

**RECIRCULATED DRAFT
SUBSEQUENT ENVIRONMENTAL IMPACT REORT
FOR THE
CHINO BASIN WATERMASTER
OPTIMUM BASIN MANAGEMENT PROGRAM UPDATE**

Prepared for:

Inland Empire Utilities Agency

6075 Kimball Avenue
Chino, California 91708
(909) 993-1600

Implementing Agency:

Chino Basin Watermaster

9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Prepared by:

Tom Dodson & Associates

2150 North Arrowhead Avenue
San Bernardino, California 92405
(909) 882-3612

In association with West Yost

September 2023

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ABBREVIATIONS AND ACRONYMS

AFY or afy	acre-feet per year
AMP	Adaptive Monitoring Program
ASR	Aquifer Storage and Recovery
Basin Plan	Santa Ana River Basin
CASGEM	California Statewater Groundwater Elevation Monitoring Program
CCWF	Chino Creek Well Field
CCWRF	Carbon Canyon Water Recycling Facility
CDA	Chino Basin Desalter Authority
CEQA	California Environmental Quality Act
CIM	California Institution for Men
Court	California State Superior Court for San Bernardino County
DDW	Division of Drinking Water
DFW	Department of Fish and Wildlife
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DYYP	Dry-Year Yield Program
EDMs	electronic distance measurements
FMSB	First Managed Storage Band
FWC	Fontana Water Company
GE	General Electric
GLMC	Ground-Level Monitoring Committee
GMZ	Groundwater Management Zone
HP	horsepower
IEUA	Inland Empire Utilities Agency
IMP	Interim Monitoring Program
IP	Implementation Plan
IX	RO/ion exchange
JCSD	Jurupa Community Services District
Judgment	Chino Basin Municipal Water District vs. City of Chino et al.
MAR	Managed Aquifer Recharge
MCLs	maximum contaminant levels
MGD	million gallons per day
MPI	Material Physical Injury
MS4	Municipal Separate Storm Sewer System
MVWD	Monte Vista Water District
MZ-1	Management Zone 1
NLs	notification levels
OBMP	Optimum Basin Management Program
PBHSP	Prado Basin Habitat Sustainability Program
PEs	Program Elements
PFAS	per-and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate

POTW	Publicly-owned Treatment Works
Regional Board	Santa Ana Regional Water Quality Control Board
RIPComm	Recharge Investigations and Projects Committee
RMPU	Recharge Master Plan Update
RO	reverse osmosis
RODs	Records of Decisions
RP	Regional Plant
SEIR	Supplemental Environmental Impact Report
SFI	Storage Framework Investigation
SGMA	Sustainable Groundwater Management Act
SMP	Storage Management Plan
SNMP	Salt-and-Nutrient Management Plan
SSC	Safe Storage Capacity
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TIN	total inorganic nitrogen
TOC	total organic carbon
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UV	ultraviolet
VOC	volatile organic compound
WEI	Wildermuth Environmental, Inc.
WFA	Water Facilities Authority

CHAPTER 1 – EXECUTIVE SUMMARY

In accordance with Public Resources Code Section 21092.1 and California Environmental Quality Act (CEQA) Guidelines Section 15088.5, the Inland Empire Utilities Agency (IEUA), in conjunction with the Project proponent, the Chino Basin Watermaster (CBWM or Watermaster), have elected to recirculate the entire Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) Draft Subsequent Environmental Impact Report (DSEIR) (SCH #2020020183).

CEQA requires a lead agency to issue new notice and to recirculate a revised EIR, or portions thereof, for additional commentary and consultation if, subsequent to the commencement of public review and interagency consultation but prior to final EIR certification, the lead agency adds “significant new information” to an EIR. Significant new information can include changes in the project or environmental setting, as well as additional data or other information. New information added to a Draft EIR is not significant unless the Draft EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including feasible alternatives) that the project's proponents have declined to implement.

In accordance with CEQA Guidelines Sections 15162 and 15168, IEUA prepared the 2020 DSEIR for the Chino Basin Watermaster Optimum Basin Management Program Update (2020 OBMPU) and circulated it for public review from March 27, 2020 to May 11, 2020. The 2020 DSEIR was finalized, and responses to comments were sent to agencies and entities that commented on the project (henceforth referred to as the 2020 FEIR). However, the project was removed from the IEUA Board of Directors' July 15, 2020 Agenda, and the 2020 FEIR ultimately was not certified in part, as a result of comments received both during the initial public review period (March 27, 2020 to May 11, 2020) and the day of the IEUA Board of Directors monthly Board Meeting.

Since that time, the Project Description has been further refined in conjunction with Watermaster and with input from Watermaster member agencies/Stakeholders.

This Executive Summary for the OBMPU Recirculated Draft Subsequent Environmental Impact Report (RDSEIR) summarizes the potential environmental effects that are forecast to occur from implementation of the proposed Project. It also contains a summary of the Project background, Project objectives, and Project description. A table summarizing potentially significant environmental impacts, mitigation measures, and mitigation responsibility is included at the end of this Executive Summary (**Table 1.5-1**). Chapter 2, the Introduction to this RDSEIR, also provides information that augments this Executive Summary.

Recirculation of a draft EIR requires notice pursuant to CEQA Guidelines Section 15087, and consultation with responsible agencies, trustee agencies, agencies with jurisdiction by law over the Project, and other entities pursuant to Section 15086 (see CEQA Guidelines Section 15088.5 [d]). A Notice of Availability of a Recirculated 2020 DSEIR was published on September 26, 2023 for a 45-day public review period ending on 10, 2023, pursuant to CEQA Guidelines Section 15087 and consultation with responsible agencies, trustee agencies, agencies with jurisdiction by law over the Project has occurred pursuant to Section 15086.

1.1 PROJECT BACKGROUND

The Chino Basin Watermaster is proposing to update the Optimum Basin Management Program (OBMP), which provides a regional water resources and groundwater management program for the Chino Basin. The OBMP Update's scope is, of necessity, expansive, as it covers the nine (9) Program Elements (PEs) that make up the original OBMP, and which were analyzed in a 2000 Program Environmental Impact Report (2000 PEIR). The OBMP Update (OBMPU) is intended to address possible Chino Basin water resource program activities and projects at a programmatic level over the next 30 years, with some site-specific detail where near-term future locations of facilities are known. The CBWM and Stakeholders have worked to define the scope, purpose and goals of the OBMPU. In 2019, during the extensive workshops held on behalf of the OBMPU, the Stakeholders concluded that the goals of the 2020 OBMPU are identical to the 2000 OBMP goals.

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

To accomplish these 4 goals, the OBMPU proposes the implementation of specific facilities, which consists of construction and operation of the various facilities summarized by category, below, and fully described in Section 3, Project Description.

These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities. Below are general descriptions of the facilities and operations proposed as part of the OBMPU.

Project Category 1: Well Development and Monitoring Devices

This Project Category includes the development of Aquifer Storage and Recovery (ASR), injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Well development includes up to 66 new ASR wells, 12 wells relocated to adjust up to about 25,000-acre feet per year (afy) of pumping, 8 new wells to expand desalter capacity, 10 injection wells and 9 extraction wells in support of the proposed advanced water purification facility (AWPF) for a total of 105 new wells. In addition, the OBMPU anticipates

reconstruction and/or modification of up to 5 wells to mitigate loss of pumping capacity, and destruction and replacement of 5 wells. This category also includes the development of 102 monitoring wells, with 2 intended to support the proposed AWPf, for a total of up to 207 wells, which serve the varying purposes listed above and outlined below. The monitoring devices proposed as part of the OBMPU include up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells.

Project Category 2: Conveyance Facilities and Related Infrastructure

This category includes the construction of up to 620,600 lineal feet (LF) of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gallons per minute (gpm), up to 14 water storage reservoirs with an average storage capacity of 5 million gallons (MG) and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Project Category 3: Storage Basins and Recharge Facilities and Storage Bands

This Project Category includes the construction of up to 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood Managed Aquifer Recovery (MAR) facilities, new Municipal Separate Storm Sewer System (MS4)-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 acre feet (af) and 900,000 af going forward with various impacts that may result for each 100,000 af within this range of storage. The specific locations of the new and existing storage basins are described in the Project Description, above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Project Category 4: Desalters and Water Treatment Facilities

The facilities projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (previously analyzed in IEUA's 2017 Facilities Master Plan [FMP] Program EIR [PEIR]), a new up to 9,000 afy advanced water purification facility, improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites, 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. Impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR are assumed to be part of the baseline and will not be analyzed further as part of the OBMPU.

The Watermaster functions as a unique entity that has been created by the court to administer the Judgment¹ for the Chino Basin—which addressed the allocation of water rights in the Chino Basin. The Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. Please refer to Appendix 1 for a list of all Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool

¹ On January 2, 1975, several Chino Basin groundwater producers filed suit in the California State Superior Court for San Bernardino County (Court) to settle the problem of allocating water rights in the Chino Basin. On January 27, 1978, the Court entered a judgment in "Chino Basin Municipal Water District v. City of Chino et. al." (Judgment). The Judgment adjudicated the groundwater rights of the Chino Basin, established the Chino Basin Watermaster (Watermaster or CBWM)—a Court created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin.

A more robust discussion of the Judgment can be found at the beginning of Chapter 2, Introduction.

participants. These member agencies are henceforth referred to as either “Stakeholders” or “the Parties.”

Because the CBWM is not considered a public agency, IEUA serves as the Lead Agency for the implementation of the OBMPU environmental documentation under CEQA. The IEUA was initially recommended by Watermaster, ordered by the Court, and then agreed to by the Parties to the Judgment to be the Lead Agency for CEQA review of the OBMP, which was ordered by Court decree for the 2000 OBMP PEIR. Actual implementation of the OBMPU activities—outlined in Chapter 3: Project Description—may be carried out by the CBWM or any of its Stakeholders in the Chino Basin through the planning period, 2020 through 2040.

Based on the information in the OBMPU Initial Study—provided as part of the Notice of Preparation (NOP), which was published for initial public review beginning on February 10, 2020 and ending on March 10, 2020 (SCH #2020020183)—IEUA and Watermaster concluded that a Subsequent Environmental Impact Report (EIR) should be prepared to address the potential impacts from the proposed Project focused on the following issues: Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gas, Hydrology and Water Quality, Tribal Cultural Resources, and a portion of Utilities and Service Systems. The decision to prepare a Subsequent EIR was based on the finding that the proposed Project may have one or more significant effects on the existing Project environment and surrounding environment as is documented in the NOP, provided as Subchapter 8.1 of this document.

Furthermore, as discussed above, in accordance with Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5, IEUA, in conjunction with Watermaster, the Project proponent, have elected to recirculate the entire Chino Basin Watermaster OBMPU 2020 DSEIR.

The focus of the analysis provided herein, in accordance with Section 15146 of the CEQA Guidelines, addresses the forecast effects of the proposed OBMPU as presented in Chapter 3, Project Description. However, it is the combination of authorizations and entitlements requested for this Project that must be recommended for approval by IEUA to allow the OBMPU to be implemented by Watermaster and Stakeholders.

1.2 SUMMARY OF REVISIONS TO THIS RECIRCULATED 2020 DSEIR

Pursuant to CEQA Guidelines Section 15088.5(g), this subsection summarizes the revisions made to the previously circulated 2020 DSEIR. IEUA prepared a 2020 DSEIR for the Project that was circulated for public review from March 27, 2020 to May 11, 2020. The 2020 DSEIR was finalized, and responses to comments were sent to agencies and entities that commented on the Project (refer to Subchapter 8.2 for Responses to Comments, Comment Letters on the 2020 DSEIR, and receipts showing the Response to Comments were sent to the commenters). Between the public review period conclusion on May 11, 2020 and the day of the IEUA Board of Directors monthly Board Meeting (July 15, 2020), an additional 2 comments were received from Watermaster Stakeholders: City of Ontario and Cucamonga Valley Water District (CVWD). These comments are responded to under Subsection 2.2 in Chapter 1, Introduction of this RDSEIR.

This RDSEIR represents a comprehensive update to the previously circulated 2020 DSEIR. Pursuant to CEQA Section 15088.5(f), because this RDSEIR has been substantially revised, reviewers must submit new comments on this RDSEIR. Although part of the administrative record, the previous comments do not require further written response, though as stated above the

Responses to Comments, Comment Letters on the 2020 DSEIR, and receipts showing the Response to Comments were sent to the commenters are provided in Subchapter 8.2.

The Project Description was modified to include new input from Stakeholders received in late 2022 as a result of Watermaster workshops intended to obtain Stakeholder feedback on the OBMPU. This led to a revision to the Project Description to include a more specific number of facilities proposed under the OBMPU.

For instance, the 2020 DSEIR did not contemplate a specific number of water storage facilities, nor an average size of such facilities; this was the case for several other facilities contemplated as part of the 2020 DSEIR, including reservoirs, regional groundwater treatment facilities, groundwater treatment facilities at well sites, etc. Additionally, based on Stakeholder feedback, additional detail was provided to enable analysis of an up to 9,000 afy advanced water purification facility (AWPF) and associated infrastructure. Stakeholders further defined additional projects, adding to the number of aquifer storage and recovery (ASR) wells, monitoring wells, extraction and injection wells. Additional pipeline projects are contemplated under the revised Project Description as a result of Stakeholder input. Furthermore, based on the work effort undertaken to draft the 2023 Storage Framework Investigation (SFI) (provided as Appendix 6b, Volume 2 of this RDSEIR), the safe storage capacity (SSC) contemplated in the 2020 SEIR has been updated to be divided into two bands: First Managed Storage Band (FMSB) of 700,000 acre feet (af) for use by the Chino Basin Stakeholders, Metropolitan, and IEUA, and 200,000 af of storage space between 700,000 af and 900,000 af for use by future Storage and Recovery Programs. The 2020 DSEIR contemplated an increase in SSC up to 1,000,000 af.

Based on the fact that the Project Description has been both revised and redefined to describe the proposed OBMPU facilities in greater detail than that which was outlined in the 2020 DSEIR, this RDSEIR includes updated analysis of the environmental effects of implementing the proposed Project based on Appendix G of the CEQA Guidelines. As permitted by CEQA, the following topic areas were excluded from detailed analysis in the RDSEIR and discussed in the Initial Study prepared for the RDSEIR, which is provided as Subchapter 8.2: Aesthetics, Agriculture and Forestry Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, parts of Utilities and Service Systems, Wildfire.

This RDSEIR evaluates the environmental effects of the proposed Project in the following issue areas: Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gases/Climate Change, Hydrology and Water Quality, Tribal Cultural Systems, and parts of Utilities and Service Systems. Updates to these subchapters required the preparation of additional technical studies, including: an updated Air Quality and Greenhouse Gas Impact Analysis to address the emissions generated by the facilities contemplated in the revised Project Description; an updated Biological Resources Assessment to address the changes in the regulatory setting and environmental setting that may have occurred since the 2020 DSEIR was published; an updated Energy Impact Analysis to address the energy demand by the facilities contemplated in the revised Project Description; and, an updated Storage Framework Investigation (SFI), which informs the Hydrology and Water Quality Subchapter 4.7. Based on the SFI, additional alternatives to the OBMPU have been contemplated as part of Chapter 5, Alternatives.

Ultimately, the findings of this RDSEIR vary slightly from the findings made in the 2020 DSEIR as a result of the greater definition attributed to each of the facilities and facility types contemplated as part of the revised Project Description. As such, a significant greenhouse gas impact that was

identified in the 2020 SEIR is now avoidable, and would be less than significant. However, a significant and unavoidable Air Quality impact is anticipated to occur as a result of Program implementation related to construction-generated NO_x emissions. The significant and unavoidable impacts from the OBMPU on Biological Resources and Utilities and Service Systems remain significant and unavoidable.

1.3 INTENDED USE OF THIS ENVIRONMENTAL IMPACT REPORT

Pursuant to Section 21151 of CEQA, this RDSEIR has been prepared in accordance with CEQA and the CEQA Guidelines. IEUA is the Lead Agency for the Project and has supervised the preparation of this RDSEIR. This RDSEIR is an informational document that will inform public agency decision makers and the general public of the potential environmental effects, including any significant impacts that may be caused by implementing the proposed Project. Possible ways to minimize potential significant effects of the proposed Project and reasonable alternatives to the Project are also identified in this RDSEIR.

This RDSEIR will be used as the information source and CEQA compliance document for the following discretionary actions or recommended approvals by the CEQA lead agency, IEUA. CEQA requires that the IEUA, as the CEQA Lead Agency, consider the environmental information in the Project record, including this RDSEIR, prior to making a decision regarding whether or not to recommend approval to CBWM and implementation of a proposed specific Project. The decision that will be considered by IEUA is whether to approve the Watermaster OBMPU defined in Chapter 3 of this document. The OBMPU has defined nine program elements, which include facilities that have been broken into four Project Categories as defined above and within the Project Description. Alternatively, IEUA can recommend denial of the Project as proposed. This RDSEIR evaluates the environmental effects as outlined above.

IEUA will serve as the CEQA Lead Agency on behalf of the Watermaster pursuant to CEQA Guidelines Section 15015(b)(1). In all future circumstances, IEUA will remain the Lead Agency for the OBMPU CEQA document and the Watermaster will maintain annual records for cumulative projects implemented under the OBMPU on an annual basis. A CEQA Responsible Agency—those defined in Chapter 3, the Project Description of this RDSEIR—shall coordinate with these agencies when it assumes CEQA lead agency status for a future specific project under the OBMPU umbrella.

This RDSEIR has been prepared by Tom Dodson & Associates (TDA) under contract to IEUA and Watermaster. TDA was retained to assist IEUA to perform the independent review of the Project required by CEQA before the RDSEIR is released.

As a Subsequent EIR, this document addresses the continued evolution of the OBMP since 2000. The original OBMP Program Environmental Impact Report (PEIR) was certified in 2000 and the Peace II SEIR was certified in 2010. This RDSEIR tiers off of these two documents and extends the analysis for each environmental issue to address the current environmental setting (2020). These documents and their findings are referenced in this RDSEIR where appropriate. Copies of these documents can be accessed at the IEUA website www.ieua.org/obmpu-ceqa.

This RDSEIR assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed Project. It is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of the Project.

Other California agency approvals (if required) for which this environmental document may be utilized are outlined in **Table 1.3-1**, below:

**Table 1.3-1
PROGRAM APPROVALS**

Agency	Approvals Necessary
Chino Basin Stakeholders Monte Vista Water District Cucamonga Valley Water District City of Chino City of Chino Hills City of Fontana City of Norco City of Ontario City of Pomona City of Upland County of San Bernardino Jurupa Community Services District West Valley Water District IEUA Three Valleys Municipal Water District Western Municipal Water District Chino Basin Water Conservation District	Future site-specific projects may be enacted by OBMPU Stakeholders. This RDSEIR and subsequent environmental documents may be reviewed by each City or Stakeholder as part of the review process for future OBMPU related projects.
California Department of Public Health (CDPH)	CDPH is responsible for issuing water supply permits administered under the Safe Drinking Water Program and funds various loan and grant programs for drinking water related infrastructure projects. As such, CDPH would be considered a “responsible agency” if IEUA or other Stakeholders request any permits and/or funding from CDPH for the OBMPU.
State Water Resources Control Board (SWRCB)	Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the Project area, the Santa Ana Regional Board enforces the BMP requirements contained in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor under contract to IEUA or a Stakeholder agency, with the Regional Board providing enforcement oversight.
Jurisdictional Waters	The Project includes the potential discharge of fill into or alterations of “waters of the United States,” “waters of the State,” and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to Project activities such as pipeline installation are likely be required.

Agency	Approvals Necessary
Army Corps of Engineers (ACOE)	<ul style="list-style-type: none"> • A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE • A Section 401 Water Quality Certification may be required from the Regional Board • 1600 Streambed Alteration Agreement may be required from the CDFW
Santa Ana Regional Water Quality Control Board	
California Department of Fish and Wildlife (CDFW)	
U.S. Fish and Wildlife Service (USFWS) CDFW	These agencies may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
San Bernardino County Riverside County City of Chino City of Chino Hills City of Claremont City of Eastvale City of Fontana City of Jurupa Valley City of Montclair City of Ontario City of Pomona City of Rancho Cucamonga City of Upland	Land use permits may be required from local jurisdictions
South Coast Air Quality Management District (SCAQMD)	Air quality permits may be required from the SCAQMD.
California Department of Transportation (Caltrans) County of Riverside County of San Bernardino City of Chino City of Chino Hills City of Claremont City of Eastvale City of Fontana City of Jurupa Valley City of Montclair City of Ontario City of Pomona City of Rancho Cucamonga City of Upland Flood Control Agencies Southern California Edison, The Gas Company, Other private companies such as: BNSF Railway Company Union Pacific Railroad	Encroachment permits may be required.
Watermaster	Watermaster has a separate approval process for determining material physical injury to the Stakeholders within the Chino Basin.
State Water Resources Control Board	State Water Resources Control Board will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or Division of Drinking Water.

This is considered to be a partial list of other permitting agencies for future OBMPU future individual projects.

1.4 PROJECT OBJECTIVES

The *2020 Optimum Basin Management Program Update Report* (2020 OBMP Update Report), approved by CBWM in October 2020, documents the stakeholder process that was used to update the OBMP and it describes the 2020 OBMP Management Plan. The management plan forms the basis for the 2020 OBMP Implementation Plan Update, which remains in process. Through this process, the Stakeholders concluded through the 2020 OBMP Update Report that the goals of the 2020 OBMP Update should be identical to the 2000 OBMP goals.

Accordingly, the 2020 OBMPU's goals remain the same as the 2000 OBMP's goals:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

1.5 IMPACTS

Based on data and analysis provided in this RDSEIR, it is concluded the proposed Project could result in significant adverse environmental impacts to the following environmental issues: ***Air Quality, Biological Resources, and Utilities and Service Systems***. All other potential impacts were determined to be less than significant without mitigation or can be reduced to a less than significant level with implementation of the mitigation measures identified in the Initial Study (IS) provided in Subchapter 8.2 to this RDSEIR. Note that the cumulative significant impacts are identified in this document based on findings that the Project's contributions to such impacts are considered to be cumulatively considerable which is the threshold identified in Section 15130 of the State CEQA Guidelines. **Table 1.5-1** summarizes all of the environmental impacts and proposed mitigation and monitoring measures identified in this RDSEIR and will be provided to the decision-makers prior to finalizing the RDSEIR.

The following issues evaluated in the RDSEIR have been determined to experience less than significant impacts—either with or without mitigation—based on the facts, analysis and findings in the Initial Study provided in Subchapter 8.2 to this RDSEIR or based on the evaluation within this RDSEIR.

Aesthetics: As described in Section I of the IS, all potential aesthetic impacts associated with the OBMPU can be mitigated to a less than significant impact level. Mitigation measures would:

minimize impacts to scenic vistas through enforcing future projects to meet local design standards; minimize visual impacts to the pastoral setting at the Mills Wetland site; minimize impacts to scenic resources through avoidance of such resources, or through assessment in subsequent CEQA documentation; minimize impacts to scenic resources such as trees through enforcement of compliance with local jurisdiction tree ordinance(s); minimize conflicts with regulations governing scenic quality through enforcing compliance with applicable zoning code and design requirements established by local jurisdictions; and, minimize light and glare impacts by enforcing local jurisdiction light and glare minimization standards. As a result, there will not be any unavoidable Project specific or cumulative adverse impacts to aesthetics from implementing the Project as proposed.

Agriculture & Forestry Resources: Due to the substantial agricultural resources located within Chino Basin, installation of future OBMPU related facilities was determined to have a potentially significant impact to such resources; however, several mitigation measures were identified to minimize agricultural and forestry resource impacts including those that would: relocate or avoid impacts to important agricultural land or where relocation is not possible, undergo subsequent CEQA documentation to assess potential impacts that a future OBMPU facility may have upon agricultural resources; and, relocate or avoid impacts to forest land or offset the loss by purchasing compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank. As described in Section II of the IS, no unavoidable significant impact to agricultural resources will result from implementing the proposed Project.

Cultural Resources: As described in Subchapter 4.4, the Chino Basin is a large expanse of area that may contain historical, archaeological, or paleontological resources. As such, future OBMPU projects may be developed within sites that contain such resources. Since the proposed Project is at the programmatic level, specific locations for most of the proposed OBMPU projects have not yet been determined. As such, mitigation has been identified to minimize impacts to cultural resources, including those that would: exclude highly disturbed sites from requiring further cultural resource evaluation except to adhere to procedures pertaining to the treatment of accidental discoveries, unless the Implementing Agency is seeking State funding for a specific future OBMPU project; ensure that such projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow-on Phase I Cultural Resources Investigation and enforces several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located; ensure that a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM for projects containing cultural resources; and, set a precedent for future OBMPU Projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. As described in Subchapter 4.4, no unavoidable significant impact to cultural resources will result from implementing the proposed Project.

Energy: As discussed in Subchapter 4.5, Project construction would not result in the inefficient, wasteful or unnecessary consumption of energy. In fact, the proposed Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements which would result in a more efficient process and consequently reduce a wasteful use of energy. The energy demands of the Project can be accommodated within the context of available resources and energy delivery systems, which may also include the incorporation of renewable

energy generation and/or storage equipment depending on the nature of the OBMPU facility and local constraints. Additionally, as the grid moves towards carbon neutrality and renewable sources of energy, even for facilities where incorporation of renewable energy generation and/or storage features are not feasible, the Project will automatically incorporate these energy sources by way of state regulatory schemes and the state's long-term climate goals and strategies. Further, as the jurisdictions in the Chino Basin begin to implement their own initiatives, including but not limited to their own Climate Action Plans (CAP), this will further push the Project towards meeting the state's goals. Finally, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive, the Project will offset energy demands that would otherwise have occurred absent implementation of the Project. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservation goals within the State of California. Furthermore, the Project includes construction activity and associated improvements and would not obstruct a state or local plan for renewable energy or energy efficiency and would be powered by electricity from the grid, and would therefore be more energy efficient and rely on renewable energy as the grid moves towards more efficiency and renewable energy sources.

While no mitigation measures are required to ensure a less than significant impact under any issue under Energy, mitigation measures designed to reduce energy consumption from construction and operation of the OBMPU are identified in Subchapters 4.2, Air Quality, and 4.6, Greenhouse Gas, of this RDSEIR (Mitigation Measures **GHG-1** and **GHG-2**, and **AQ-1** and **AQ-3**, specifically address this issue, as do 2000 OBMP Mitigation Measures **4.13-1**, **4.13-3**, **4.13-4**, and **4.13-5**). These mitigation measures would: incorporate construction related GHG emission reduction measures identified by the CAPCOA in its 2010 report, Quantifying Greenhouse Gas Mitigation Measures, into OBMPU construction and operational activities, which includes energy consumption reduction requirement, minimize energy use through use of efficient construction equipment, and incorporate energy efficiency and coordination with SCE into the planning process for future facilities. Regardless of the above mitigation measures, the proposed OBMPU is anticipated to have a less than significant impact on energy demand and resources.

Geology and Soils: The Chino Basin contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future OBMPU related facilities in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the OBMPU were identified in Section VI of the IS. However, several mitigation measures were identified to minimize geology and soil impacts including those that would: ensure new facilities are located outside of delineated fault zones through relocation, implementation of seismic design measures, or subsequent CEQA documentation; reduce potential impacts from liquefaction and landslide hazards through a design level geotechnical investigation with implementation of specific design recommendations; ensure that the proposed facilities associated with the OBMPU that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs; minimize impacts to paleontological resources through requiring site-specific studies, where necessary. As described in Section VI of the IS, no unavoidable significant impact to geology and soils will result from implementing the proposed Project.

Greenhouse Gas: As described in Subchapter 4.6, the GHG analysis qualitatively evaluated the energy intensity of the water that would be supplied to the Basin by the facilities proposed under the OBMPU in comparison to other potential water sources, such as importing water from the

California State Water Project or the Colorado River. GHG emissions associated with water conveyance from the Colorado River Deliveries or State Water Project Deliveries are substantially greater than all other water conveyance sources. Thus, qualitatively, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River. Further, if the Project's annual amortized construction emissions (683.46 MTCO₂e per year) are added to any of the local sources, the resulting annual GHG emissions would be substantially less than the amount of GHG emissions for the same amount of water conveyed from either the Colorado River Deliveries or State Water Project Deliveries. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 af would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5** and **4.6-6** found in Subchapter 4.6, the OBMPU will offset project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Thus, the proposed Program would not result in new significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts. Mitigation Measures **GHG-1** and **GHG-2** would further reduce GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and proposed to be implemented. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis herein.

Additionally, the OBMPU would be consistent with the applicable goals of applicable federal, State and local plans and programs designed to reduce GHG emissions. The OBMPU would be consistent with: AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030; AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045; Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; and, CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279. Thus, the proposed OBMPU would not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts are considered less than significant in this regard. The proposed Program would not result in new significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts.

Hazards and Hazardous Materials: The Chino Basin contains substantial hazards and hazardous materials issue constraints. Due to these substantial constraints and the installation of future water infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the OBMPU were identified in Section VIII of the IS. However, several mitigation measures were identified to minimize hazards and hazardous materials impacts, including those that would: ensure that applicable OBMPU facilities' Hazardous Materials Business Plan (HMBP) incorporate best management practices designed to minimize the potential for accidental release of such chemicals; ensure that applicable OBMPU facilities' HMBP identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material; ensure sensitive receptors will not be exposed to significant health threat by modeling the pathways of release and implementing specific measures that would minimize potential exposure to acutely hazardous materials; ensure hazardous materials are disposed of and delivered to licensed facilities; ensure the establishment of and adherence to specific thresholds of acceptable clean-up of hazardous materials; ensure the preparation of and adherence to vector

management plans; ensure remediation of an accidental spill or discharge of hazardous material in compliance with state and local regulations; ensure that sites for future OBMPU facilities obtain a Phase I Environmental Site Assessment and either avoid or remediate a site that is contaminated; ensure that any unknown contamination is remediated and handled according to the local certified unified program agency (CUPA); ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the Project area; ensure that construction traffic is managed safely; and, ensure that fire hazard reduction measures are enforced. Therefore, though there will be some adverse impacts as a result of implementing the Project, specific mitigation measures have been identified to reduce potential Project-specific and cumulative (direct and indirect) effects to a less than significant impact level for hazards and hazardous material issues. Thus, the Project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts.

Hydrology and Water Quality: As described in Subchapter 4.7, the overall hydrology (watershed, drainage and flood hazards) and water quality impacts that would result from implementation of the OBMPU could be significant without the implementation of mitigation measures. As such, several mitigation measures were identified to minimize impacts related to hydrology and water quality, such as those that would: ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, result in new subsidence, result in potential adverse impacts to Hydraulic Control, result in adverse impacts to riparian vegetation and habitat in Prado Basin, or result in potential degradation of water quality, and (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a specific future project or, where mitigation is not feasible, reject the project; address the plan of response by Watermaster should the Basin conditions to vary from the projections that have been modeled as part of the OBMPU (and all supporting documentation); require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the Construction General Permit and Stormwater Pollution Prevention Plan, which are required for larger projects; ensure that drainage is managed through either runoff collection or development of a drainage plan for a given OBMPU project; require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites; require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future OBMPU facility sites; ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding; ensure that significant polluted runoff does not occur from contaminated discharge that may result from refurbishing or capping a well; and, ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. Therefore, though there will be some adverse impacts as a result of implementing the Project, specific mitigation measures have been identified to reduce potential Project-specific and cumulative (direct and indirect) effects to a less than significant impact level for hydrology and water quality issues. Thus, the Project is not forecast to cause any unavoidable significant adverse hydrology and water quality impacts.

Land Use and Planning: As described in Section XI of the IS, impacts related to land use and planning are minimal; however, mitigation is provided to address the potential for conflicts with land use from OBMPU related facilities. This mitigation would ensure that the facilities associated with the OBMPU are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. With implementation of this

mitigation measure, the Project-related land use and planning impacts can be reduced below significance thresholds, and as such, the proposed Project will not cause unavoidable significant land use and planning impacts.

Mineral Resources: As described in Section XII of the IS, limited mineral resource occur in the northern portion of the Chino Basin. As such, there is a nominal potential for future OBMPU facilities to be installed within mineral resource zones. As such, mitigation has been identified to minimize mineral resource impacts that would ensure that the proposed facilities associated with the OBMPU would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources. With implementation of this mitigation measure, the Project-related mineral resource impacts can be reduced below significance thresholds, and as such, the proposed Project will not cause unavoidable significant mineral resource impacts.

Noise: The Chino Basin contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints and the installation of future noise-producing OBMPU facilities in locations where such noise sensitive uses may exist, a potential exists for significant noise impacts from implementation of the OBMPU. However, several mitigation measures were identified to minimize noise impacts including those that would: reduce the construction-related noise levels at nearby receptors to the maximum extent feasible; ensure that operational noise meets the applicable City or County noise level requirement, thereby minimizing operational noise impacts; ensure that construction activities outside of standard working hours secure a noise waiver, thereby minimizing conflicts with the applicable noise standards; enforce noise minimizing techniques that will ensure that the proposed well developments will not result in excessive operation or construction related noise; discourage the use of construction equipment that generates high levels of vibration near sensitive uses; and, ensure the safety of existing historic buildings by requiring a certified structural engineer to analyze and provide evidence that no structural damage would result at these buildings due to the Project's construction activities. With implementation of these mitigation measures, the Project-related noise impacts would be reduced to a less than significant impact level.

Population and Housing: As described in Section XIV of the IS, implementation of the OBMPU would not significantly induce growth within the Chino Basin; however, mitigation is provided to address the potential for OBMPU related facilities to displace housing and/or persons. This mitigation would ensure that the facilities associated with the OBMPU that are located on parcels containing housing would be minimized through the provision of short- and long-term housing of comparable quality, thereby minimizing impacts below significance thresholds. With implementation of this mitigation measure, the Project-related population and housing impacts would be reduced below significance thresholds, and as such, the proposed Project will not cause unavoidable significant land use and planning impacts.

Public Services: As described in Section XV of the IS, implementation of the OBMPU would not significantly impact fire protection, police protection schools, recreation/parks or other public facilities. However, several mitigation measures were identified to minimize impacts to police protection and recreation/parks including those that would: minimize the potential for trespass that could exacerbate demand for police protection services; and, minimize the potential for loss of park or recreational facilities as a result of OBMPU projects through relocation or provision of supplemental parkland or recreation facilities. With implementation of these mitigation measures, the Project-related police protection and park/recreation impacts would be reduced to a less than significant impact level.

Recreation: As described in Section XVI of the IS, implementation of the OBMPU would not significantly impact recreation. However, mitigation identified under Public Services that would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects would minimize impacts under this issue as well. Furthermore, mitigation is provided to ensure that, should construction of recreation or park facilities be required as a part of the OBMPU, a subsequent CEQA determination will be prepared to ensure that impacts are appropriately assessed and mitigated. With implementation of this mitigation measure, the Project-related recreation impacts can be reduced below significance thresholds, and as such, the proposed Project will not cause unavoidable significant recreation impacts.

Transportation: Since transportation system facilities occur throughout much of the Chino Basin and the installation of future water infrastructure facilities can directly impact roadways or traffic on such roadways, a potential for significant transportation/traffic impacts from implementation of the OBMPU was identified in Section XVII of the IS. Mitigation was identified to minimize impacts to transportation that would reduce the Project's potential construction traffic impacts by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. With implementation of this mitigation measure, the Project-related transportation impacts can be reduced below significance thresholds, and as such, the proposed Project will not cause unavoidable significant recreation impacts.

Tribal Cultural Resources: As described in Subchapter 4.8 of this RDSEIR, the Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians), Gabrieleño Band of Mission Indians - Kizh Nation, and Morongo Band of Mission Indians requested continued participation with this Project's CEQA process and future project implemented under the OBMPU. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures, impacts to Tribal Cultural Resources are considered less than significant. The mitigation measures provide a hierarchy from which to approach future OBMPU facilities at undisturbed project sites, AB 52 consultation will be initiated and a records search shall be performed as part of a site-specific Phase I evaluation, and the site shall be surveyed; and, development and implementation of a Cultural Resources Monitoring and Treatment Plan which may require monitoring and treatment of any resources located within a given site. Thus, with implementation of mitigation to protect tribal cultural resources, the Project would not cause significant unavoidable adverse impacts to tribal cultural resources.

Wildfire: The location of OBMPU facilities would likely not be located in such an area but since many of the proposed OBMPU facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. Mitigation was identified to minimize impacts to wildfire (gathered from other sections of the IS) that would: reduce the Project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan; ensure adequate emergency access; and, ensure fire hazard reduction measures are incorporated into a fire management plan for a proposed OBMPU facility. Thus, with implementation of mitigation to minimize wildfire impacts, the Project would not cause significant unavoidable adverse impacts under wildfire.

The proposed Project could result in significant impacts to the following environmental issues: Air Quality, Biological Resources, and Utilities and Service Systems, based on the facts, analysis and findings in this Focused RDSEIR.

Air Quality: As described in Subchapter 4.2, after implementation of the recommended mitigation measures, neither construction nor operation of the proposed OBMPU would result in the exceedance of thresholds for criteria pollutants (ROG, CO, SO₂, PM₁₀, or PM_{2.5}). Furthermore, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project. When applied to air quality emissions, as stated above, air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. However, the offset in energy use on a regional basis from storing water in the Basin, rather than importing water to meet demand, would minimize air emissions attributable to energy sources on a more regional or statewide level. Mitigation would achieve emissions minimization through enhanced dust control measures and through the use of reasonably available control measures for diesel exhaust. Additionally, mitigation is recommended to reduce the severity of the NO_x construction-generated emissions impacts to the greatest extent feasible. However, even after implementation of Mitigation Measure **AQ-1**, the modeled construction scenario would not fall below significance thresholds for construction-source emissions of NO_x. There is a potential for the implementation of a significant number and type of OBMPU facilities to be constructed on the given “worst day” of construction such that NO_x emissions would be considered both significant and unavoidable at a Project-specific and cumulative level. As a result of exceeding the NO_x emissions threshold, the Program would not be consistent with the AQMP, and therefore, would result in a significant and unavoidable impact thereof. While the air quality impact for Program-related Localized Significance Threshold (LST) impacts and odor impacts are considered to be less than significant, and sensitive receptors would not be subject to a significant air quality impact during Program construction or operations, a significant and unavoidable impact to air quality as a result of construction-related NO_x emissions will result from implementing the proposed Program.

Biological Resources: As described in Subchapter 4.3, development of the OBMPU, because the specific locations for future specific OBMPU projects are not presently known, there is a potential that a future OBMPU facility may be developed in an area containing significant biological resources that cannot be avoided. Though substantial mitigation is provided to minimize impacts, there are certain areas within the overall Project area of potential impact where the biological resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources. Analysis of site-specific biological resource impacts can only occur and thereby be identified, once a site is defined or in the case of water diversions, once a water diversion project is identified. Thus, the proposed Project is forecast to potentially cause significant unavoidable adverse impacts to biological resources.

Utilities and Service Systems: Section XIX of the IS concluded that implementation of the OBMPU would not significantly impact stormwater drainage, telecommunications, or solid waste. Mitigation is required to address potential impacts related to solid waste, including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities; and, ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. Based on the facts and findings

presented in the RDSEIR analysis, the proposed Project will not cause unavoidable significant adverse impacts to stormwater drainage, telecommunications, or solid waste.

The IS also included analysis of wastewater provider capacity impacts from implementation of the OBMPU. The potential for the Program to result in a determination by the wastewater treatment provider which serves or may serve a project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments was determined to be less than significant because impacts related the extension of wastewater and brine conveyance associated with the proposed Project would be required to go through a subsequent CEQA documentation for the extension of wastewater and brine conveyance facilities.

The topic of electricity, natural gas, water and wastewater infrastructure was also discussed in Subchapter 4.9, and while the extension of water and wastewater related infrastructure was determined to be significant, the provision of sufficient water supply within the Chino Basin was determined to be a less than significant impact. The construction of infrastructure related to electricity and natural gas was analyzed and determined to be less than significant as OBMPU projects not located in an area containing electricity and natural gas infrastructure would require subsequent CEQA documentation. Mitigation is required to minimize impacts related to pumping sustainability, net recharge and safe yield, hydraulic control, riparian vegetation and habitat in Prado Basin, and overall basin management. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties within the Chino Basin. The mitigation is extracted from Subchapter 4.7, Hydrology and Water Quality (discussed above) and would create a hierarchy of checks and balances as part of the sustainable management of the Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact.

However, as discussed under Subchapter 4.9 of this RDSEIR, the proposed OBMPU could result in significant impacts related to the construction-related NO_x emissions that would result from the extension of water- and wastewater-related infrastructure. As such, though mitigation measures identified under Air Quality would reduce emissions from construction equipment, ensure minimization of fugitive dust during construction of OBMPU related facilities, and control exhaust emissions, construction-related NO_x emissions exceed the SCAQMD thresholds of 100 pounds per day of NO_x, and therefore the proposed OBMPU would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing water facilities.

The Executive Summary of potential Project impacts is presented in **Table 1.5-1**.

1.6 ALTERNATIVES

CEQA and the CEQA Guidelines require an evaluation of alternatives to the proposed action. Section 15126.6 of the CEQA Guidelines states that “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project... .” The CEQA Guidelines also state that “a range of reasonable alternatives to the proposed shall include those that could feasibly accomplish most of the basic objectives of the project” and that “The range of alternatives required in an EIR is governed by ‘rule of reason’ that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.” The detailed analyses of the alternatives evaluated are provided in Chapter 5 of this RDSEIR. This evaluation addresses those alternatives for feasibility and a range of alternatives required to permit decision-makers a reasoned choice between the

alternatives. Refer to **Table 1.6-1** for a tabular comparison of alternatives (found at end of chapter).

The proposed Project objectives are to enhance basin water supplies, protect and enhance water quality within the Chino Basin, enhance management of the Chino Basin, and equitably finance the OBMP. In this instance the RDSEIR analysis of resource areas in Chapter 4 has reached a finding that there are three issues with unavoidable significant adverse effects from implementing the Project as proposed in Chapter 3, the Project Description.

Several alternatives to the proposed Project were considered, but were rejected due to infeasibility, failure to substantially reduce significant environmental impacts, and/or failure to meet most of the OBMPU objectives. These include:

- **Alternative Location:** Since management of water resources in the Chino Basin is an activity that cannot be conducted at another location and is part of every one of the Project objectives, this evaluation will not give further consideration to an alternative location for the Program because implementation outside the Chino Basin would fail to meet any of the basic Program objectives.
- **Demand Management:** A demand management alternative would reduce water demand through techniques such as low flow fixtures, turf replacement, drought tolerant landscaping, etc. Watermaster cannot compel Chino Basin Parties to implement demand management within their service areas, and Basin Stakeholder cannot compel customers to avail themselves of demand management techniques. Thus, demand management is not feasible as an alternative, but may be feasible to implement by an individual agency. While demand management might meet some of the OBMPU objectives, and could avoid or substantially lessen any of the significant impacts of the Project, it is not feasible because Watermaster cannot compel Basin Parties to impose demand management techniques, and Basin Parties cannot compel their customers to avail themselves of demand management.
- **Imported Water:** An imported water alternative would utilize imported water instead of Basin management to increase Safe Storage Capacity (SSC). Importing water may not reduce significant impacts, and in fact, may create new significant impacts related to GHG emissions as a result of the greater amount of energy required to use imported water. Biological resource impacts may be avoided, though new biological resource impacts could be introduced. This alternative would not meet most of the basic Project objectives, and may not avoid or substantially lessen any of the significant impacts of the Project.
- **Import Water to Meet the Santa Ana River Base Flow Obligation at Prado Dam:** Utilizing imported water to meet the Santa Ana River (SAR) Base Flow Obligation would free up additional recycled water supply for local use by IEUA customer agencies. Importing water may not reduce significant impacts, and in fact, may create new significant impacts related to GHG emissions as a result of the greater amount of energy required to import water. Biological impacts from infrastructure may be avoided, though biological resource impacts from diversion of additional recycled water from the SAR, which may occur as a result of only meeting the SAR Base Flow Obligation rather than going above and beyond that obligation which occurs at present, may occur. This alternative would not meet most of the basic Project objectives, and may not avoid or substantially lessen any of the significant impacts of the Project.

Thus, the four alternatives considered above were ultimately rejected. The three alternatives that were fully evaluated are the No Project/ Baseline Alternative, No Project/Reasonably Foreseeable Development Alternative, and Reduced Storage Alternative (SSC Up To 800,000 AF; Operational Band 2; Scenario 2A).

1.6.1 No Project / Baseline Alternative

One of the alternatives that must be evaluated in an EIR is the “no project alternative,” regardless of whether it is a feasible alternative to the Project, i.e., would meet the Project objectives or requirements. Under this alternative, the environmental impacts that would occur are what would otherwise occur under the existing OBMP, without any of the OBMPU facilities and programs being implemented.

This alternative represents the continuation of OBMP programs under the approved Peace I and Peace II Agreements. The approval in the 2021 Addendum to the OBMP enables a short-term, tiered increase in groundwater storage. The 2021 Addendum was prepared, and enabled the increase in Safe Storage Capacity to 700,000 af through June 30, 2030, 620,000 af from July 1, 2030 through June 30, 2035, and a return to 500,000 af thereafter. This alternative includes the installation of water infrastructure on an as-needed basis to meet the Peace I and II Agreement programs outlined in the OBMP, without installing those facilities required to achieve the objectives of the proposed OBMPU.

1.6.2 No Project Plus Plausibly Foreseeable Projects Alternative (No Project Plus Alternative)

The No Project Plus Plausibly Foreseeable Projects Alternative (No Project Plus Alternative) analyzes the impacts from a scenario in which the OBMPU is not implemented, and plausibly foreseeable projects—meaning those that have undergone CEQA determinations, and have been certified—with wide reaching (regional) impacts on the Basin, are implemented. In this case, the only project that has been put forth in this manner is the Chino Basin Program. As such, this No Project Plus Alternative assesses the impacts on the Basin should the OBMPU not be implemented, where, as described under the No Project/Baseline Alternative, Chino Basin Stakeholders would continue to implement the “Baseline Alternative,” which represents the “business as usual” approach to water resources management in the Basin, and where the Chino Basin Program (CBP), as a plausibly foreseeable Project to be implemented in the Basin, does go forward.

The No Project components of this Alternative would be precisely the same scenario as that which is presented under Subsection 1.6.1, above. However, those components would be combined with the CBP, the description of which is presented below.

The CBP was submitted for by IEUA for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded \$206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 AFY of recycled water in the Chino Basin and extract the water during call years, likely during dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new AWPf and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPf for Chino Basin use to provide for an exchange of SWP supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits. Additionally, new water stored in the Chino Basin would also enhance emergency response water supply

availability for IEUA and other participating agencies during crises such as flood or seismic events that disrupt imported water infrastructure.

IEUA's partner and the State Water Project Contractor that will facilitate the exchange for the CBP is Metropolitan Water District of Southern California (MWD). The Program would rely on water transfer agreements through MWD. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD. MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years

The CBP proposes the following facilities to allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure:

- 16 injection wells (12 duty, 4 standby)
- The CBP would install a maximum of 17 extraction wells.
- 4 monitoring wells
- Use of existing wells including the following:
 - Use of existing Rialto Pipeline
 - Use of up to 9 existing member agency wells
 - Use of existing Agua de Lejos WTP Clearwell (HGL 1,632 ft)
 - Use of existing Lloyd Michael WTP Clearwell
- A total of about 30 miles or 158,400 lineal feet (LF) of various types of pipelines (potable, recycled water, and brine pipelines)
- A maximum of 6 that would be between 12" and 72" in size turnouts
- A circular, prestressed tank storage reservoir with a maximum capacity of 5 MG with possible and in-conduit hydropower facility
- Up to 4 pump stations serving various PUT and TAKE facilities. One pump station would serve PUT facilities, while up to three pump stations would support TAKE facilities.
- An AWPf at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity 15,000 AFY
- 3 wellhead treatment facilities at a location that has yet to be selected up to 3,000 AFY each, with no more than 6,000 AFY treated in total through biological or other wellhead treatment mechanisms

Additionally, the proposed CBP would require an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate the additional managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) required to operate the CBP. As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as existing known Watermaster stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to

580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

In terms of Basin Management, the No Project Plus Alternative is compared to the OBMPU in terms of ability to accommodate the future increased demand for local water supplies, ability to minimize Basin-wide water quality concerns (e.g., emerging contaminants, salinity), and equitably and effectively manage the Chino Basin. As such, the No Project Plus Alternative assumes that, even with the imported water offsets put forth by the CBP, the Watermaster Stakeholders and Basin as a whole would likely increase or maintain current reliance on imported water to accommodate increased demand for water caused by future growth.

1.6.3 Reduced Storage Alternative

One component of the OBMPU that has been analyzed as part of the whole of the OBMPU in this RDSEIR is the 2023 Storage Framework Investigation (SFI). The 2023 SFI is meant to provide a technical analysis of the hydrologic impacts of Storage and Recovery Programs that are contemplated in the 2020 OBMPU Project Description. Pursuant to this objective, the scope of work to develop the 2023 SFI is to (i) define Storage and Recovery Program scenarios based on the 2020 OBMPU Project Description and (ii) evaluate the response of the Chino Basin to the scenarios for MPI and adverse impacts.

The Baseline Scenario for the 2023 SFI (Appendix 6b) is the planning scenario simulated in the evaluation of the 2021 Addendum, the Local Storage Limitation Solution (LSLS) with two minor changes: (i) updated locations of three planned wells operated by the Cucamonga Valley Water District (CVWD), and (ii) increased discharge at the Western Riverside County Recycled Water Treatment Plant (WRCRWTP) from zero to 2,500 afy to accommodate the proposed diversions due to the potential operations of the Chino Basin Program (CBP).² This scenario comprises the Parties' projected use of storage and the assumed operations of the DYYP from Fiscal Year (FY) 2019 through FY 2028. The projection scenario is based on planning data starting in FY 2019 and does not reflect historical data. As shown in the black line on **Figure 4.7-9**, the maximum volume of Managed Storage that is projected to be used in the Baseline Scenario is about 700,000 af, which occurs in FY 2025. Therefore, Operational Band 1 is defined by using Managed Storage up to 700,000 af.

The Reduced Storage Alternative analyzes the impacts from Increased Use of Existing Facilities (Scenario 2A of the 2023 SFI), which includes the Baseline Scenario, assumed CBP operations,³ and the increased use of existing facilities to enable an additional 100,000 af of Storage and Recovery above the assumed CBP operations. Thus, this Alternative analyzes the increased SSC to 800,000 af going forward.

Table 5-1 outlines the allocation of puts and takes among existing facilities and new facilities for storage and recovery program Scenario 2a (i.e., Reduced Storage Alternative).

² While the CBP PEIR is presently undergoing CEQA litigation as of the publication of this RDSEIR, the CBP is a reasonably foreseeable project that would be implemented within the Basin. Thus, for forecasting purposes, the projected CBP Storage and Recovery operations were utilized to develop model scenarios in which 800,000 af and 900,000 af of storage could be achieved. However, should the CBP be withdrawn from implementation, this analysis assumes that a combination of other Storage and Recovery projects (such as ASR wells, recharge basins, etc.) analyzed as part of the OBMPU and outlined in the Project Description under Summary of All Facilities could be implemented to achieve the same or similar results.

³ Ibid.

Table 5-1
ALLOCATION OF PUTS AND TAKES AMONG EXISTING AND NEW FACILITIES FOR STORAGE AND RECOVERY PROGRAM SCENARIO 2A (I.E. ALTERNATIVE 1)

	Operational Band 2 (up to 800,000 af)
	Scenario 2a (Alternative 1)
Cumulative storage used in each scenario (af)	800,000
Annual Put ⁴	25,000
Existing in-lieu capacity used	12,500
Existing spreading basin recharge capacity used	9,760
Existing ASR capacity used	2,740
Total Existing PUT capacity used	25,000
Annual Take ⁵	33,333
Take through existing facilities	33,333

1.6.4 Discussion

The No Project/Baseline Alternative to the proposed Project would be feasible but would not meet any of the fundamental Project objectives outlined in the OBMPU Project Description, which are to increase the water supplies available for the Chino Basin Parties and to improve water supply reliability in accordance with the current understanding of the Basin hydrology. The No Project/Baseline Alternative has comparable environmental impacts for all of the resource issues, except for those related to hydrology/water quality. The No Project/Baseline Alternative is forecast to have significant unavoidable adverse impacts to Hydrology and Water Quality, and would cause greater significant unavoidable adverse impacts under Utilities and Service Systems than the OBMPU. Further, although the No Project/Baseline Alternative would reduce potentially significant impacts identified in this RDSEIR as compared to the proposed Project, it would lead to greater impacts in some other areas, including Hydrology and Water Quality and Utilities and Service Systems. In the final analysis, the No Project/Baseline Alternative clearly cannot be considered the environmentally superior alternative to the proposed Project from a total environmental standpoint, because the environmental damage from implementing it is forecast to cause a significant adverse impact on Basin hydrology and water quality when compared to implementing the OBMPU.

Under the No Project/Baseline Alternative, the ability to attain the goals and objectives as described under Chapter 3, Project Description, in this RDSEIR would be virtually eliminated. The Stakeholders in the Basin would be hampered in their ability to collectively correct and address drivers and trends in today's water management framework that may challenge the ability of the Parties to protect their collective interests in the Chino Basin and their water supply reliability. On that basis, the No Project/Baseline Alternative is inferior to the proposed Project because it would not obtain most of the Project's basic objectives.

CEQA Guidelines Section 15126.6(b), indicate that a list of reasonable alternatives must be developed and considered by the lead agency. Elimination of potential environmental impacts of the proposed Project should be considered when developing potential alternatives. As evaluated

⁴ PUTs (the components to recharge water to the Chino Basin)

⁵ TAKEs (the components to extract groundwater and convey potable water supply)

in Chapter 2 of this EIR, the significant impacts of the Proposed Project are: Air Quality, Biological Resources, and Utilities and Service Systems.

The No Project Plus Alternative to the proposed Project would be feasible but would only meet the OBMPU objective of protecting and enhancing Basin water quality, as the CBP Product Water would be of higher quality in some cases than the ambient water quality of the Basin, thereby enhancing water quality. However, other fundamental Project objectives outlined in the OBMPU Project Description such as increasing the water supplies available for the Chino Basin Parties would not be achieved by the No Project Plus Alternative. As with the No Project/Baseline Alternative, the No Project Plus Alternative has comparable environmental impacts for all of the resource issues to the Project, except for those related to Hydrology and Water Quality. The No Project Plus Alternative is forecast to have significant unavoidable adverse impacts to Hydrology and Water Quality, and would cause greater significant unavoidable adverse impacts under Utilities and Service Systems than the OBMPU. Further, although the No Project Plus Alternative would reduce potentially significant impacts identified in this RDSEIR as compared to the proposed Project, it would lead to greater impacts in some other areas, including Hydrology and Water Quality and Utilities and Service Systems. In the final analysis, the No Project Plus Alternative cannot be considered the environmentally superior alternative to the proposed Project from a total environment standpoint, because the environmental damage from implementing it is forecast to cause a significant adverse impact when compared to implementing the OBMPU.

Comparatively, while the Reduced Storage Alternative could be viewed as the environmentally superior alternative—given that impacts are lessened in all categories except Hydrology and Water Quality—the Reduced Storage Alternative would only partially meet two of the Project objectives as described in Chapter 3, Project Description of this RDSEIR. The Reduced Storage Alternative has comparable environmental impacts for all of the resource issues, except to water quality under Hydrology and Water Quality. This is because the Reduced Storage Alternative would not install any new facilities designed to treat water within the Basin, and therefore, there is a greater potential for degradation of water quality from TDS and Nitrate concentration. While mitigation is available to minimize degradation of water quality, the cost to accomplish the minimization of high concentrations of TDS and Nitrate could be significantly greater than under the OBMPU, and thereby would not meet the OBMPU objective to Equitably Finance the OBMP. The Reduced Storage Alternative would minimize impacts under Biological Resources and Air Quality, and the extent to which this Alternative would minimize impacts is great enough to eliminate significant impacts under both issues. The Reduced Storage Alternative does not cause a significant impact under any additional categories when compared to the OBMPU, and would lessen the significant impacts that were identified under the OBMPU.

A summary of impacts of the alternatives compared to the proposed OBMPU is included in **Table 1.6-1** below, pursuant to CEQA Guidelines Section 15126.6(d).

1.7 AREAS OF CONTROVERSY

1. Unused recycled water supplies
2. Regional benefits vs benefits of participating agencies (cost related)
3. Groundwater storage/storage and recovery program

Unused Recycled Water Supplies

IEUA produces a supply of recycled water from treating wastewater at its water recycling plants, with the current following uses for the IEUA produced recycled water: direct use by IEUA customer

agencies, surface spreading for groundwater recharge, or is released to the Chino Creek and Cucamonga Creek, which eventually reaches the Santa Ana River. IEUA recycled water is used by its customer agencies as direct use and they are allocated pro-rata shares of the recycled water that is recharged. Some of the IEUA customer agencies do not utilize all the available recycled water supply for direct use due to a lack of potential customer uses, facilities to convey recycled water to end users, and funding opportunities. This unused recycled water supply makes up the plant effluent that is discharged to the Chino Creek and Cucamonga Creek, which eventually reaches the Santa Ana River. Additionally, recently, a portion of the unused recycled water supply that is currently discharged is planned to be dedicated by participating IEUA customer agencies as the source water for the IEUA's future advanced water purification facility (AWPF). As the interest in maximizing the use of available recycled water continues to grow, there are issues of concern as to how the remaining available supplies are put to use.

Watermaster Stakeholder Benefits

The OBMPU offers both regional benefits and stakeholder benefits through the update to the Program that would enhance management of the Chino Basin. Stakeholders that utilize the OBMPU as a framework by which to implement future projects would benefit from the streamlined process created as part of this RDSEIR, and the supporting documentation herein. Stakeholders as a whole would benefit as the OBMPU has a potential to:

- Enable a more sustainable and reliable water supply within the Chino Basin as a result of the expanded safe storage capacity;
- Enable the Watermaster and stakeholders to better manage the Chino Basin in the face of the changing climate;
- Enable the Watermaster and Stakeholders to maintain hydraulic control, and minimize subsidence, prevent material physical injury (MPI), and manage plume movement through extensive monitoring and mitigation efforts;
- Enable expanded infrastructure to deliver water and recycled water throughout the Basin, thereby expanding access to these water supplies; and,
- Establish a foundation for meeting future total dissolved solids and nutrient management objectives within the Chino Basin by enhancing water quality, amongst other things.

The disbursement of the regional benefits between Watermaster Stakeholders resulting from OBMPU implementation remains a topic that continues to evolve.

Groundwater Storage/Storage and Recovery Program

Groundwater storage is recognized in the Chino Basin Judgment as an important asset. Implementation of Storage and Recovery Programs will require an application with the Chino Basin Watermaster. Storage and Recovery Applications for specific projects will identify mitigation measures that would protect the Basin from Material Physical Injury (MPI), addressing any potential effects on Safe Yield, and would ensure that hydraulic control is maintained. The implementing agency will be required to adhere to these mitigations in order to carry out operations of the given Storage and Recovery Project within the Basin. Allocation of storage within the Basin remains a topic of concern, as storage and recovery programs by Watermaster Stakeholders are desired because groundwater storage has become an important resource for long term supply planning within the Basin.

1.8 SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DISCUSSED IN THIS DRAFT EIR

Table 1.5-1 provides a summary of all impacts and mitigation measures identified in the detailed environmental evaluation presented in Chapter 4 of this RDSEIR. This summary is meant to provide a quick reference to proposed Project impacts, but the reader is referred to Chapter 4 to understand the assumptions, method of impact analysis and rationale for the findings and conclusions presented in **Table 1.6-1**.

**Table 1.5-1
SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DISCUSSED IN THIS DRAFT SEIR**

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
AIR QUALITY		
AQ-1	<u>Tier 4 Equipment</u> . All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.	Implementing Agency
AQ-2	<u>Fugitive Dust Control</u> <ul style="list-style-type: none"> • Apply soil stabilizers or moisten inactive areas. • Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day). • Cover all stock piles with tarps at the end of each day or as needed. • Provide water spray during loading and unloading of earthen materials. • Minimize in-out traffic from construction zone • Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard • Sweep streets daily if visible soil material is carried out from the construction site. 	Implementing Agency
AQ-3:	<u>Exhaust Emissions Control</u> <ul style="list-style-type: none"> • Utilize well-tuned off-road construction equipment. • Establish a preference for contractors using Tier 3 or better rated heavy equipment. • Enforce 5-minute idling limits for both on-road trucks and off-road equipment 	Implementing Agency
Impact Description		Impact After Mitigation
<p>As described in Subchapter 4.2, after implementation of the recommended mitigation measures, neither construction nor operation of the proposed OBMPU would result in the exceedance of thresholds for criteria pollutants (ROG, CO, SO₂, PM₁₀, or PM_{2.5}). Furthermore, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project. When applied to air quality emissions, as stated above, air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. However, the offset in energy use on a regional basis from storing water in the Basin, rather than importing water to meet demand, would minimize air emissions attributable to energy sources on a more regional or statewide level. Without mitigation, NO_x emissions would exceed the SCAQMD emissions during the given "worst case" day of construction, such that NO_x emissions could be considered both significant and unavoidable at a project-specific and cumulative level. Furthermore, the air quality impact for Project-related LST impacts, including construction of all of the OBMPU facilities, are considered to be less than significant; and, sensitive receptors would not be subject to a significant air quality impact during Project construction or operations. As a result of the exceedance of NO_x Thresholds, the proposed project would not be consistent with the AQMP without the implementation of mitigation.</p>		<p>As described in Subchapter 4.2, mitigation would achieve emissions minimization through enhanced dust control measures and through the use of reasonably available control measures for diesel exhaust. Additionally, mitigation is recommended to reduce the severity of the NO_x construction-generated emissions impacts to the greatest extent feasible. However, even after implementation of Mitigation Measure AQ-1, the modeled construction scenario would not fall below significance thresholds for construction-source emissions of NO_x. There is a potential for the implementation of a significant number and type of OBMPU facilities to be constructed on the given "worst day" of construction such that NO_x emissions would be considered both significant and unavoidable at a Project-specific and cumulative level. As a result of exceeding the NO_x emissions threshold, the Program would not be consistent with the AQMP, and therefore, would result in a significant and unavoidable impact thereof. While the air quality impact for Program-related Localized Significance Threshold (LST) impacts and odor impacts are considered to be less than significant, and sensitive receptors would not be subject to a significant air quality impact during Program construction or operations, a significant and unavoidable impact to air quality as a result of construction-related NO_x emissions will result from implementing the proposed Program.</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>BIOLOGICAL RESOURCES</p> <p>BIO-1 <u>Pre-Construction Consultations.</u> All future OBMPU projects shall be required to consult with a biologist¹ to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a biologist, in any case in which a future OBMPU project will affect undeveloped land, or in which the Implementing Agency seeks State Funding, site surveys shall be conducted by a biologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, all work must stop in the area until the following subsequent mitigation actions are taken:</p> <ol style="list-style-type: none"> The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted when needed in areas that were not previously surveyed because of access or timing issues or project design changes. Pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. 	<p>Implementing Agency</p>
<p>BIO-2 <u>Biological Resources Management Plan (BRMP).</u> Biological Resources Management Plan (BRMP): During final design and prior to issuance of construction permits each specific infrastructure improvement project, a BRMP shall be prepared to:</p> <ul style="list-style-type: none"> Assemble the biological resources mitigation measures to be applied for each specific infrastructure improvement in the future; Specify the terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility; Discuss habitat replacement and revegetation, protection during ground-disturbing activities, performance (growth) standards, maintenance criteria, and monitoring requirements for temporary and permanent native plant community impacts. <p>The parameters of the BRMP will be formed with the mitigation measures from subsequent CEQA documentation (if required), including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.</p>	<p>Implementing Agency</p>
<p>BIO-3 <u>Burrowing Owl.</u> All future OBMPU projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department</p>	<p>Implementing Agency</p>

¹ Biologist throughout this document means: a person holding a bachelor's degree in biology, or biologist certified by CDFW.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed in coordination with CDFW and submitted to the Implementing Agency that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.</p>	
<p>BIO-4 <u>Post Construction Return to Natural State.</u> As part of completion of the final site development, after ground disturbance has occurred within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management at the specific site, which shall be implemented in cooperation with regulatory agencies and with oversight from a biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.</p>	Implementing Agency
<p>BIO-5 <u>Clean Construction Equipment.</u> During construction, equipment will be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials will be removed from construction equipment when working in native plant communities, near special-status plant communities, or in areas where special-status plant species have been identified.</p>	Implementing Agency
<p>BIO-6 <u>Contractor Education and Environmental Training.</u> Personnel who work onsite will attend a Contractor Education and Environmental Training session conducted by a biologist. The environmental training will cover general and specific biological information on the special-status plant species that may be present near the construction site, including the distribution of the resources, the recovery efforts, the legal status of the resources, and the penalties for violation of project permits and laws. The Contractor Education and Environmental Training sessions will be given before the initiation of construction activities and repeated, as needed, when new personnel begin work within the project limits. Daily updates and synopsis of the training will be performed during the daily safety ("tailgate") meeting. All personnel who attend the training will be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training, and such tracking sheets shall be maintained for inspection by the Implementing Agency.</p>	Implementing Agency
<p>BIO-7 <u>Biological Monitoring.</u> Biological Monitor to Be Present during Construction Activities in areas where impacts to Riparian, Riverine, Wetland, Endangered Species or Endangered Species Critical habitat occurs. A biological monitor (or monitors) will be present onsite during construction activities that could result in direct or indirect impacts on sensitive biological resources (including listed species) and to oversee permit compliance and monitoring efforts for all special-status resources.</p> <p>A biological monitor (biologist) is any person who has a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field and/or has demonstrated field experience in and knowledge about the identification and life history of the special-status species or jurisdictional waters that could be affected by project activities. The biological monitor(s) will be responsible for monitoring the Contractor to ensure compliance with the Section 404 Individual Permit, Section 401 Water Quality Certification and the Lake and Streambed Alteration Agreement. Activities to ensure compliance would include performing construction-monitoring activities, including monitoring environmental fencing, identifying areas where special-status plant species are or may be present, and advising the Contractor of methods that may minimize or avoid impacts on these resources. Biological monitor(s) will be required to be present in all areas during ground disturbance activities and for all construction activities conducted within or</p>	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
adjacent to identified Environmentally Sensitive Areas, Wildlife Exclusion Fencing, and Non-Disturbance Zones as defined by the project biologist.	
BIO-8 <u>Food and Trash</u> . All food-related trash items (e.g., wrappers, cans, bottles, food scraps) will be disposed of in closed containers and removed at least once a week from the construction site.	Implementing Agency
BIO-9 <u>Rodenticides and Herbicides</u> . Use of rodenticides and herbicides in the project footprint will be restricted at the direction of the project biologist. This measure is necessary to prevent poisoning of special-status species and the potential reduction or depletion of the prey populations of special-status wildlife species. Where pesticides must be used, they must be used in full accordance with use instructions for the particular chemical and at the direction of the project biologist.	Implementing Agency
BIO-10 <u>Wildlife Exclusion Fencing</u> . Exclusion barriers (e.g., silt fences) will be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas as defined by the project biologist prior to the commencement of construction activities to restrict special-status species from entering the construction area during construction. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW, as appropriate. Clearance surveys will be conducted for special-status species after the exclusion fence is installed in compliance with USFWS and/or CDFW requirements. The project biologist shall determine the frequency in which clearance surveys will be conducted to determine the efficacy of the exclusion fencing.	Implementing Agency
BIO-11 <u>Equipment Staging Areas</u> . Prior to the commencement of construction, the Implementing Agency shall identify staging areas for construction equipment to be utilized during construction that will be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors.	Implementing Agency
BIO-12 <u>Erosion Control Material Exclusions</u> . Plastic mono-filament netting (erosion-control matting) or similar material will <u>not</u> be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds will be used as substitutes.	Implementing Agency
BIO-13 <u>Vehicle Traffic</u> . During ground-disturbing activities, project-related vehicle traffic will be restricted within the construction area to established roads, construction areas, and other designated areas to prevent avoidable impacts. Access routes will be clearly flagged; traffic outside of the designated areas will be prohibited. Furthermore, the use of motorized vehicles within sensitive habitat areas and linkages shall be prohibited except for crucial maintenance and/or construction activities.	Implementing Agency
BIO-14 <u>Entrapment Prevention</u> . All excavated, steep-sided holes or trenches more than 8 inches deep will be covered at the close of each working day with plywood or similar materials, or a minimum of one escape ramp constructed of earth fill for every 10 feet of trenching will be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. All culverts or similar enclosed structures with a diameter of 4 inches or greater will be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material will be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.	Implementing Agency
BIO-15 <u>Weed Control Plan</u> . Prior to the commencement of construction, a Weed Control Plan will be developed for the Implementing Agency by the project biologist to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics will be addressed:	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<ul style="list-style-type: none"> • A Schedule for noxious weed surveys shall be addressed. • Weed control treatments shall be addressed and ultimately implemented by the Implementing Agency, including permitted herbicides, and manual and mechanical methods for application; herbicide application will be restricted in Environmentally Sensitive Areas (as defined by the project biologist). • The timing of the weed control treatment for each plant species shall be addressed. • Fire prevention measures shall be addressed. <p>The Implementing Agency shall maintain records demonstrating implementation of the Weed Control Plan and shall make those records available to inspection by the Implementing Agency upon request..</p>	
<p>BIO-16 <u>Dewatering/Water Diversion Plan.</u> If construction is planned to occur where there is open or flowing water, prior to the commencement of construction the Implementing Agency shall submit to the Implementing Agency a Dewatering Plan prepared in coordination with the resource agencies (e.g., COE, SWRCB/RWQCB, and CDFW, as appropriate). The Dewatering Plan shall identify how open or flowing water will be routed around construction areas, such as through the creation of cofferdams. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures shall be implemented to avoid and lessen impacts on jurisdictional waters during construction:</p> <ul style="list-style-type: none"> • The cofferdams, filter fabric, and corrugated steel pipe are to be removed from the creek bed after completion of the project. • The timing of work within all channelized waters is to be coordinated with the regulatory agencies. • The cofferdam is to be placed upstream of the work area to direct base flows through an appropriately sized diversion pipe. The diversion pipe will extend through the Contractor's work area, where possible, and outlet through a sandbag dam at the downstream end. • Sediment catch basins immediately below the construction site are to be constructed when performing in-channel construction to prevent silt- and sediment-laden water from entering the main stream flow. Accumulated sediments will be periodically removed from the catch basins. 	Implementing Agency
<p>BIO-17 <u>Permanent Water Diversion Projects.</u> The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. The IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or shall implement a comparable and equally effective monitoring program in its place to enable OBMPU Implementing Agencies to utilize the monitoring data to address and mitigate any future potential adverse impacts to Prado Basin Habitat due to implementation of the OBMPU. The Implementing Agency shall conduct an evaluation of each water diversion projects associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of such diversion projects.</p>	Implementing Agency
<p>BIO-18 <u>Streambed Alteration.</u> Any future project that must discharge fill into a channel or otherwise alter a streambed shall be minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or</p>	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1, and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the Implementing Agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.</p>	
<p>BIO-19 <u>Jurisdictional Water Preconstruction Surveys</u>: A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with BIO-18.</p>	<p>Implementing Agency</p>
<p>BIO-20 <u>Nesting Birds</u>. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 1 of a given calendar year, depending on the species). Alternatively, a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction can be conducted by a qualified biologist no more than 14 days prior to initiation of ground disturbance; construction may only commence once a biologist has demonstrated that no nesting birds are present at a given site. The Implementing Agency shall coordinate with the CDFW to develop nesting bird survey protocol. The results of the nesting bird survey will be documented in a report submitted by the avian biologist to the Implementing Agency. The Implementing Agency, in coordination with CDFW and USFWS (as appropriate), may designate nest buffers outside of which construction activities may be allowed to proceed. There are no standard nest buffers specified in the Migratory Bird Treaty Act (MBTA) or within the California Fish and Game Code. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project and site-specific basis.</p>	<p>Implementing Agency</p>
<p>BIO-21 <u>Tree Preservation</u>. Maximize the preservation of individual oak, sycamore and walnut trees within proposed OBMPU facility sites. Preservation is defined within this measure as follows: existing oak, sycamore and walnut trees within a given project site shall be retained within the site to the maximum extent feasible except where their preservation would interfere with functional and reasonable project design. Where the preservation of individual trees is not possible, the guidelines set forth in MM AES-4 regarding tree preservation and adherence to local ordinances thereof shall be followed.</p>	<p>Implementing Agency</p>
<p>BIO-22 <u>MSHCP Planning</u>. Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance,</p>	<p>Implementing Agency</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP.	
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.8-1 Place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat area, and protect the integrity of habitat linkages. As part of this emphasis, incorporate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of pipelines and other facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific project.</p>	Implementing Agency
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.8-2 When determining which portion of a facility site should be retained in open space, give emphasis to the preservation of habitat areas and linkages, avoiding destruction of viable, sensitive habitat areas and linkages as a trade-off for preserving open space for purely aesthetic purposes. Further, whenever feasible, avoid impacts and disturbances to individuals and species considered sensitive by jurisdictional agencies.</p>	Implementing Agency
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.8-3 Require facility designs to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions.</p> <ul style="list-style-type: none"> a. Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources. b. Within riparian areas and wetlands subject to state or federal regulations (e.g., blue line streams); riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, faunal resting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in a measurable reduction in the reproductive capacity of sensitive biotic resources. c. Within habitats of plants listed by the CNDDDB or CNPS as "special" or "of concern," require that new facilities not result in a reduction in the number of these plants, if they are present. 	Implementing Agency
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.8-6 Require the establishment of buffer zones adjacent to areas of preserved biological resources. Such buffer zones shall be of adequate width to protect biological resources from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identifies resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer area are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource.</p>	Implementing Agency
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.8-7 Require conservation or open space easements, granting of development rights, or other similar protections over biological habitats, and habitat linages being preserved in their natural state.</p>	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
<i>2000 OBMP Mitigation Measure</i>		Implementing Agency
4.8-9	Mitigation measures should be determined on a project-by-project basis. Potential mitigation measures may include avoidance or minimization of impacts. One means of minimizing impacts to sensitive plants, for example, has included transplanting individuals out of harm's way.	
<i>2000 OBMP Mitigation Measure</i>		Implementing Agency
4.8-11	Mitigation must be designed so that development of a given project will effectively benefit the species. The 2081 and 10(a) permits should be complimentary of one another to avoid conflicts between State and federal mitigation requirements. These permits will likely require land purchase, endowment funds, fencing funds, and mitigation measures. Section 7 consultations also usually include a land acquisition component.	
Impact Description		Impact After Mitigation
<p>As described in Subchapter 4.3, development of the OBMPU, because the specific locations for future OBMPU Projects are not presently known, there is a potential that a future OBMPU facility may be developed in an area containing significant biological resources that cannot be avoided. Though substantial mitigation is provided to minimize impacts, there are certain areas within the overall project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources.</p>		<p>Because the individual projects implemented throughout the Program could result in potentially significant impacts on biological resources, mitigation measures were designed to avoid or reduce the impacts on these resources. The mitigation strategy includes avoidance of impacts on biological resources to the extent possible: field verification of sensitive resources and filling data gaps; the formulation of alternative designs (minimization and avoidance); limiting modifications to access and egress points to facilities (minimization); designing cuts and fills to minimize the area of disturbance; and where necessary, and compensation to offset unavoidable impacts to individual species or sensitive habitat. Specific biological resource mitigation measures will be selected from those listed above based on specific resources directly or indirectly impacted by a future specific project. Given that there are certain areas within the overall project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. These areas are highly dependent upon the site selected and final design of each Program goal, i.e., individual project, and if those actions cannot be reasonably or feasibly offset, the ultimate design of these Program improvements must be based on sound engineering. In each case where most environmental impacts cannot be fully avoided, it may be possible to avoid certain impacts by designs that avoid such impacts through sound mitigation-based planning at each step. Given the speculative nature of the locations of proposed OBMPU Project, there is a potential that an individual OBMPU facility may be developed and have operations within an area containing biological resources that cannot be avoided, even at the design level.</p> <p>A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
	cause an unavoidable significant adverse or cumulatively considerable impact on biological resources. Analysis of site-specific biological resource impacts can only occur and thereby be identified, once a site is defined or in the case of water diversions, once a water diversion project is identified. Thus, the proposed Project is forecast to cause significant unavoidable adverse impacts to biological resources.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>CULTURAL RESOURCES – ARCHAEOLOGICAL</p> <p>CUL-1: <u>Cultural Mitigation Level 1</u>. Where a future discretionary project requiring additional CEQA review is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow on cultural resources report (Phase I Cultural Resources Investigation) unless the Implementing Agency is seeking State funding, in which case the Implementing Agency must prepare a Phase I Cultural Resources Investigation to satisfy State CEQA-plus requirements.</p> <p>Where a Phase I Cultural Resources Investigation is not required, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:</p> <ul style="list-style-type: none"> Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. An archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act. 	Implementing Agency
<p>CUL-2: <u>Cultural Mitigation Level 2</u>. Where a future discretionary project requiring additional CEQA review is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, the agency implementing the OBMPU project shall complete the appropriate cultural resources report(s) (Phase I, II, III, and/or IV Cultural Resources Investigation) regardless of whether the Implementing Agency is seeking State funding.</p> <p>Where a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given OBMPU project:</p> <p>1. Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate:</p> <ul style="list-style-type: none"> Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet; Historical background research, geoarchaeological profile analysis, and paleontological literature review; Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups; 	Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
<ul style="list-style-type: none"> Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions; Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases. <p>2. Phase II (Evaluation): If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:</p> <ul style="list-style-type: none"> Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals; In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation; Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples; Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted. <p>3. Phase III (Mitigation): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:</p> <ul style="list-style-type: none"> Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation; Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public; Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question. <p>4. Phase IV (Monitoring): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate, as put forth in MMs TCR-1 through TCR-3.</p>	
<p>CUL-3: <u>Cultural Report Submission to Information Centers.</u> After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the</p>	<p>IEUA and Watermaster, Watermaster</p>

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research procedures shall be prepared by the Implementing Agency and submitted to South Central Coastal Information Center (SCCIC), Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM), as appropriate and in addition to the Implementing Agency for the project, for permanent documentation and easy references by future researchers.	Stakeholders/Implementing Agencies
<p>CUL-4: Early SHPO Consultation. Prior to commencement of construction of OBMPU related facilities, the Watermaster and IEUA shall confer with the Watermaster and Watermaster Stakeholders to establish a programmatic agreement with SHPO that will stipulate a set of mutually accepted guidelines that address research procedures and the types of potential cultural resources that may be excluded from further consideration before OBMPU projects are implemented, such as common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Once this agreement has been made with SHPO, Watermaster shall retain the agreement in the Project file, and shall ensure that all Stakeholders are given copies of the agreement for reference on future OBMPU projects. For OBMPU projects that are in development prior to an agreement with SHPO, all types of cultural resources shall be considered by the professionals assessing historical resources within the project footprint; regardless, the steps provided in MM CUL-2 shall be followed to assess and minimize impacts to sensitive cultural resources within a given site.</p>	IEUA, Watermaster, or other Implementing Agency
<p><i>2000 OBMP Mitigation Measure</i></p> <p>4.14-6 Based solely upon this level of investigation and at this stage of project planning, it would be premature to propose specific mitigation measures. However, certain options can be presented presupposing a general level of knowledge regarding impacts. These options can be utilized to avoid impacts upon the cultural resources - the preferred result - or to lessen adverse effects. It should be emphasized that these options are not the only ones that may be applied. As such, these measures are not recommended as conditions of Project approval but are included for the Authority's consideration and implementation as appropriate.</p> <ul style="list-style-type: none"> a. Conduct a comprehensive historic building survey which is integrated with economic development programs; b. Adopt a preservation ordinance and create a preservation board; c. Ensure other planning programs, plans, and ordinances are compatible to the historic preservation goals and policies; d. Direct existing funding sources and loan programs to historic neighborhoods in need of revitalization; e. Provide incentives and direction encouraging preservation and revitalization; and f. Develop ongoing programs for enhancing public appreciation of historic resources. g. Project Redesign <p>A proposed project may be redesigned in either of two ways:</p> <ul style="list-style-type: none"> (1) Outside of site boundaries, thus avoiding impact to the site; or (2) Restricting impacts to those areas of a site where previous impacts have already destroyed the integrity and research potential. <p>Other options may also apply and may include capping of the site, relocation of structures, and integration of extant buildings into project design</p>	Implementing Agency

Impact Description	Impact After Mitigation
<p>As described in Subchapter 4.4, the Chino Basin is a large expanse of area that may contain historical, archaeological, or paleontological resources. As such, future OBMPU projects may be developed within sites that contain such resources. Since the proposed project is at the programmatic level, specific locations for many of the proposed OBMPU projects have not yet been determined. As such, substantive mitigation has been identified to minimize impacts to cultural resources.</p>	<p>Mitigation measures required to reduce cultural resource impacts would: exclude highly disturbed sites from requiring further cultural resource evaluation except to adhere to procedures pertaining to the treatment of accidental discoveries, unless the Implementing Agency is seeking state funding for the project; ensure that future OBMPU Projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow on Phase I Cultural Resources Investigation and enforces several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located; ensure that a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM for projects containing cultural resources; and, set a precedent for future OBMPU Projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. As described in Subchapter 4.4, no unavoidable significant impact to cultural resources will result from implementing the proposed Project.</p>

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<p>ENERGY OBMPU Mitigation Measures AQ-1, AQ-3, GHG-1, and GHG-2 further minimize impacts under this issue.</p>	<p>N/A</p>
<p><i>2000 OBMP Mitigation Measure</i> 4.13-1 Developers in the proposed Project Area should coordinate with SCE and other power companies regarding the location and phasing of required on-site electrical facilities.</p>	<p>Implementing Agency</p>
<p><i>2000 OBMP Mitigation Measure</i> 4.13-3 Onsite electrical lines should be installed underground.</p>	<p>Implementing Agency</p>
<p><i>2000 OBMP Mitigation Measure</i> 4.13-4 Project planners and architects should consult with SCE regarding current energy conservation techniques.</p>	<p>Implementing Agency</p>
<p><i>2000 OBMP Mitigation Measure</i> 4.13-5 Project planners and architects should also consider the use of energy-efficient architecture and landscape design concepts which will work to reduce the long-term demands for fossil fuels. Such measures should include the following:</p> <ul style="list-style-type: none"> Architectural planning and design, to the extent feasible, should take full advantage of such concepts as natural heating and/or cooling through sun and wind exposure and solar energy collection system opportunities when practical; and Landscape design should be tailored, where feasible, to the use requirements of individual structures, with the intent to minimize heat gain in summer, maximize heat gain in winter, and promote air circulation for heating and cooling purposes. 	<p>Implementing Agency</p>

Impact Description	Impact After Mitigation
<p>As discussed in Subchapter 4.5, Project construction would not result in the inefficient, wasteful or unnecessary consumption of energy. In fact, the proposed Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements which would result in a more efficient process and consequently reduce a wasteful use of energy. The energy demands of the Project can be accommodated within the context of available resources and energy delivery systems, which may also include the incorporation of renewable energy generation and/or storage equipment depending on the nature of the OBMPU facility and local constraints. Additionally, as the grid moves towards carbon neutrality and renewable sources of energy, even for facilities where incorporation of renewable energy generation and/or storage features are not feasible, the Project will automatically incorporate these energy sources by way of state regulatory schemes and the state's long-term climate goals and strategies. Further, as the jurisdictions in the Chino Basin begin to implement their own initiatives, including but not limited to their own Climate Action Plans (CAP), this will further push the Project towards meeting the state's goals. Finally, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive, the Project will offset energy demands that would otherwise have occurred absent implementation of the Project. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservation goals within the State of California. Furthermore, the Project includes construction activity and associated improvements and would not obstruct a state or local plan for renewable energy or energy efficiency and would be powered by electricity from the grid, and would therefore be more energy efficient and rely on renewable energy as the grid moves towards more efficiency and renewable energy sources.</p>	<p>While no mitigation measures are required to ensure a less than significant impact under any issue under Energy, mitigation measures designed to reduce energy consumption from construction and operation of the OBMPU are identified in Subchapters 4.2, Air Quality, and 4.6, Greenhouse Gas, of this RDSEIR (Mitigation Measures GHG-1 and GHG-2, and AQ-1 and AQ-3, specifically address this issue, as do 2000 OBMP Mitigation Measures 4.13-1, 4.13-3, 4.13-4, and 4.13-5). These mitigation measures would: incorporate construction related GHG emission reduction measures identified by the CAPCOA in its 2010 report, Quantifying Greenhouse Gas Mitigation Measures, into OBMPU construction and operational activities, which includes energy consumption reduction requirement, minimize energy use through use of efficient construction equipment, and incorporate energy efficiency and coordination with SCE into the planning process for future facilities. Regardless of the above mitigation measures, the proposed OBMPU is anticipated to have a less than significant impact on energy demand and resources.</p>

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<p>GREENHOUSE GASES</p> <p>GHG-1 <u>GHG Reduction Measures During Construction</u>. Implementing Agencies shall implement all feasible GHG reduction measures during construction. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:</p> <ul style="list-style-type: none"> • Use alternative fuels for construction equipment • Use electric and hybrid construction equipment 	<p>Implementing Agency</p>

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	<ul style="list-style-type: none"> Limit construction equipment idling beyond regulation requirements Institute a heavy-duty off-road vehicle plan Implement a construction vehicle inventory tracking system 	
GHG-2	<p><u>GHG Reduction Measures During Operation.</u> Implementing Agencies shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measure:</p> <ul style="list-style-type: none"> Exceed Title 24 Building energy efficiency standards Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle 	Implementing Agency
Impact Description		Impact After Mitigation
<p>As described in Subchapter 4.6, the GHG analysis qualitatively evaluated the energy intensity of the water that would be supplied to the Basin by the facilities proposed under the OBMPU in comparison to other potential water sources, such as importing water from the California State Water Project or the Colorado River. GHG emissions associated with water conveyance from the Colorado River Deliveries or State Water Project Deliveries are substantially greater than all other water conveyance sources. Thus, qualitatively, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River. Further, if the Project's annual amortized construction emissions (683.46 MTCO₂e per year) are added to any of the local sources, the resulting annual GHG emissions would be substantially less than the amount of GHG emissions for the same amount of water conveyed from either the Colorado River Deliveries or State Water Project Deliveries. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 af would increase the availability of local water supply within the Basin, and, as demonstrated in Tables 4.6-5 and 4.6-6 found in Subchapter 4.6, the OBMPU will offset project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project.</p> <p>Additionally, the OBMPU would be consistent with the applicable goals of applicable federal, State and local plans and programs designed to reduce GHG emissions. The OBMPU would be consistent with: AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030; AB 1279's goal of</p>		<p>While no mitigation measures are required to ensure a less than significant impact under any issue under Greenhouse Gas, mitigation measures would further reduce GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and proposed to be implemented. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis. These measures would: incorporate construction related GHG emission reduction measures identified by the CAPCOA in its 2010 report, Quantifying Greenhouse Gas Mitigation Measures, into OBMPU construction and operational activities. Regardless of the above mitigation measures, the proposed OBMPU is anticipated to have a less than significant contribution to GHG emissions and would be consistent with the state and regional objectives, and thereby would not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.</p>

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reducing emissions to 85% below 1990 levels and carbon neutrality by 2045; Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; and, CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279. Thus, the proposed OBMPU would not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts are considered less than significant in this regard. The proposed Program would not result in new significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts.	

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HYDROLOGY AND WATER QUALITY	
HYD-1: <u>Pumping Sustainability Part 1</u> . Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for loss of pumping sustainability). Watermaster shall then prepare a report that describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for loss of pumping sustainability, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.	Watermaster and the Implementing Agency
HYD-2: <u>Pumping Sustainability Part 2</u> . To mitigate MPI caused by a proposed Storage and Recovery Program Application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.	Watermaster and the Implementing Agency
HYD-3: <u>New Land Subsidence Part 1</u> . Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate	Watermaster and the Implementing Agency

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the potential for new land subsidence, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.	
<p>HYD-4: <u>New Land Subsidence Part 2.</u> To mitigate the potential for new land subsidence caused by a proposed Storage and Recovery Program Application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) limiting facilities and operations of the Storage and Recovery Programs to MZ-2 and MZ-3 (2) modifying the put and take cycles to ensure the Storage and Recovery Program does not contribute to the lowering of water levels below the new land subsidence metric, (3) strategically increasing supplemental water recharge near the affected area (especially in the deep aquifer layers), (4) reducing pumping (especially in the deep aquifer layers) and providing an alternate supply to the affected Parties to ensure Parties can meet their demands in response to any pumping reductions, (5) reallocating pumping from deeper to shallower layers, (6) a combination of (1) through (5), and (7) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.</p>	Watermaster and the Implementing Agency
<p>HYD-5: <u>Net Recharge Part 1.</u> Watermaster shall estimate the reduction in net recharge and Safe Yield for each Storage and Recovery Program/Project and deduct it from water stored in each Storage and Recovery Program storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements pursuant to MM HYD-6 established by Watermaster; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on net recharge and Safe Yield, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.</p>	Watermaster and the Implementing Agency
<p>HYD-6: <u>Net Recharge Part 2.</u> To mitigate impacts on net recharge and Safe Yield caused by a proposed Storage and Recovery Program Application (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying put and take cycles to minimize reductions in net recharge, such as executing takes prior to puts, (2) reducing the total volume of takes compared to puts (i.e., "Leave Behind" water), including recharging additional water to mitigate reductions in net recharge, (3) constructing facilities in the southern part of the basin to mitigate the reduction of net recharge, (4) a combination of (1) through (3), and (5) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.</p>	Watermaster and the Implementing Agency
<p>HYD-7: <u>Hydraulic Control Part 1.</u> Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on Hydraulic Control and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-8; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement.</p>	Watermaster and the Implementing Agency

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Applications that do not adequately mitigate adverse impacts on hydraulic control, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.	
<p>HYD-8: <u>Hydraulic Control Part 2</u>. To mitigate for potential impacts on Hydraulic Control caused by a proposed Storage and Recovery Program Application (as described above under HYD-7), the Watermaster's comprehensive monitoring and modeling that assesses the state of Hydraulic Control in Chino Basin shall be used to estimate groundwater outflow from Chino North to the Santa Ana River, assess the state of Hydraulic Control, determine if the Storage and Recovery Program will cause a loss of hydraulic control, and develop mitigation requirements to mitigate for impacts to the state of Hydraulic Control. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (2) construct facilities in the southern part of the basin to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.</p>	Watermaster and the Implementing Agency
<p>HYD-9: <u>Riparian Vegetation Part 1</u>. Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on riparian vegetation and habitat in Prado Basin and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-12; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on riparian vegetation and habitat in Prado Basin, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.</p>	Watermaster and the Implementing Agency
<p>HYD-10: <u>Riparian Vegetation Part 2</u>. To mitigate for potential impacts on riparian vegetation and habitat in Prado Basin caused by a proposed Storage and Recovery Program Application (as described above under HYD-11), the Watermaster's comprehensive monitoring and modeling that assesses the state of riparian vegetation and habitat in Prado Basin shall be used to estimate groundwater levels in the Prado Basin, assess the health of the riparian vegetation and habitat, determine if the Storage and Recovery Program will adversely impact riparian vegetation and habitat, and develop mitigation requirements to mitigate for impacts to the riparian vegetation and habitat in Prado Basin. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to mitigate groundwater level impacts in Prado Basin, (2) develop areas in the Prado Basin for new riparian vegetation or habitat to offset any effects by Storage and Recovery Program operations, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.</p>	Watermaster and the Implementing Agency
<p>HYD-11: <u>Water Quality Degradation Part 1</u>. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for water quality degradation). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these</p>	Watermaster and the Implementing Agency

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<p>requirements established by the Watermaster and pursuant to MM HYD-10; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for water quality degradation, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.</p>	
<p>HYD-12: <u>Water Quality Degradation Part 2</u>. To mitigate potential water quality degradation caused by a proposed Storage and Recovery Program Application (as described above under HYD-9), the data gathered through Watermaster's comprehensive groundwater-quality monitoring shall be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells, and to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation includes but is not limited to: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.</p>	<p>Watermaster and the Implementing Agency</p>
<p>HYD-13: <u>Basin Monitoring and Mitigation</u>. Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected basin conditions assumed in the evaluation of the Storage and Recovery Program application process, compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the Storage and Recovery Program storage agreements. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the Storage and Recover Program storage agreements that will adequately mitigate MPI and related adverse impacts. The Watermaster shall continue to determine what programs and projects should be implemented or should be rejected based on their potential to contribute to or cause MPI or other adverse impacts to the Basin.</p>	<p>Watermaster and the Implementing Agency</p>
<p>HYD-14: <u>Site Stormwater Discharge BMPs</u>. Prior to the commencement of construction of any OBMPU project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), the Implementing Agency shall require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each OBMPU facility, and to control urban runoff after each OBMPU facility is constructed and the well (if approved for operation post well testing) or other OBMPU facility is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to:</p> <ul style="list-style-type: none"> • The use of silt fences or coir rolls; • The use of temporary stormwater desilting or retention basins; • The use of water bars to reduce the velocity of stormwater runoff; • The use of wheel washers on construction equipment leaving the site; • The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads; • The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and 	<p>Implementing Agency</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<ul style="list-style-type: none"> Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles. 	
<p>HYD-15: <u>Drainage Plans</u>. Prior to commencement of construction of project facilities, the Implementing Agency shall require that the Project Proponent submit either:</p> <ol style="list-style-type: none"> (1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever possible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not possible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall: (2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located. 	Implementing Agency
<p>HYD-16: <u>Operational Risk Management Plan</u>. Prior to commencement of construction of any recharge or stormwater retention basin projects as either existing or new basins, a management plan will be established to the satisfaction of San Bernardino County Flood Control District (SBCFCD), Riverside County Flood Control District (RCFCD), and/or Division of Safety. This plan shall be created specifically for each individual basin to ensure the safety of surrounding property and people from undue risks associated with water-related hazards (i.e. flooding). The Operational Risk Management Plan will firmly establish a priority of flood-control functions over and above recharge or retention-related operations. Weather forecasts of upcoming storm events will be carefully monitored and in the event of a significant forecasted storm-event, water deliveries to the basins will be ceased until further notice is received from SBCFCD or RCFCD that it is safe for deliveries to resume. Additionally, each SBCFCD or RCFCD basin's specific management plan will be developed, to coordinate flood control along with surface water recharge or retention. This mitigation measure will ensure that people and property are not subject to additional risk associated with water-related hazards in the Basin, and will allow SBCFCD or RCFCD to make full utilization of the basin's flood control capacity in the event of a storm.</p>	Implementing Agency
<p>HYD-17: <u>Brine Disposal</u>. All new and expanded water treatment facilities associated with the OBMPU shall ensure that any brine generated from the water treatment process that cannot be otherwise treated on-site is disposed of in accordance with state and local regulations—such as through disposal to a brine line (Non-Reclaimable Wastewater System, Etiwanda Wastewater Line, and Inland Empire Brine Line, etc.)—to prevent brine from being discharged into the local stormwater collection system.</p>	Implementing Agency
<p>HYD-19: <u>Recharge and Storage Basin Management Plan Actions</u>. Recharge Basins, Storage Basins, and site-specific infiltration or bioretention basins shall each be required to prepare a Management Plan that shall establish ongoing management actions required to achieve adherence to applicable water quality standards. Management actions shall be identified in the Management Plans, which shall include, but not be limited to the following:</p> <ul style="list-style-type: none"> Oxygenation of the water body; Control of sediment accumulation; and, Control of nutrients flowing into the basin to minimize the potential for a basin to support vectors. 	Implementing Agency

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
<i>2000 OBMP Mitigation Measure</i>		
4.5-1	To minimize potential ground disturbances associated with installation and maintenance of proposed monitoring equipment on existing wells, the equipment shall be installed within or along existing disturbed easements or right-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements.	Implementing Agency
<i>2000 OBMP Mitigation Measure</i>		
4.5-6	For long-term mitigation of site disturbances at OBMP facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or man-made landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two-year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows. These measures and requirements shall be applied to closure of abandoned well site disturbed areas.	Implementing Agency
<i>2000 OBMP Mitigation Measure</i>		
4.5-7	Prior to cleaning out, refurbishing or capping a well, samples will be obtained and chemically analyzed to ensure that the discharge does not contain any contaminants exceeding regulatory thresholds. If contaminants are discovered, then they shall be removed or lowered below the regulatory threshold prior to discharge to the environment. Discharge of non-stormwater into storm drains will require a NPDES permit.	Implementing Agency
<i>2000 OBMP Mitigation Measure</i>		
4.5-16	Whenever possible and feasible, OBMP projects that are highly capital intensive, or that employ workers who are onsite for more than just maintenance activities, shall consider Figure 4.5-47 when siting specific project locations for OBMP facilities. Areas defined on this map that potentially may be affected by flood-hazards shall be avoided, unless conjunctive use and flood-control operations demand that facilities must be located within these areas. If facilities are constructed in a flood zone, the facility will be brought to a level above flood hazards, or hardened against flood related impacts. Additionally, if facilities must be located within flood plains or hazard areas, a flood management program to minimize impacts to people and surrounding property shall be created and implemented for each facility that may occur within these hazard areas.	Implementing Agency
Impact Description		Impact After Mitigation
As described in Subchapter 4.7, the overall hydrology (watershed, drainage and flood hazards) and water quality impacts that would result from implementation of the OBMPU could be significant without the implementation of substantive mitigation measures. As such, several mitigation measures were identified to minimize impacts related to hydrology and water quality.		Mitigation measures required to reduce hydrology and water quality impacts would: ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, result in new subsidence, result in potential adverse impacts to Hydraulic Control, result in adverse impacts to riparian vegetation and habitat in Prado Basin, or result in potential degradation of water quality, and (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a Project or, where mitigation is not feasible, reject the Project; address the plan of response by Watermaster should the Basin conditions to vary from the projections that have been modeled as part of the OBMPU (and all supporting documentation); require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the Construction General Permit and Stormwater Pollution Prevention Plan, which are required for larger projects; require OBMPU

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
	<p>projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites; require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future OBMPU facility sites; ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding; ensure that significant polluted runoff does not occur from contaminated discharge that may result from refurbishing or capping a well; and, ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. Therefore, though there will be some adverse impacts as a result of implementing the Project, specific mitigation measures have been identified to reduce potential Project specific and cumulative (direct and indirect) effects to a less than significant impact level for hydrology and water quality issues. Thus, the Project is not forecast to cause any unavoidable significant adverse hydrology and water quality impacts.</p>

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
<p>TRIBAL CULTURAL RESOURCES</p> <p>TCR-1 <u>Tribal Cultural Resources Mitigation Level 1.</u> Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site, water treatment facility, or wastewater treatment plant site), the agency implementing the OBMPU project will notify the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation) under AB 52 but will point out that the project falls under the OBMPU evaluation and that the site is fully developed. No further cultural resources or Tribal Cultural Resources investigation will be conducted unless a Tribe identifies specific Tribal Cultural Resources resources/values at such site(s).</p>	<p>IEUA, Watermaster, or Watermaster Stakeholders/Implementing Agencies</p>
<p>TCR-2 <u>Tribal Cultural Resources Mitigation Level 2.</u> Where a future discretionary project requiring a Negative Declaration or subsequent environmental document is proposed at an undisturbed site, the agency implementing the OBMPU project will initiate AB 52 consultation and a records search at the appropriate California Historical Resources Information System (CHRIS) center with at least a 0.5-mile search radius. The Native American Heritage Commission (NAHC) shall also be contacted to identify tribal representatives to contact as part of a Phase 1 cultural resources investigation. Finally, a site-specific survey will be conducted by a qualified professional archaeologist.² During the survey, the archaeologist shall engage the designated tribal representative(s) based on responses from the NAHC consultation among the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation).</p>	<p>Implementing Agency</p>

² Archaeologist throughout this document means: a person registered with the Register of Professional Archaeologists, or an archaeologist certified by SHPO

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
TCR-3	<p>Tribal Cultural Resources Mitigation Level 3. If the AB 52 consultation results in a request to consult from one or more of the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation), and the consultation results in a request for monitoring from one or more of the Tribes, the agency implementing the OBMPU project, in partnership with qualified archeological professional and/or in partnership with the State Historic Preservation Office Tribal Liaison (reachable by email at tribalaffairs@parks.ca.gov), shall work with the Tribes to determine which entity is more culturally affiliated with the specific OBMPU site, and thus which entity will monitor the site, as only a single Tribe's monitor(s) shall be funded in the monitoring effort. Cultural affiliation shall be determined by the qualified archeological professional and/or in partnership with the State Historic Preservation Office Tribal Liaison. According to the NAHC, Cultural affiliation means that there is a relationship of shared group identity that can be reasonably traced historically or prehistorically between members of a present-day Indian Tribe or Native Hawaiian Organization and an identifiable earlier group. Each of the Tribes shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to enable Tribal input in regards to significance and treatment. Monitoring activities and follow-on management of any discovered tribal cultural resources shall be conducted in accordance with the Cultural Resources Monitoring and Treatment Plan agreed upon for the specific project and specific project site. The Treatment Plan ultimately agreed upon shall be enforced as mitigation applicable to the specific project for which it is created. The Treatment Plan shall include enforceable mitigation measures that shall include components, such as: archaeological monitoring, actions that shall be taken should tribal cultural resources be discovered, treatment of resources should they be discovered, preservation actions for discovered resources, procedures for funerary objects and human remains, etc.</p>	Implementing Agency
Impact Description		Impact After Mitigation
<p>As described in Subchapter 4.8 of this RDSEIR, the Yuhaaviatam of San Manuel Nation (formerly San Manuel Band of Mission Indians), Gabrieleño Band of Mission Indians - Kizh Nation, and Morongo Band of Mission Indians requested continued participation with this project's CEQA process and future project implemented under the OBMPU. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures, impacts to Tribal Cultural Resources are considered less than significant.</p>		<p>The mitigation measures provide a hierarchy from which to approach future OBMPU Projects, involving (1) notification to the three tribes at project sites that have been totally disturbed; (2) at undisturbed project sites, AB 52 consultation will be initiated and a records search shall be performed as part of a site specific Phase I evaluation, and the site shall be surveyed; and, (3) development of a Cultural Resources Monitoring and Treatment Plan which may require monitoring and treatment of any resources located within a given site. Thus, with implementation of mitigation to protect tribal cultural resources, the Project would not cause significant unavoidable adverse impacts to tribal cultural resources.</p>

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
<p>UTILITIES AND SERVICE SYSTEMS 2000 OBMP Mitigation Measure 4.13-11 All Plan-related development/redevelopment projects including exterior landscape elements shall employ xeriscape plant design and water conservation concepts. At a minimum xeriscape requirements shall include the following:</p>		Implementing Agency

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
<ul style="list-style-type: none"> a. The use of drought-tolerant species, drip irrigation systems, soil moisture sensors, and automatic irrigation systems, when appropriate. b. Extensive use of mulch in all landscaped areas. Use of mulch will improve water holding capacities of the soil by reducing evaporation and erosion. c. A minimal use of lawn, except to accommodate-lawn dependent uses such as playing fields. Warm-season grasses shall be used. d. The use of gray water separation storage and transmission systems when feasible for irrigation purposes. 	
Impact Description	Impact After Mitigation
<p>As described in Subchapter 4.9 and in Section XIX, the issues of extension of telecommunication, stormwater, electricity, and natural were determined to be less than significant without the need mitigation. Stormwater design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities. This is a regulatory requirement, and therefore adherence to MS4 requirements is mandatory, and adherence thereof would ensure that impacts related to stormwater drainage facilities are minimized below significance thresholds. Furthermore, wastewater generated during construction of the proposed OBMPU facilities would be minimal, and should the additional capacity of the brine disposal facilities beyond that which is presently available, subsequent CEQA documentation addressing the required facility expansions would be required to be prepared in accordance with CEQA, which is a mandatory requirement, thereby no mitigation is required to ensure a less than significant wastewater capacity impact. The same applies to electricity and natural gas, should extension of electricity and natural gas services be required, preparation of project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to electricity, telecommunication, and natural gas connections. This is a requirement in accordance with CEQA, and thereby, impacts related to the extension of electricity and natural gas infrastructure would be less than significant. The overall solid waste, water and wastewater extension, and water supply impacts that would result from implementation of the OBMPU could be significant without the implementation of mitigation measures.</p>	<p>Section XIX of the IS concluded that implementation of the OBMPU would not significantly impact solid waste. Mitigation is required to address potential impacts related to solid waste, including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities; and, ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. Based on the facts and findings presented in the RDSEIR analysis, the proposed Project will not cause unavoidable significant adverse impacts to stormwater drainage, telecommunications, or solid waste.</p> <p>The IS also included analysis of wastewater provider capacity impacts from implementation of the OBMPU. The potential for the Program to result in a determination by the wastewater treatment provider which serves or may serve a project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments was determined to be less than significant because impacts related the extension of wastewater and brine conveyance associated with the proposed Project would be required to go through a subsequent CEQA documentation for the extension of wastewater and brine conveyance facilities.</p> <p>The topic of electricity, natural gas, water and wastewater infrastructure was also discussed in Subchapter 4.9, and while the extension of water and wastewater related infrastructure was determined to be significant, the provision of sufficient water supply within the Chino Basin was determined to be a less than significant impact. The construction of infrastructure related to electricity and natural gas was analyzed and determined to be less than significant as OBMPU projects not located in an area containing electricity and natural gas infrastructure would require subsequent CEQA documentation. Mitigation is required to minimize impacts related to pumping sustainability, net recharge and safe yield, hydraulic control, riparian vegetation and habitat in Prado Basin,</p>

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
	<p>and overall basin management. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties within the Chino Basin. The mitigation is extracted from Subchapter 4.7, Hydrology and Water Quality (discussed above) and would create a hierarchy of checks and balances as part of the sustainable management of the Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact.</p> <p>However, as discussed under Subchapter 4.9 of this RDSEIR, the proposed OBMPU could result in significant impacts related to the construction-related NO_x emissions that would result from the extension of water- and wastewater-related infrastructure. As such, though mitigation measures identified under Air Quality would reduce emissions from construction equipment, ensure minimization of fugitive dust during construction of OBMPU related facilities, and control exhaust emissions, construction-related NO_x emissions exceed the SCAQMD thresholds of 100 pounds per day of NO_x. No feasible mitigation measures are available that would reduce construction emissions to below a level of significance. Furthermore, though substantial mitigation is provided to minimize impacts on Biological Resources as a result of construction and operation of the Project, there are certain areas within the overall Project area of potential impact where the biological resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse impact on biological resources as a result of extension of water and wastewater infrastructure. Therefore, the proposed OBMPU would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing water and wastewater facilities.</p>

**Table 1.6-1
TABULAR COMPARISON OF PROJECT, NO PROJECT/BASELINE, AND ALTERNATIVE 1**

	<i>Would the Project Result in Significant Adverse Impacts to the Resource Issues?</i>	<i>Would the Alternative Result in Equal, Greater, or Less Impacts than the Project?</i>		
	Proposed Project (SSC up to 900,000 af)	No Project/ Baseline Alternative	Reduced Storage Alternative	No Project Plus Alternative
Aesthetics	No Impacts LSM	▼	▼	▼
Agricultural	No Impacts LSM	▼	▼	▼
Air Quality	Yes Impacts would be Significant	▼	▼	▼
Biological Resources	Yes Impacts would be Significant	▼	▼	▼
Cultural Resources	No Impacts LSM	▼	▼	▼
Energy	No Impacts LSM	=	=	▲
Geology and Soils	No Impacts LSM	▼	▼	▼
Greenhouse Gas	No Impacts LSM	=	=	▲
Hazards and Hazardous Materials	No Impacts LSM	▼	▼	▼
Hydrology and Water Quality	No Impacts LSM	▲	▲	▲
Land Use / Planning	No Impacts LSM	▼	▼	▼
Mineral Resources	No Impacts LSM	▼	▼	▼
Noise	No Impacts LSM	▼	▼	▼
Population / Housing	No Impacts LSM	▼	▼	▼
Public Services	No Impacts LSM	▼	▼	▼
Recreation	No Impacts LSM	▼	▼	▼
Transportation / Traffic	No Impacts LSM	▼	▼	▼
Tribal Cultural Resources	No Impacts LSM	▼	▼	▼
Utilities and Service Systems	Yes Impacts would be Significant	▼	▼	▲
Wildfire	No Impacts LSM	▼	▼	▼

- ▲ Alternative is likely to result in greater impacts to issue when compared to Proposed Project.
 - ▼ Alternative is likely to result in reduced impacts to issue when compared to Proposed Project.
 - = Alternative is likely to result in comparable overall impacts to issue when compared to the Proposed Project
- LSM = less than significant with mitigation measures

CHAPTER 2 – INTRODUCTION

2.1 BACKGROUND

The Inland Empire Utilities Agency (IEUA or Agency) serves as a wholesale imported water distributor for the Chino Groundwater Basin (Chino Basin), provides industrial/municipal wastewater collection and treatment and other related utility services for the western portion of the Santa Ana River watershed in the southwestern-most portion of San Bernardino County. Current services provided or programs supported by IEUA also include: production of recycled water; sewage collection and treatment; distribution of imported and recycled water supplies; co-composting of manure and municipal biosolids; desalinization of groundwater supplies; renewable energy generation; and disposal of non-reclaimable industrial wastewater and brine.

The Optimum Basin Management Program (OBMP) is a regional water resources and groundwater management program for the Chino Basin. The location of the Chino Basin is shown in Exhibit 1. On January 2, 1975, several Chino Basin groundwater producers filed suit in the California State Superior Court for San Bernardino County (Court) to settle the problem of allocating water rights in the Chino Basin. On January 27, 1978, the Court entered a judgment in “*Chino Basin Municipal Water District v. City of Chino et. al.*” (Judgment).¹ The Judgment adjudicated the groundwater rights of the Chino Basin, established the Chino Basin Watermaster (Watermaster or CBWM)—a Court created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin. Exhibit 2 shows the adjudicated boundary as it is legally defined in the Judgment, the hydrologic boundary, the Chino Basin management zones, and the groundwater management zones defined by the Santa Ana Regional Water Quality Control Board (Regional Board) in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

The OBMP is a required component of the Judgment and the Physical Solution², Paragraph 41 of which provides that:

Watermaster, with the advice of the Advisory and Pool Committees, is granted discretionary powers in order to develop an optimum basin management program for Chino Basin, including both water quantity and quality considerations. Withdrawals and supplemental water replenishment of Basin Water, and the full utilization of the water resources of Chino Basin, must be subject to procedures established by and administered through Watermaster with the advice and assistance of the Advisory and Pool Committees composed of the affected producers. Both the quantity and quality of said water resources may thereby be preserved and the beneficial utilization of the Basin maximized.

¹ On September 27, 2012, the Court ordered that the Restated Judgment, incorporating all amendments since 1978, shall serve as the official and legally operative copy of the 1978 Judgment. All references to the Judgment refer to the Restated Judgment.

² Pursuant to the mandate of Section 2 of Article X of the California Constitution, the Court ordered the parties to comply with a Physical Solution. The purpose of the Physical Solution is to establish a legal and practical means for making the maximum reasonable beneficial use of the waters of Chino Basin by providing the optimum economic, long-term, conjunctive utilization of surface waters, ground waters and supplemental water, to meet the requirements of water users having rights in or dependent upon Chino Basin.

The OBMP was developed by Watermaster and its implementation was facilitated by the Peace Agreement among the parties to the Chino Basin Judgment (Parties), and ultimately ordered by the Court. However, the Watermaster is not considered a public agency and therefore, does not conduct environmental review pursuant to the California Environmental Quality Act (CEQA). The IEUA was initially recommended by Watermaster, ordered by the Court, and then agreed to by the Parties to the Judgment to be the Lead Agency for CEQA review of the OBMP. Given the above, and that IEUA has jurisdiction throughout most of the Chino Basin, IEUA has agreed to serve as the Lead Agency for purposes of complying with CEQA. Actual implementation of the OBMP activities—outlined in Chapter 3: Project Description—may be carried out by Watermaster or any of its member agencies/Stakeholders in the Chino Basin through the 20-year planning period, 2020 through 2040.

The Watermaster functions as a unique entity that has been created by the Court as outlined above. The Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. Please refer to Appendix 1 for a list of all Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool participants. These member agencies are henceforth referred to as either “Stakeholders” or “the Parties.”

Watermaster, at the direction of the Court, began developing the OBMP in 1998 and completed it in July 2000. The OBMP was developed in a collaborative public process that identified the needs and wants of all Stakeholders, described the physical state of the groundwater basin (as understood at that time), defined a set of management goals, characterized impediments to those goals, and developed a series of actions that could be taken to remove the impediments and achieve the management goals. The Parties entered into the Peace I Agreement in June 2000. In July 2000, the IEUA certified a Program Environmental Impact Report (2000 PEIR)³ for the OBMP, which was based on the Peace I Agreement between Stakeholders in the Chino Basin.

2.1.1 OBMP Characteristics

Watermaster, at the direction of the Court, began developing the OBMP in 1998 and completed it in July 2000. The OBMP was developed in a collaborative public process that identified the needs and wants of all Stakeholders, described the physical state of the groundwater basin, defined a set of management goals, characterized impediments to those goals, and developed a series of actions that could be taken to remove the impediments and achieve the management goals. This work was documented in the *Optimum Basin Management Program – Phase I Report* (OBMP Phase 1 Report).

The four goals of the 2000 OBMP included:

- Goal 1 – Enhance Basin Water Supplies*
- Goal 2 – Protect and Enhance Water Quality*
- Goal 3 – Enhance Management of the Basin*
- Goal 4 – Equitably Finance the OBMP*

³ A PEIR is an EIR which may be prepared on a series of actions that can be characterized as one large project. (See CEQA Guidelines § 15168(a).) CEQA allows for a subsequent EIR to rely on a PEIR, which can limit the scope of a subsequent EIR and only requires it to focus on later activities and the associated new effects which had not been considered before. (See CEQA Guidelines § 15168(c).) Where appropriate, and in accordance with the CEQA Guidelines, any later activities undertaken via the OBMP will be examined in the light of the PEIR to determine whether an additional environmental document must be prepared. (See CEQA Guidelines § 15168(b).)

The actions defined by the Stakeholders to remove the impediments to the OBMP goals were logically grouped into sets of coordinated activities called Program Elements (PEs), each of which included a list of implementation actions and an implementation schedule. The nine PEs defined in the 2000 OBMP included:

PE 1 – Develop and Implement Comprehensive Monitoring Program. The objectives of the comprehensive monitoring program are to collect the data necessary to support the implementation of the other eight PEs and periodic updates to the *State of the Basin Report*.

PE 2 – Develop and Implement Comprehensive Recharge Program. The objectives of the comprehensive recharge program include increasing stormwater recharge to offset the recharge lost due to channel lining, to increase Safe Yield, and to ensure that there will be enough supplemental water recharge capacity available to Watermaster to meet its Replenishment Obligations.

PE 3 – Develop and Implement a Water Supply Plan for Impaired Areas. The objective of this program is to maintain and enhance Safe Yield with a groundwater desalting program that is designed to replace declining agricultural groundwater pumping in the southern part of the basin with new pumping to meet increasing municipal water demands in the same area, to minimize groundwater outflow to the Santa Ana River, and to increase Santa Ana River recharge into the basin.

PE 4 – Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1. The objectives of this land subsidence management program are to characterize the spatial and temporal occurrence of land subsidence, to identify its causes, and, where appropriate, to develop and implement a program to minimize or stop land subsidence.

PE 5 – Develop and Implement Regional Supplemental Water Program. The objective of this program is to improve the regional conveyance and availability of imported and recycled waters throughout the basin.

PE 6 – Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management. The objectives of this water quality management program are to identify water quality trends in the basin and the impact of the OBMP implementation on them, to determine whether point and non-point contamination sources are being addressed by water quality regulators, and to collaborate with water-quality regulators to identify and facilitate the cleanup of soil and groundwater contamination.

PE 7 – Develop and Implement Salt Management Plan. The objectives of this salinity management program are to characterize current and future salt and nutrient conditions in the basin and to develop and implement a plan to manage them.

PE 8 – Develop and Implement Groundwater Storage Management Program. The objectives of this storage program are to implement and periodically update a storage management plan that prevents overdraft, protects water quality, and ensures equity among the Parties, and to periodically recalculate Safe Yield. This PE explicitly defined the storage management plan, including a “Safe Storage Capacity” for the managed storage of 500,000 acre-feet (af)—inclusive of Local and Supplemental Storage and Storage and Recovery Programs.

PE 9 – Develop and Implement Storage and Recovery Programs. The objectives of this conjunctive use program are to develop Storage and Recovery Programs that will provide broad mutual benefit to the Parties and ensure that Basin Water and storage capacity are put to maximum beneficial use while causing no Material Physical Injury (MPI).

The PEs and their associated implementation actions (facilities and operations) were incorporated into a recommended management plan. The Parties used the management plan as the basis for developing the OBMP Implementation Plan (which identified specific projects for implementation

under the OBMP) and an agreement between the Watermaster Parties and Stakeholders (the Peace Agreement) to implement it. The OBMP Implementation Plan is Exhibit B to the Peace Agreement. The Peace Agreement was reviewed in the 2000 OBMP PEIR.

The Parties entered into the Peace Agreement in June 2000. Under Resolution 2000-05,⁴ Watermaster adopted the goals and plans of the OBMP Phase 1 Report and agreed to proceed in accordance with the Peace Agreement and the OBMP Implementation Plan. Following a July 2000 hearing, the Court directed Watermaster to proceed in a manner consistent with the Peace Agreement in order to implement the OBMP and received and filed the PEIR.

For the purposes of the discussions herein, the term “OBMP” refers to the collective programs implemented by Watermaster and others (e.g., IEUA, Chino Basin Desalter Authority [CDA], etc.) pursuant to the Peace Agreements (see discussion of Peace II below), the OBMP Implementation Plan, the PEIR, and any amendments to these documents.

2.1.1.1 2007 Supplement to the OBMP Implementation Plan and the Peace II Agreement

The work to develop the OBMP determined that the groundwater production of the Chino Basin Desalters (see Section 3.3.4.3) would ultimately need to be 40,000 acre-feet per year (afy) to accomplish the goals of the OBMP. The Chino I Desalter production capacity prior to the Peace Agreement was 8 million gallons per day (mgd; 9,000 afy). The Peace Agreement provided for the expansion of the Chino I Desalter to up to 14 mgd (15,700 afy) and the construction of the Chino II Desalter, with a production capacity of 10 mgd. The Peace Agreement required a minimum combined Desalter production capacity of 20 mgd (22,400 afy) and it committed the Parties to developing expansion and funding plans for the remaining capacity within five years of approval of the Peace Agreement. The Parties developed the Peace II Agreement, which included provisions to expand the desalting capacity such that groundwater production reaches 40,000 afy. The Peace II Agreement introduced Re-operation⁵ to achieve Hydraulic Control⁶ of the Chino Basin and maintain Safe Yield. Hydraulic Control is both a goal of the OBMP and a requirement of the maximum benefit salt-and-nutrient management plan (maximum benefit SNMP, which is discussed on P. 34 therein) that was developed by Watermaster and the IEUA under PE 7 to enable the expansion of recycled water recharge and reuse throughout the basin under PEs 2 and 5.

The Parties executed the Peace II Agreement in 2007. There were no changes to the storage management plan in the OBMP Implementation Plan as a result of Peace II.

The IEUA Board certified a supplemental environmental impact report (SEIR) for the Peace II Agreement in 2010.

⁴ Chino Basin Watermaster. (2002). <https://www.cbwm.org/docs/resolutions/2000-2009/Resolution%2000-05.pdf> (accessed 07/12/23).

⁵ Re-operation is the controlled overdraft of the basin by the managed withdrawal of groundwater pumping for the Chino Basin Desalters and the potential increase in the cumulative un-replenished pumping from the 200,000 acre-feet authorized by paragraph 3 of the Engineering Appendix Exhibit I to the Judgment, to 600,000 acre-feet for the express purpose of securing and maintaining Hydraulic Control as a component of the Physical Solution.

⁶ Hydraulic Control is the elimination of groundwater discharge from the Chino-North Groundwater Management Zone to the Santa Ana River or its reduction to less than 1,000 afy.

2.1.1.2 2017 Addendum to the OBMP PEIR

In 2016, Watermaster identified the need to update the storage management plan in the OBMP Implementation Plan because the total amount of water in managed storage accounts was projected to exceed the Safe Storage Capacity (SSC) limit of 500,000 af defined in the 2000 OBMP. In 2017, the IEUA adopted an Addendum to the 2000 OBMP PEIR to provide a “temporary increase in the Safe Storage Capacity from 500,000 af to 600,000 af for the period of July 1, 2017 through June 30, 2021 [...] until a comprehensive re-evaluation of the Safe Storage Capacity value/concept can be completed before June 30, 2021.” The Addendum was supported with engineering work that demonstrated that this temporary increase in SSC would not cause material physical injury (MPI) or loss of Hydraulic Control.

2.1.1.3 2020 Safe Yield Update and 2021 Addendum to the OBMP PEIR

Watermaster began the comprehensive re-evaluation of the Safe Storage Capacity (SSC) concept through a stakeholder process during 2017 and 2018, which resulted in the 2018 Storage Framework Investigation Report (SFI)(Appendix 2). The SFI evaluated the Basin response, MPI and undesirable results from projections of the Parties’ future storage management activities and potential future Storage and Recovery Programs that could store additional water in the Basin, concurrently with the Parties (cumulatively up to 1,000,000 af). This work was based, in part, on groundwater modeling projections of the Basin using the 2017 Watermaster model that was last previously calibrated in 2011. The SFI developed a series of metrics to identify MPI and undesirable results for the use of storage space and introduced a new term called managed storage. Managed storage includes water stored by the Parties and other entities, which fluctuates over time based on the actions of the Parties and other entities.

During the period between 2018 and mid-2020, Watermaster revised its groundwater model and renamed it the 2020 Chino Valley Model (CVM). The 2020 CVM supersedes the model version used in the 2018 SFI. The CVM was used to update pumping and recharge projections to develop an updated estimate of Safe Yield for the period 2021 through 2030 (WEI, 2020). Based on this Safe Yield Investigation, the Safe Yield for the period 2021 through 2030 was found to be 131,100 afy.

The Court subsequently accepted Watermaster’s Safe Yield recommendation and ordered the Safe Yield changed in July 2020, which therefore occurred in the time that has elapsed since the 2020 OBMPU DSEIR was circulated for public review between March 27, 2020 and May 11, 2020.

In addition to the updated Safe Yield, three other conclusions were reached in the Safe Yield Investigation using the 2020 CVM: (1) the storage in the saturated zone of the Chino Basin was estimated to be about 12,200,000 af on July 1, 2018, of which 462,000 af was in managed storage; (2) the projected managed storage by the Parties would reach about 612,000 af in 2031; and, (3) no adverse impacts or MPI were projected to occur from managed storage reaching 612,000 af by 2031 (WEI, 2020).

As a result of the conclusions made in the Safe Yield Investigation, and because the temporary increase in the SSC that was adopted as part of the 2017 Addendum was set to expire on June 30, 2021, Watermaster identified the need to amend the SSC of the OBMP for the Chino Basin. Thus, the 2021 Addendum was prepared, and enabled the increase in Safe Storage Capacity to 700,000 af through June 30, 2030, and to 620,000 af from July 1, 2030 through June 30, 2035. The 2021 Addendum was adopted by the IEUA Board on March 17, 2021. Further, in 2021, the

Court subsequently accepted Watermaster's SSC recommendation and ordered the SSC changed as described above. Thus, even though these actions took place after the Notice of Preparation publication date (February 10, 2020), which sets forth the baseline date for this Recirculated DSEIR, the above actions—the Safe Yield Update, SSC Modification, and revision to the Watermaster groundwater model (the 2020 CVM)—have been accepted and implemented by the Court, under orders from which the Watermaster operates. Thus, these actions are considered a part of the environmental setting with respect to operation of the Basin as of the Recirculation of this DSEIR.

2.1.1.4 OBMPU Objectives

The evolution of the water management space led to the decision to update the OBMP – the Optimum Basin Management Plan Update (OBMPU). The OBMPU's scope is, of necessity, expansive, as it covers the nine (9) Program Elements (PEs) that make up the original OBMP, and which were analyzed in the 2000 PEIR. The OBMPU is intended to address possible program activities and projects at a programmatic level over the next 20 years (2020 – 2040), with some site-specific detail where near-term future locations of facilities or types of activities are known. The CBWM and Stakeholders worked to define the scope, purpose and goals of the OBMPU between 2019 and 2020, which are expressed in the 2020 OBMPU Program Report, adopted by Watermaster in October 2020. The Stakeholders concluded that the goals of the 2020 OBMP Update (OBMPU, Project or Program) are identical to the 2000 OBMP goals. The goals and their intents for the OBMPU include:

Goal No. 1 – Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 – Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

2.1.2 Environmental Impact Report Process to Date

The CBWM and Parties/Stakeholders of the OBMPU and regulatory agencies that will function as CEQA Responsible Agencies will have the option of relying upon this CEQA document for any future actions they take in support of the proposed Program or an individual project described in this environmental document. Some site-specific information, however, is not known at this time and may require additional environmental review at the project-level.

As explained in the Notice of Preparation (NOP), which was published for initial public review beginning on February 10, 2020 and ending on March 10, 2020 (SCH #2020020183), IEUA and Watermaster concluded that an Environmental Impact Report (EIR) should be prepared to address the potential impacts from proposed Project focused on the following issues: Air Quality,

Biological Resources, Cultural Resources, Energy, Greenhouse Gas, Hydrology and Water Quality, Tribal Cultural Resources, and Utilities and Service Systems. The decision to prepare an EIR was based on the conclusion that the proposed Program may have one or more significant effects on the existing Project environment and surrounding environment as is documented in the NOP, provided as **Subchapter 8.1** of this document.

IEUA prepared a Draft SEIR for the OBMPU that was circulated for public review from March 27, 2020 to May 11, 2020. The SEIR was finalized, and responses to comments were sent to agencies and entities that commented on the Project. However, the Project was removed from the IEUA Board of Directors' July 15, 2020 Agenda, and ultimately, the SEIR was not certified.

Since the time of circulation, the Project Description has been further refined in conjunction with the Watermaster and with input from the Parties/Stakeholders. In accordance with Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5, IEUA, in conjunction with the project proponent, Watermaster has recirculated the entire Chino Basin Watermaster OBMPU Draft SEIR, which consists of revisions to the original topics in the 2020 DSEIR environmental Evaluation (Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gases/Climate Change, Hydrology and Water Quality, Tribal Cultural Systems, and parts of Utilities and Service Systems [water and wastewater]) in addition to revisions to the entire Initial Study, which addresses the remaining environmental topics not listed above.

IEUA has prepared this OBMPU Recirculated Draft Subsequent Environmental Impact Report (RDSEIR or Recirculated DSEIR) that evaluates the potential broad scope or programmatic environmental impacts that would result from constructing and implementing the proposed Program.

2.2 PURPOSE AND USE OF AN EIR

CEQA was adopted to assist with the goal of maintaining the quality of the environment for the people of the State. Compliance with CEQA, and its implementing Guidelines, requires that an agency making a decision on a project⁷ must consider its potential environmental effects/impacts before granting any approvals or entitlements. Further, the State adopted a CEQA policy "that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." Thus, an agency, in this case IEUA, must examine feasible alternatives and identify feasible mitigation measures as part of the environmental review process. The State adopted CEQA policy also states "that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof." (§21002, Public Resources Code.)

When applied to a specific project, such as the proposed OBMPU, the reviewing agency is required to identify the potential environmental impacts of implementing the project; and, where potential significant impacts are identified, must determine whether there are feasible mitigation measures or alternatives that can be implemented to avoid or substantially lessen significant environmental effects of a project. The first step in this process—determination that an EIR is required and issuance of an NOP—has been completed for the OBMPU. This constitutes the "project being considered for approval and implementation" by IEUA on behalf of Watermaster.

⁷ The definition of "project" means an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment. (See Public Resources Code, § 21065.)

Based on the information in the NOP, IEUA concluded an EIR should be prepared to address any potential significant impacts that may result from implementation of the proposed Project.

As stated above, the following environmental issues will be analyzed in this EIR: Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gases/Climate Change, Hydrology and Water Quality, Tribal Cultural Systems, and parts of Utilities and Service Systems. The NOP concluded that the following issues have been determined to be less than significant either with or without mitigation incorporated by the Initial Study prepared for the Program, which was included as an attachment to the NOP: Aesthetics, Agriculture and Forestry Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, parts of Utilities and Service Systems, Wildfire. In accordance with CEQA Guidelines Section 15088.5, the Initial Study has been updated to reflect the changes in the project that have led to the recirculation of this Draft SEIR. These revisions made to the previously circulated SEIR (Draft circulated from March 27, 2020 to May 11, 2020; Final made available to the public on July 6, 2020) are summarized pursuant to CEQA Guidelines Section 15088.5(g) in Chapter 1, Executive Summary.

Watermaster prepared and circulated a NOP for the Project. The NOP public review period through the State Clearinghouse began on February 10, 2020 and ended on March 10, 2020. Respondents were requested to send their input as to the scope and content of environmental information and issues that should be addressed in the 2020 OBMPU DSEIR no later than 30 days after receipt of the NOP. The NOP was distributed to interested agencies, the State Clearinghouse (SCH #2020020183), and a list of interested parties compiled by the Watermaster. IEUA held a Scoping Meeting on February 27, 2020 at 6 p.m. at the Inland Empire Utilities Agency: Agency Headquarters, Board Room located at 6075 Kimball Avenue, Building A, Chino, CA 91708 (provided as **Subchapter 8.1** of this RDSEIR). The date and location of the scoping meeting was announced in the NOP, and although not required, a legal advertisement announcing the scoping meeting was published in a local newspaper of general circulation prior to the scoping meeting. Five responses were submitted in response to the NOP. No comments were received at the scoping meeting. NOP comments are summarized below, and a brief response to each issue organized by environmental topic is provided following the summary of comment letters. Responses to the NOP comments are addressed within the Subchapter applicable to the comment itself. A copy of each letter is provided in **Subchapter 8.1**. The location where the issues raised in the comments are addressed is described in the following text.

Comment Letter #1 from Office of Planning and Research (dated 2/15/20) states:

- Acknowledgment letter detailing NOP distribution to State agencies.

Comment Letter #2 from Orange County Water District (OCWD) (dated 3/6/20) states:

- OCWD has statutory authority over and extensive activities within Prado Basin.
- The distribution of riparian vegetation and wetlands in the Prado Basin relies on rising groundwater or groundwater seepage as a Groundwater Dependent Ecosystem.
- The OBMPU EIR should evaluate potential effects that the proposed project might have on the Groundwater Dependent Ecosystem in Prado Basin.
- The OBMPU EIR should assess how the proposed projects would change or effect surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River.
- The OBMPU EIR should assess how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin.

- The OBMPU EIR should assess the effects that OBMPU related changes in ground-water levels will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should assess how changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin, and the effects these changes will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should evaluate potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species that might occur to the proposed OBMPU Projects.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would affect Santa Ana River flows reaching Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the habitat conservation plan.

Comment Letter #3 from the California Department of Corrections and Rehabilitation, Facility Planning, Construction and Management (dated 3/10/20):

- This letter acknowledges the decision to prepare and EIR for the OBMPU and commits to reviewing the prospective Draft EIR and continued collaboration with the Parties involved in implementing the OBMPU.

Comment Letter #4 from the Department of Water Resources, Division of Safety of Dams (DSOD) (dated 3/3/20) states:

- The DSOD acknowledges the OBMPU includes possible future new surface water basins and improvements to existing basins
- The DSOD seeks additional information regarding whether these projects may be subject to State jurisdiction for dam safety. DSOD requests submittal of preliminary plans for each project to allow them to conduct reviews.
- DSOD outlines the process for initiating and processing applications with their organization.

Comment #5 e-mail from Katie Gienger, Water Resources Manager for Ontario Municipal Utilities (dated 3/9/20) states:

- The Comment identifies the process for future review of projects that may result in potential changes to surface flows in the Santa Ana River (quality or quantity), particularly in relation to recycled water discharges to the River and means to mitigate potential impacts from such changes. This Comment states that the OBMPU should include discussion of the potential adverse impact to the Santa Ana River from proposed OBMPU future projects.

A brief response to each issue raised is provided below organized by environmental topic.

Aesthetics

No comments specific to this topic were received.

Agriculture and Forestry Resources

No comments specific to this topic were received.

Air Quality

No comments specific to this topic were received

Biological Resources

Comment Letter #2 (OCWD):

- OCWD has statutory authority over and extensive activities within Prado Basin.
- The distribution of riparian vegetation and wetlands in the Prado Basin relies on rising groundwater or groundwater seepage as a Groundwater Dependent Ecosystem.
- The OBMPU EIR should evaluate potential effects that the proposed project might have on the Groundwater Dependent Ecosystem in Prado Basin.
- The OBMPU EIR should assess how the proposed projects would change or effect surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River.
- The OBMPU EIR should assess how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would affect Santa Ana River flows reaching Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the habitat conservation plan.

*Response: With no specific water diversion projects proposed as part of the OBMPU RDSEIR beyond those that have been analyzed in former environmental impact reports—such as the CBP certified PEIR and the Draft Santa Ana River Habitat Conservation Plan EIR (SAR HCP DEIR)—it would be speculative to identify specific impacts to the riparian vegetation and wetlands in the Prado Basin. However, Mitigation Measure **BIO-17** requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects, but this does not preclude a determination of insignificance, particularly if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. In addition, Mitigation Measure **BIO-17** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects.*

- The OBMPU EIR should assess the effects that OBMPU related changes in groundwater levels will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should assess how changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin, and the effects these changes will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should evaluate potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species that might occur to the proposed OBMPU Projects.

Response: The Prado Basin Habitat Sustainability Committee is tasked with obtaining and analyzing this information. Impacts from the OBMPU implementation and future activities thereof will be monitored to adapt to future conditions within the Chino Basin. As such, the following contingency measures will be implemented as part of the OBMPU to monitor and adapt to future environmental conditions in the Chino Basin which, with unknowns associated with climate

change, may require future adaptations in management of the whole watershed's recycled water resources.

- 1. The IEUA will continue to support the preparation of the Prado Basin Habitat Sustainability Program (PBHSP) in cooperation with the Chino Basin Watermaster and Upper Santa Ana River Watershed Stakeholders. This would continue the monitoring and mitigation efforts intended to protect Prado habitat and the species that the Prado habitat supports.*
- 2. Continue to support the Upper Santa Ana River Habitat Conservation Plan (HCP), via input and refinement of the Plan itself, both its programs and the forum that it will establish to focus on adaptive management to protect sensitive species in the Upper Watershed. This will ensure that species and habitats protected by the cumulative efforts put forth by the HCP continue to be carried forth.*
- 3. Consider which forum to use (SAWPA, PBHSP, HCP implementation/management group, or a new group) to most effectively manage the whole Santa Ana River Watershed water resources in an effective, creative and adaptive manner to protect the habitats and species that are supported by habitats within the Santa Ana River Watershed, in addition to managing the water available in the Watershed in an equitable and sustainable manner.*

This 2023 OBMPU RDSEIR further addresses this comment and notes that all OBMPU projects will undergo project-level environmental review when necessary and will identify project-specific mitigation measures at that time.

Comment Letter #5 Katie Gienger, Water Resources Manager for Ontario Municipal Utilities: The Comment identifies the process for future review of projects that may result in potential changes to surface flows in the Santa Ana River (quality or quantity), particularly in relation to recycled water discharges to the River and means to mitigate potential impacts from such changes. This Comment states that the OBMPU should include discussion of the potential adverse impact to the Santa Ana River from proposed OBMPU future projects.

Response as it relates to Biological Resources: The OBMPU could result in water diversions that have a potential to contribute to a cumulative adverse impact on biological resources in both the Upper Santa Ana River channel and Prado Basin. Based on implementing avoidance and mitigation measures in accordance with the mitigation outlined in the SAR HCP DEIR (presented in Appendix 6), the impacts to 21 of the identified covered species can be reduced to a less than cumulatively considerable adverse impact or even beneficial impacts. However, according to the SAR HCP DEIR the cumulative operational diversions from the SAR may contribute to a significant adverse impact on the Santa Ana sucker. As described above, this impact is not unequivocal; it is based on insufficient data to ensure that all of the proposed avoidance and mitigation measures are effective, particularly translocation, which "may not achieve their intended result." The Watermaster and IEUA concur with the cumulative impact findings of the SAR HCP DEIR, which, in addition to the data provided in Appendix 3a and 3b of Volume 2 to this DSEIR containing the SAR HCP DEIR's environmental analysis, addresses mitigation that would reduce impacts from the OBMPU on biological resources to the greatest extent feasible.

*At this time, no specific diversions in the Chino Basin have been proposed as part of the OBMPU; note that the CBP PEIR fully evaluated the impacts resulting from diversion of recycled water from the Santa Ana River. Mitigation is required to continue the Prado Basin monitoring program and to conduct detailed environmental reviews of future diversion impacts on Prado Basin habitat prior to approval of such projects. Mitigation Measure **BIO-17** requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the*

impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects, but this does not preclude a determination of significance, particularly given that if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. However, based on the RDSEIR evaluation, diversion of additional water as part of the OBMPU (including recycled water) was concluded to represent a potentially unavoidable cumulatively considerable significant adverse impact to Prado Basin biological resources until proven otherwise with a project-specific CEQA evaluation.

Cultural Resources

No comments specific to this topic were received.

Energy

No comments specific to this topic were received.

Geology and Soils

No comments specific to this topic were received.

Greenhouse Gases (GHG)

No comments specific to this topic were received.

Hazards and Hazardous Materials

No comments specific to this topic were received.

Hydrology and Water Quality

Comment Letter #2 from Orange County Water District (OCWD) (dated 3/6/20) states:

- OCWD has statutory authority over and extensive activities within Prado Basin.
- The distribution of riparian vegetation and wetlands in the Prado Basin relies on rising groundwater or groundwater seepage as a Groundwater Dependent Ecosystem.
- The OBMPU EIR should evaluate potential effects that the proposed project might have on the Groundwater Dependent Ecosystem in Prado Basin.
- The OBMPU EIR should assess how the proposed projects would change or effect surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River.
- The OBMPU EIR should assess how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin.
- The OBMPU EIR should assess the effects that OBMPU related changes in groundwater levels will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should assess how changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin, and the effects these changes will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should evaluate potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species that might occur to the proposed OBMPU projects.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would affect Santa Ana River flows reaching Prado Basin.

- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the habitat conservation plan.

*Response: Hydrology and water quality are addressed in detail in the RDSEIR, and in this Subchapter. Regarding groundwater, the proposed OBMPU projects are determined to not cause a significant effect with mitigation. The forecast for surface water is both more complex and nuanced because the existing data base and the scope of future impacts is less well defined. Regardless, proposed mitigation combined with the existing Prado Basin Habitat Sustainability Program (PBHSP) are deemed sufficient to reduce or control surface volume impacts to a less than significant impact level. In accordance with Section 15152(c) of the CEQA Guidelines, some detailed, site-specific information is not available and the impacts analysis for surface water diversions will be deferred to when those projects are being implemented. Nonetheless, the OBMPU includes a Mitigation Measure for future surface runoff diversions (Mitigation Measure **BIO-17**) which requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects. This does not preclude a determination of insignificance, particularly if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. In addition, Mitigation Measure **BIO-17** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects. Furthermore, Mitigation Measure **BIO-17** would further commit IEUA to the preparation of the annual PBHSP beyond its expiration in 2030, or otherwise implement a comparable and equally effective monitoring program in its place to enable OBMPU implementing agencies address any future potential adverse impacts to riparian habitat/Prado Basin habitat due to implementation of the OBMPU.*

*Additionally, Mitigation Measures **HYD-9** and **HYD-10** address potential adverse impacts to riparian vegetation and habitat in Prado Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential adverse impacts to riparian vegetation and habitat in Prado Basin, and (2) respond with appropriate mitigation to minimize potential adverse impacts to riparian vegetation and habitat in Prado Basin that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts to riparian vegetation and habitat in Prado Basin that may result from implementation of future OBMPU projects.*

Comment Letter #4 from the Department of Water Resources, Division of Safety of Dams (DSOD) (dated 3/3/20) states:

- The DSOD acknowledges the OBMPU includes possible future new surface water basins and improvements to existing basins
- The DSOD seeks additional information regarding whether these projects may be subject to State jurisdiction for dam safety. DSOD requests submittal of preliminary plans for each project to allow them to conduct reviews.
- DSOD outlines the process for initiating and processing applications with their organization.

Response: Although the issue raised involves review of proposed dams and minimizing any risk that such facilities may pose; no specific facilities are proposed at this time. However, based on the Comments in this letter the project has been designed to require future agency facility proposals which involve a dam to consult with DSOD and involve them in the review process to ensure safety of such facilities.

Comment #5 e-mail from Katie Gienger, Water Resources Manager for Ontario Municipal Utilities (dated 3/9/20) states:

- The Comment identifies the process for future review of projects that may result in potential changes to surface flows in the Santa Ana River (quality or quantity), particularly in relation to recycled water discharges to the River and means to mitigate potential impacts from such changes. This Comment states that the OBMPU should include discussion of the potential adverse impact to the Santa Ana River from proposed OBMPU future projects.

Response as it relates to Hydrology and Water Quality: Ownership and control over wastewater discharges is governed by contract, specifically the Chino Basin Regional Sewerage Service Agreement (Regional Contract) which has been in effect for almost 50 years. As correctly noted, the renewal of that contract is currently under negotiation, as it will lapse in 2023. It is neither the intent nor purpose of the RDSEIR to interpret contractual terms or resolve disputes between contracting parties, and certainly not to speculate on the outcome of dispute resolution. Further, what happens between IEUA and member agencies is still-in-progress, contract negotiations are inherently speculative, and until such negotiations are concluded it would be inappropriate for analysis or findings to be conducted.

Local water supply and interpretation of contracts is beyond the scope of the OBMPU, as is the 1969 Judgment obligation to meet SAR base flow obligations. Consideration of acquisition of other supply sources is part of local supply development and not considered in the OBMPU.

*There are data available on Santa Ana River flows and discharges at various points along the River, but there are no specific projects or proposals for diversions of wastewater discharges that were ripe for evaluation within the scope of this RDSEIR. Fundamentally, retention of recycled water would constitute a diversion of water from discharge to either Chino or Mill Creek, initially, and subsequently to the Santa Ana River in Prado Basin. When examining the issue of diversion of discharges (any type, including recycled water, stormwater, and non-point source urban discharges) in the RDSEIR, the issue was deferred to future specific proposals because no such specific proposals were in the OBMPU and the complicated variables—only some of which are described above— make any future forecasts speculative. Under **Subchapter 4.3, Biological Resources**, the issue of diversions and potential adverse impacts to Prado Basin habitat is addressed. Indirectly, this section also applies to recycled water diversions, and the conclusion is that such diversions, until defined and evaluated in the broader context, can have a potentially significant adverse impact on biological resources of the Chino Basin. As stated above, Mitigation Measure **BIO-17** requires further evaluation of specific diversion proposals when they are defined in sufficient detail to allow an evaluation. Additionally, Mitigation Measures **HYD-9** and **HYD-10** address potential adverse impacts to riparian vegetation and habitat in Prado Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential adverse impacts to riparian vegetation and habitat in Prado Basin, and (2) respond with appropriate mitigation to minimize potential adverse impacts to riparian vegetation and habitat in Prado Basin that may occur from a project or, where mitigation is not feasible, reject the project. Thus, based on the RDSEIR evaluation, diversion of additional*

water as part of the OBMPU (including recycled water) was concluded to represent a potentially unavoidable significant adverse impact to Prado Basin biological resources until proven otherwise with a project specific CEQA evaluation.

Land Use and Planning

No comments specific to this topic were received.

Mineral Resources

No comments specific to this topic were received.

Noise

No comments specific to this topic were received.

Population and Housing

No comments specific to this topic were received.

Public Services

No comments specific to this topic were received.

Recreation

No comments specific to this topic were received.

Transportation and Traffic

No comments specific to this topic were received.

Tribal Cultural Resources

No comments specific to this topic were received.

Utilities and Service Systems

No comments specific to this topic were received.

Wildfire

No comments specific to this topic were received.

A copy of the Notice of Preparation and NOP Distribution list are provided in **Subchapter 8.1** of this RDSEIR. A copy of the referenced comment letters/comments is also provided in **Subchapter 8.3** of this RDSEIR.

Additionally, as part of the initial circulation period for the OBMPU DSEIR, IEUA received seven comments from various agencies and entities on the 2020 DSEIR during the 2020 DSEIR public review period (March 27, 2020 to May 11, 2020), in addition to two comments received on the day of the IEUA Board of Directors monthly Board Meeting (July 15, 2020) from which the Final SEIR was withdrawn. Per CEQA Guidelines Section 15088.5(f)(1), reviewers are advised that, although part of the administrative record for the Project, the previous comments received on the 2020 DSEIR do not require a written response in the Final Recirculated SEIR and new comments must be submitted for this RDSEIR.

As stated above, IEUA will serve as the CEQA Lead Agency for the OBMPU pursuant to the Court order and CEQA Guidelines Section 15051(b)(1). The OBMPU RDSEIR was prepared by Tom Dodson & Associates (TDA). TDA was retained to assist IEUA and Watermaster to perform the

independent review of the Program required by CEQA before the OBMPU RDSEIR is released. IEUA and Watermaster will independently review the content of the OBMPU RDSEIR and determine whether they concur in the conclusions and findings contained herein prior to certifying the Final Recirculated SEIR.

2.3 SCOPE AND CONTENT OF THIS EIR

As stated previously, the OBMPU RDSEIR evaluates the environmental effects of the proposed Project based on Appendix G of the CEQA Guidelines in the following issue areas: Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gases/Climate Change, Hydrology and Water Quality, Tribal Cultural Systems, and parts of Utilities and Service Systems. The NOP concluded that the remaining issues have been determined to be less than significant either with or without mitigation incorporated within the Initial Study prepared for the Project, which was included as an attachment to the NOP and is provided as **Subchapter 8.1** of this RDSEIR: Aesthetics, Agriculture and Forestry Resources, Geology and Soils, Hazards and Hazardous Materials, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, parts of Utilities and Service Systems, Wildfire.

In addition to evaluating the environmental issues listed above, the OBMPU RDSEIR contains all of the sections mandated by CEQA and the CEQA Guidelines. **Table 2.3-1** provides a listing of the contents required in an EIR along with a reference to the chapter and page number where these issues can be reviewed in the document. This RDSEIR is contained in two volumes. Volume 1 contains the CEQA mandated sections and some pertinent appendices. Volume 2 contains the technical appendices.

**Table 2.3-1
REQUIRED EIR CONTENTS**

Required Section (CEQA)	Section in EIR	Page Number
Table of Contents (Section 15122)	same	ii
Summary (Section 15123)	Chapter 1	1.1
Summary of revisions made to previously circulated DSEIR (Section 18088.5(g))	Chapter 1	1.2
Project Description (Section 15124)	Chapter 3	3.1
Environmental Setting (Section 15125)	Chapter 4	Beginning 4.1
Significant Environmental Effects of Proposed Project (Section 15126a); Environmental Impacts	Chapter 4	Beginning 4.1
Unavoidable Significant Environmental Effects (Section 15126b)	Chapter 4	Beginning 4.1
Mitigation Measures (Section 15126c)	Chapter 4	Beginning 4.1
Cumulative Impacts (Section 15130)	Chapter 4	Beginning 4.1 and 6.2
Alternatives to the Proposed Action (Section 15126d)	Chapter 5	Beginning 5.1
Growth-Inducing Impacts (Section 15126g)	Chapter 6	6.1
Irreversible Environmental Changes (Section 15126f)	Chapter 6	6.1
Effects Found Not to be Significant (Section 15128)	Chapter 2 & 8	2.1
Organizations and Persons Consulted (Section 15129)	Chapter 7	7.1
Appendices	Chapter 8	8.1 ⁸

⁸ Chapter 8 includes: Subchapter 8.1: NOP and NOP comment letters; Subchapter 8.2: Initial Study; Subchapter 8.3: Responses to Comments, Comment Letters on the 2020 DSEIR, and receipts showing the Response to Comments were sent to the commenters.

2.4 RDSEIR FORMAT AND ORGANIZATION

The OBMPU RDSEIR contains eight chapters in Volume 1 and a set of technical appendices in Volume 2, which, when considered as a whole, provide the reviewer with an evaluation of the potential significant adverse environmental impacts from implementing the proposed OBMPU. The following paragraphs provide a summary of the content of each chapter of the OBMPU RDSEIR.

Chapter 1 contains the Executive Summary for the OBMPU RDSEIR. This includes an overview of the proposed Project and a tabular summary of the potential adverse impacts and mitigation measures.

Chapter 2 provides the reviewer with an Introduction to the document. This chapter of the document describes the background of the proposed Project, its purpose, and its organization. The CEQA process to date is summarized and the scope of the OBMPU RDSEIR is identified.

Chapter 3 contains the Project Description used to forecast environmental impacts. This chapter describes for the reviewer how the existing environment will be altered by the proposed Project. Chapter 3 sets the stage for conducting the environmental impact forecasts contained in the succeeding several chapters.

Chapter 4 presents the environmental impact forecasts for the issues considered in the OBMPU RDSEIR. For each of the environmental issues identified in Section 2.3, the following impact evaluation is provided for the reviewer: the potential impacts forecast to occur if the Project is implemented; proposed mitigation measures; unavoidable adverse impacts; and cumulative impacts.

Chapter 5 contains the evaluation of alternatives to the proposed Project. Included in this section is an analysis of the No Project Alternative and other Project alternatives.

Chapter 6 presents the topical issues that are required in an EIR. These include any significant irreversible environmental changes and growth inducing effects of the proposed Project.

Chapter 7 describes the resources used in preparing the OBMPU RDSEIR. This includes persons and organizations contacted; list of preparers; and bibliography.

Chapter 8 contains those materials referenced as essential appendices to the OBMPU RDSEIR, such as the NOP, Initial Study, Responses to Comments, Comment Letters on the 2020 DSEIR, and receipts showing the Response to Comments were sent to the commenters. Technical Appendices are provided in Volume 2 of the OBMPU RDSEIR, under separate cover. All Appendix material is referenced at appropriate locations in the text of the OBMPU RDSEIR.

2.5 AVAILABILITY OF THE OPTIMUM BASIN MANAGEMENT PROGRAM UPDATE RDSEIR

The OBMPU RDSEIR has been distributed directly to all public agencies and interested persons identified in the NOP mailing list (see **Subchapter 8.1**), the State Clearinghouse, as well as any other requesting agencies or individuals. All reviewers will be provided 45 days to review the OBMPU RDSEIR and submit comments to the IEUA for consideration and response. The

OBMPU RDSEIR is also available for public review at IEUA's website at www.ieua.org/obmpu-ceqa and at the following location during the 45-day review period:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

2.6 REVIEW PROCESS

Pursuant to CEQA Section 15088.5(f), because this RDSEIR has been substantially revised, reviewers must submit new comments on this RDSEIR. Although part of the administrative record, the previous comments do not require further written response, though as stated above the Responses to Comments, Comment Letters on the 2020 DSEIR, and receipts showing the Response to Comments were sent to the commenters are provided in **Subchapter 8.3**. After receiving comments on the OBMPU RDSEIR, IEUA will prepare a Final Revised SEIR for certification prior to making a recommendation to the Watermaster regarding approval of the OBMPU. Information concerning the EIR public review schedule and IEUA meetings for this Project can be obtained by contacting Mr. Pietro Cambiaso at IEUA. Questions and comments submitted by mail shall be addressed to:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Attn: Mr. Pietro Cambiaso
Phone: (909) 993-1600
Email: Pcambias@ieua.org

Certain components of the Program may be subject to review and approval by other agencies. Implementation of future individual project(s) to support the OBMPU may require a variety of approvals from other agencies in support of future actions (where required) for which this environmental document may be utilized. The following summarizes those agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds, so it should not be considered exhaustive. Other California agency approvals (if required) for which this environmental document may be utilized are outlined in **Table 1.3-1**, which can be found in **Chapter 1, Executive Summary**.

CHAPTER 3 – PROJECT DESCRIPTION

All exhibits are located at the end of this chapter, not immediately following their reference in the text.

3.1 INTRODUCTION

The OBMP is a regional water resources and groundwater management program for the Chino Basin. On January 2, 1975, several Chino Basin groundwater producers filed suit in the California State Superior Court for San Bernardino County to settle the problem of allocating water rights in the Chino Basin. On January 27, 1978, the Court entered a judgment in “*Chino Basin Municipal Water District v. City of Chino et. al.*” The Judgment adjudicated the groundwater rights of the Chino Basin, established the Chino Basin Watermaster—a Court created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin.

The OBMP is a required component of the Judgment and the Physical Solution, Paragraph 41 of which provides that:

Watermaster, with the advice of the Advisory and Pool Committees, is granted discretionary powers in order to develop an optimum Basin management program for Chino Basin, including both water quantity and quality considerations. Withdrawals and supplemental water replenishment of Basin Water, and the full utilization of the water resources of Chino Basin, must be subject to procedures established by and administered through Watermaster with the advice and assistance of the Advisory and Pool Committees composed of the affected producers. Both the quantity and quality of said water resources may thereby be preserved and the beneficial utilization of the Basin maximized.

The OBMP was developed by Watermaster and its implementation was facilitated by the Peace Agreement among the Parties to the Chino Basin Judgment, and ultimately ordered by the Court. However, the Watermaster is not considered a public agency and therefore, does not conduct environmental review pursuant to CEQA. The IEUA was initially recommended by Watermaster, ordered by the Court, and then agreed by the Parties to the Judgment to be the Lead Agency for CEQA review of the OBMP. Given the above, and that IEUA has jurisdiction throughout most of the Chino Basin, IEUA has agreed to serve as the Lead Agency for purposes of complying with CEQA.

In 2000, the OBMP contemplated coordinated and potentially related actions by Parties to the Judgment that were initially evaluated under a Programmatic EIR (PEIR), and subsequent CEQA reviews were undertaken in 2007, 2017, and 2021. This chapter contains a detailed description of the proposed Project, the Optimum Basin Management Program Update (OBMPU), with focus on those program characteristics and activities that have the potential to cause a direct physical change in the environment, or a reasonably foreseeable indirect physical change to the environment. This Project Description focuses on the relationship between OBMPU Program Elements and activities and facilities proposed by the overall OBMPU programs that may be implemented. Actual implementation of the OBMPU activities described herein may be carried out by the CBWM or any of the Parties/Stakeholders in the Chino Groundwater Basin (Chino Basin) through the planning period, 2020 through 2040.

The description of the OBMPU's scope in this document is expansive, as it covers the nine (9) Program Elements (PEs) that make up the original OBMP, and which were analyzed in the 2000 PEIR. The OBMPU is intended to address possible program activities and projects at a programmatic level over the next 20 years (2020-2040), with some site-specific detail where near-term future locations of facilities are known. The CBWM and Stakeholders have met numerous times to review the Program Elements and define potential Project activities and facilities. The CBWM and Parties/Stakeholders of the OBMPU and regulatory agencies that will function as CEQA Responsible Agencies will have the option of relying upon this CEQA document for any future actions they take in support of the proposed program or an individual project described in this environmental document.

The OBMPU and its associated activities are so interrelated that they merit consideration under a single CEQA document. CBWM and IEUA are in the unique position to evaluate implementation of the OBMPU on behalf of the Chino Basin as they integrate management of water supply, wastewater and groundwater management over the next 20 years and derive important benefits through cooperation with all other water management agencies and Stakeholders in the Chino Basin.

This current environmental review is the most recent in a series of environmental documents that began in 1999-2000 when the original OBMP PEIR was published and certified. These documents include the following:

- *Final Program Environmental Impact Report for the Optimum Basin Management Program* (SCH#200041047), July 2000 prepared by Tom Dodson & Associates (2000 OBMP PEIR)
- *Final Program Environmental Impact Report for the Wastewater Facilities Master Plan, Recycled Water Master Plan, Organics Management Master Plan* (SCH#2002011116), June 2002 prepared by Tom Dodson & Associates
- *Final Subsequent Environmental Impact Report for Inland Empire Utilities Agency Peace II Project* (SCH#2000041047), September 2010 prepared by Tom Dodson & Associates (2010 Peace II SEIR)
- *IEUA Facilities Master Plan Final Environmental Impact Report* (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR)
- *IEUA Addendum to 2000 OBMP PEIR*, March 2017 prepared by Tom Dodson & Associates (2017 OBMP Addendum)
- *IEUA Addendum No. 2 to the to OBMP PEIR*, March 2021 prepared by Tom Dodson & Associates (2021 OBMP Addendum)

These documents were prepared to address planned water, wastewater, biosolids, and recycled water management activities in the Chino Basin as called for by the OBMP's Program Elements, originally analyzed in the 2000 OBMP PEIR. Each document addresses changes in management activities at different times over the past 20 years and each document provides an important update of environmental conditions and management activity impact forecasts on the environment that constitutes a fundamental building block of support for local agencies when seeking funding from state or federal agencies that provide grants or loans to implement the facilities required to meet the then current management objectives/requirements within the Chino Basin. Some examples of such facilities already implemented and supported by previous environmental documents include the Chino Basin desalters, recharge Basin utilization, pipelines to convey water from points of origin to points of use, and aquifer storage and recovery wells.

The OBMPU is being analyzed in this updated environmental document for several reasons:

1. First, while the OBMP goals have been partially achieved, the understanding of the hydrology and hydrogeology of the Chino Basin has substantially improved since 2000. This understanding opens up opportunities to revise the OBMP for the benefit of the Chino Basin Parties.
2. Second, updated programs, such as the Updated Storage Management Plan, have been identified that will affect most of the OBMP Program Elements (described in detail in the following text).
3. Third, there are new water management issues that have been identified that necessitate adapting the OBMP to protect the collective interests of the Chino Basin Parties and their water supply reliability. Specific examples include: adaptation to climate change (including future drought conditions); focused management activities to address salt balance in the Chino Basin; and the emergence of environmental management issues affecting the whole of the Upper Santa Ana River Watershed.
4. State and federal agencies that provide funding for water management projects typically want to have an environmental document that contains a current environmental data base. The OBMPU environmental document establishes an appropriate environmental baseline for both new and revised facilities for the near future. The baseline date set forth for this RDSEIR is the Notice of Preparation publication date, February 10, 2020. The most recent Basin-wide water management environmental document is now more than 10 years old (Peace II, 2010) and no longer contains a current environmental baseline.

3.2 PROJECT LOCATION

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of about 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles Counties. **Exhibit 1** shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in **Exhibit 2**, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The 2000 OBMP, focused on management actions within the Chino Basin as shown on the inset on **Exhibit 1**. **Exhibit 2** illustrates the boundary of the Chino Basin as it is legally defined in the stipulated Judgment in the case of *Chino Basin Municipal Water District vs. the City of Chino et al.* **Exhibit 2** also shows the Regional Water Quality Control Board, Santa Ana Region (Regional Board) management zones as established in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

The principal drainage course for the Santa Ana River watershed is the Santa Ana River. It flows 69 miles across the Santa Ana Watershed from its origin in the eastern San Bernardino Mountains to the Pacific Ocean. The Santa Ana River enters the Chino Basin at the Riverside Narrows and

flows along the Basin's southern boundary to the Prado Flood Control Reservoir, where it is eventually discharged through the outlet at Prado Dam and flows the remainder of its course to the Pacific Ocean. The Basin is traversed by a series of ephemeral and perennial streams that include: San Antonio Creek, Chino Creek, Cucamonga Creek, Deer Creek, Day Creek, Etiwanda Creek and San Sevaine Creek. Please refer to **Exhibit 2** for the location of drainages.

These creeks flow primarily north to south and carry significant natural flows only during, and for a short time after, the passage of Pacific storm fronts that typically occur from November through April. Year-round flow occurs along the entire reach of the Santa Ana River due to year-round surface inflows at Riverside Narrows, discharges from municipal water recycling plants to the River between the Narrows and Prado Dam, and rising groundwater. Rising groundwater occurs in Chino Creek, in the Santa Ana River at Prado Dam, and potentially other locations on the Santa Ana River depending on climate and season.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W.

3.3 PROJECT PURPOSE AND OBJECTIVES

The *2020 Optimum Basin Management Program Update Report* (2020 OBMPU Report; Appendix 6a), approved by CBWM in October 2020, documents the Stakeholder process that was used to update the OBMP and it describes the 2020 OBMP Management Plan.

Accordingly, the 2020 OBMPU's goals remain the same as the 2000 OBMP's goals:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

3.4 PROJECT CHARACTERISTICS

3.4.1 Introduction

As stated above, the OBMP is a regional water resources and groundwater management program for the Chino Basin. The location of the Chino Basin is shown in **Exhibit 1**. **Exhibit 2** shows the adjudicated boundary as it is legally defined in the Judgment, the hydrologic boundary, the Chino Basin management zones, and the groundwater management zones defined by the Santa Ana

Regional Water Quality Control Board (Regional Board) in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan). The Original OBMP, OBMP Implementation to Date, Basin-Wide Projects and Programs, and OBMPU Program Elements are discussed in detail in **Chapter 2, Introduction**.

3.4.1.1 Need for the 2020 Optimum Basin Management Program Update (OBMPU)

The 2000 OBMP contains a set of management programs (the PEs) that improve the reliability and long-term sustainability of the Chino Basin and the water supply reliability of the Judgment Parties. The framework for developing the OBMP—including the goals of the Parties, the hydrologic understanding of the Basin, the institutional and regulatory environment, an assessment of the impediments to achieving the Parties' goals, and the actions required to remove the impediments and achieve the goals—were all based on 1998-1999 conditions and valid planning assumptions at that time.

As of 2020, many of the projects and management programs envisioned in the 2000 OBMP have been and continue to be implemented; though some have not. The understanding of the hydrology and hydrogeology of the Chino Basin has improved since 2000, and new water-management issues have been identified. The strategic drivers and trends that shaped the goals and implementation actions of the OBMP in the late 1990s have since changed. And, there are several drivers and trends in today's water management space that may challenge the ability of the Parties to protect their collective interests in the Chino Basin and their water supply reliability.

Exhibit 3 characterizes the drivers and trends shaping water management and their Basin management implications for the Parties. "Drivers" are external forces that cause changes in the Chino Basin water space, such as climate change, regulations, and funding. Grouped under each driver are expected trends that emanate from that driver. For example, trends associated with climate change include reduced groundwater recharge, increased evaporation, and reduced imported water supply. The relationship of the drivers/trends to the management implications are shown by arcs that connect trends to implications. For example, a management implication of reduced groundwater recharge is the reduction of the Chino Basin Safe Yield.

As shown in **Exhibit 3**, growth is one of the drivers shaping water and Basin management. The Basin management implications that form the Stakeholders' rationale for the 2020 OBMPU are:

- Reductions in Chino Basin Safe Yield
- Reduced imported water availability and increased cost
- Imported water quality degradation
- Chino Basin water quality degradation
- Inability to pump groundwater with existing infrastructure
- Increased cost of groundwater use
- Recycled water quality degradation
- Reduced recycled water availability and increased cost
- Increased cost of Basin Plan compliance

Additionally, the 2020 OBMP PEIR and Peace II SEIR for the OBMP are over twenty and over ten years old, respectively. Knowledge of the Basin's characteristics has improved since these documents were adopted, water management challenges have intensified, and environmental considerations have changed. An updated PEIR will better support decision-making, investment, and grant applications for ongoing and new management actions under the OBMP.

Finally, it is anticipated that it will become increasingly difficult to secure grants and low-interest loans due to increased competition in the future. Most grant and low-interest loan programs require, or heavily favor projects that are within watersheds and groundwater basins with adopted integrated regional management plans, groundwater sustainability plans, or their equivalents. The 2020 OBMPU is equivalent to a regional water resources and groundwater management plan that, in addition to allowing the implementation of the Physical Solution, will enable the Stakeholders to be competitive in applying for grants and low-interest loans.

For these reasons, Watermaster and the Parties need to update the OBMP and its Implementation Plan, and perform the CEQA process, to set the framework for the next 20 years of Basin-management activities.

3.4.1.2 Stakeholder Process for the 2020 OBMPU

The 2020 OBMPU Report was facilitated using a collaborative Stakeholder process like that employed for the development of the 2000 OBMP. Throughout 2019, Watermaster held a series of public listening sessions to support the development of the OBMPU. The purpose of the listening sessions was to obtain information, ideas, and feedback from the Stakeholders to define their issues, needs, and wants; their collective goals for the OBMPU; impediments to achieving the goals; the management actions required to remove the impediments; and a proposed plan to implement the management actions.

Watermaster established an OBMPU Team to facilitate the Stakeholder process, composed of Watermaster staff, Watermaster legal counsel, engineers and scientists from WEI (Watermaster's engineering consultant at the time, which has since merged with West Yost), and IEUA staff. The OBMPU Team provided key information prior to and during each listening session to enable the Stakeholders to provide their input on each topic discussed. The objectives were to communicate the process for updating the OBMP, to ensure that the ideas and opinions of every Stakeholder were heard, to present the information that will be considered for inclusion in the OBMPU, and to ensure the Stakeholder feedback is captured correctly.

The OBMPU Team held eight listening sessions on the following dates:

- Listening Session 1: January 15, 2019
- Listening Session 2: February 12, 2019
- Listening Session 3: March 21, 2019
- Listening Session 4: May 16, 2019
- Listening Session 5: July 31, 2019
- Listening Session 6: September 11, 2019
- Listening Session 7: October 17, 2019
- Listening Session 8: December 11, 2019

The objectives of the first four listening sessions were (1) to confirm the need to update the OBMP; (2) to identify the issues, needs, and wants of the Stakeholders; (3) to define goals for the OBMPU; and (4) to identify new and revised activities that could be included in the 2020 OBMPU to remove impediments to achieving the OBMPU goals. The 2020 OBMP Scoping Report (Scoping Report) summarized and integrated the work products of these four listening sessions and described the recommended scope of work to implement each of the "OBMPU Activities" defined by the Stakeholders. The final Scoping Report, including responses to Stakeholder comments, is included in Appendix C of the 2020 OBMPU Report.

The objectives of Listening Sessions 5 and 6 were to present and obtain feedback on the scopes of work described in Section 3 of the Scoping Report. The objective of Listening Session 7 was to present and obtain feedback on the integration of the OBMPU Activities defined in the Scoping Report with the 2000 OBMP PEs. The objectives of Listening Session 8 were to present and obtain feedback on the recommended OBMPU management plan documented in the Draft 2020 OBMPU Report and to begin discussions on the OBMPU Implementation Plan and implementation agreements.

OBMPU RDSEIR Stakeholder Input

As a result of the Recirculation of this DSEIR, a second round of input was solicited from the Stakeholders in order to form an updated Project Description that meets the current needs of the Stakeholders in the context of the OBMPU.

On September 1, 2022, an OBMPU CEQA Project Description workshop was held to refresh the Stakeholders on the OBMPU Project Description development that led to the 2020 OBMPU SEIR. The September 2022 Workshop resulted in Watermaster requesting input from the Parties on additional Projects that should be considered as part of this OBMPU RDSEIR. The Parties were given a timeframe by which to provide additional Projects to be considered as part of this OBMPU RDSEIR. On November 28, 2022, the Watermaster held a second Workshop to update the Parties on the input that was received as a result of the Watermaster's request for input on the Project Description by the Parties. This resulted in an updated Project Description that included a revised Summary of All Facilities reflecting the additional Projects put forth by the Parties, which are described under **Subsection 3.5, Summary of All Facilities**, below.

3.4.1.3 Ongoing Implementation Actions for the 2020 OBMPU

Recycled Water Reuse

The IEUA is continuing to expand its recycled-water distribution system and recharge facilities throughout the Chino Basin for direct non-potable uses and recharge. Growth is still occurring in the Chino Basin and will result in additional wastewater flows to the IEUA's treatment plants. Much of this supply will be used to meet increasing non-potable demands as the currently remaining agricultural land uses convert to urban uses and can also be used to increase recycled water recharge. Such increased use activities are consistent with the activities to increase recharge in PE 2 and provide for maximum benefit through PE 7, and can be designed to address several of the Basin management issues. There are various factors that will impact the ability to maximize the reuse of recycled water produced for direct and indirect use within the Chino Basin, including the timing of recycled water availability, salt and nutrient management, water quality regulations (such as new drinking water standards for emerging contaminants of concern), and direct potable reuse regulations.

Water Reliability

As urban land uses replace agricultural and vacant land uses, the water demands of the Chino Basin Parties are expected to increase. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040. Total water demand is projected to grow from about 290,000-acre feet per year (afy) in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses.

Table 3.1
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040¹

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	147,238	145,904	153,804	157,716	168,987	176,652
Non-Chino Basin Groundwater	51,398	55,755	63,441	64,999	66,691	68,483
Local Surface Water	8,108	15,932	15,932	18,953	18,953	18,953
Imported Water from Metropolitan	53,784	86,524	93,738	100,196	102,166	109,492
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000
Recycled Water for Direct Reuse**	20,903	24,008	24,285	26,583	29,836	33,223
Total	290,292	337,607	361,295	379,422	397,633	417,803
Percentage						
Chino Basin Groundwater	51%	43%	43%	42%	42%	42%
Non-Chino Basin Groundwater	18%	17%	18%	17%	17%	16%
Local Surface Water	3%	5%	4%	5%	5%	5%
Imported Water from Metropolitan	19%	26%	26%	26%	26%	26%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	100%	100%	100%	100%	100%	100%
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin. The population data provided under Environmental Setting in Section XIV, Population and Housing provides a more accurate representation of the population within the Chino Basin, and more accurately reflects the population within the general areas in which OBMPU facilities are proposed to be developed.

**These data were obtained from the 2018 Storage Framework Investigation (SFI) prepared by WEI; revised January 2019. This document is available on Watermaster's FTP site at <http://www.cbwm.org/>

3.4.1.4 2020 Optimum Basin Management Program Update (OBMPU) Report

The purpose of this 2020 OBMPU Report provided as Appendix 6a to this RDSEIR is to document the Stakeholder process to update the OBMP and describe the recommended OBMPU management plan. The management plan will form the foundation for Watermaster and the Chino Basin Judgment Parties (hereafter, Parties or Stakeholders) to develop a final implementation plan (the 2020 OBMP Implementation Plan) and the agreements necessary to implement it. The facilities proposed as part of this OBMPU RDSEIR have been developed as a direct result of the 2020 OBMPU Report. These facilities are discussed in **Subsection 3.5, Summary of All Facilities**, below.

3.4.1.5 2023 Storage Framework Investigation

The Chino Basin Judgment included an acknowledgement that there was a significant amount of unused storage space in the Chino Basin, and that use of this space be undertaken only under Watermaster control and regulation.

¹ Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

The Judgment establishes Watermaster's control over the use of the storage space in the Basin that is not used to regulate Basin Waters for Safe Yield, require the accounting of Stored Water and Basin Water in storage, require accounting for the impacts of Managed Storage on Safe Yield and the prevention of unauthorized overdraft, require storing entities to obtain a storage agreement from Watermaster, and prioritize the use of storage space to meet the needs and requirements of the lands overlying the Chino Basin, and of the Parties over the storage space used to store water for export.

Additionally, the Judgment requires that Watermaster develop storage agreements for entities (Parties and others) to store water in the Basin, have the storage agreements approved by the Court, include terms in the storage agreements to ensure that storage "operations" do not cause "substantial adverse impact on other producers," and collect information to enable it to account for "all Stored Water in Chino Basin, and any losses of water supplies or Safe Yield of Chino Basin resulting from such Stored Water." Losses of water supplies or Safe Yield refer to storage losses and changes in Safe Yield caused by the management of storage.

As a result of the above, and to support Watermaster's update of the OBMP storage management plan, the initial Storage Framework Investigation was initiated in 2017 and completed in 2018 (2018 SFI). Watermaster conducted the 2018 SFI to provide it the tools and technical information necessary to enable an update to the storage management plan. The goals of the 2018 SFI were to describe how the Basin will respond to the use of storage space, the potential MPI and adverse impacts (if any) from the future use of storage space, and to develop descriptions of various approaches to mitigate MPI and adverse impacts.

A 2023 SFI has been prepared as a result of the modified OBMPU Project Description resulting from Stakeholder input in late 2022 (Appendix 6b). The 2023 SFI is meant to provide a technical analysis of the hydrologic impacts of Storage and Recovery Programs that are contemplated in this OBMPU Project Description. Pursuant to this objective, the scope of work to develop the 2023 SFI was to (i) define Storage and Recovery Program scenarios based on this OBMPU Project Description and (ii) evaluate the response of the Chino Basin to the scenarios for MPI and adverse impacts.

The projected response of the Chino Basin to the Storage and Recovery Program scenarios was simulated using the 2020 Chino Valley Model (CVM) over the period of fiscal year (FY) 2019 through FY 2060. By using the 2020 CVM as the basis for this analysis, the 2023 SFI reflects the most up to date understanding of the effects of the contemplated Storage and Recovery Programs on the Chino Basin. The information included in the 2023 SFI has been utilized to prepare this RDSEIR for the OBMPU. The 2023 SFI has been described in detail in **Subchapter 4.7, Hydrology and Water Quality**.

Put simply, the 2023 SFI analyzed the Basin response from the Chino Basin Parties' use of storage space up to 700,000 af and the conjunctive-use by Storage and Recovery Programs from 700,000 af to 900,000 af, thereby contemplating an increase in SSC to 900,000 af.

3.5 SUMMARY OF ALL FACILITIES

The 2020 OBMPU and related documents is a revision of the implementation plans included in the Peace and Peace II Agreements and incorporates the new activities in the 2020 OBMPU and ongoing activities from the 2000 OBMP. This section of the Project Description is intended to outline the specific facilities and specific types of facilities and/or improvements that could result

from the implementation of the OBMPU, and to provide operational and construction scenarios for OBMPU related equipment and facilities. These facilities are listed in **Exhibit 5**, which is repeated herein for reference and are outlined in further detail below. Note that the Program Elements referred to in **Exhibit 5** are described in detail in **Chapter 2, Introduction**. The Program Elements are described in detail under **Subsection 3.6, below**.

Exhibit 5

List of facilities to be evaluated in CEQA	PE1	PE2	PE4	PE5	PE6	PE7	PE8/9
New monitoring wells	✓	✓	✓	✓	✓	✓	✓
New surface water and groundwater recharge monitoring facilities	✓	✓					✓
New meteorological monitoring facilities	✓	✓					✓
New meter installation at pumping wells	✓						
New extensometers	✓		✓				✓
New benchmarks	✓		✓				✓
New stormwater diversion, storage, transfer and recharge facilities		✓	✓	✓			✓
CIM storage facilities*		✓	✓	✓			✓
Flood MAR*		✓	✓	✓			✓
Regional conveyance:*		✓	✓	✓			✓
Lower Cucamonga Basin		✓		✓			✓
Mills Wetlands		✓		✓			✓
Riverside Basin		✓		✓			✓
Vulcan Basin *		✓		✓			✓
Confluence Project*		✓		✓			✓
Injection wells*		✓	✓	✓			✓
Treatment (for some sources)*		✓	✓	✓			✓
Restore WFA Agua de Lejos Treatment Plant capacity for in-lieu recharge		✓	✓	✓			✓
MS4 recharge project incentives		✓	✓				✓
Relocate pumping from MZ1 to MZ2/3 and southern portion of the Chino Basin and/or increase recharge in MZ1			✓				✓
New production wells*			✓				✓
Acquire supplemental water supplies*		✓		✓			
Regional conveyance				✓			✓
New dedicated regional conveyance facilities				✓			✓
North-south pipeline*				✓			✓
East-west pipeline*				✓			✓
Incorporate local conveyance facilities into a regional conveyance system*				✓			✓
Maximize recycled water reuse				✓			
Expand system for indirect reuse*				✓			
Advanced water treatment*				✓		✓	
Direct potable use*				✓			
New regional groundwater treatment plants (up to 10 mgd for local use; up to 30 mgd for export)*				✓	✓		✓
Expansion of existing groundwater treatment plants*				✓	✓		✓
Upgrade recycled water treatment plant to desalt effluent*						✓	
Maintain or increase groundwater pumping in Chino Creek Well Field (CCWF) area:							
New production wells in CCWF area*						✓	✓
Acquire wells in CCWF area*						✓	✓
New ASR wells in MZ2/3 north of Highway 60*							✓

*Includes conveyance infrastructure

Exhibit 5: PROGRAM ELEMENTS AND LIST OF PROJECTS EVALUATED IN THIS RDSEIR

The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities that will be summarized below. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities. The facilities proposed under the OBMPU have been broken into the above Project Categories for impact forecasting purposes. While there are several projects with facilities in multiple project categories (for instance, the AWPf, groundwater treatment facilities, etc.), it is anticipated that future OBMPU projects that are made up of multiple facilities would not necessarily be constructed concurrently. Individual components of each project made up of multiple facilities may be installed in a singular fashion until the whole of the Project is implemented and operational. Below are general descriptions of the facilities and operations proposed as part of the OBMPU.

Construction Scenarios

As part of this summary of all facilities, estimated construction scenarios are provided as part of the discussion of each type of facility. The purpose of the following general construction scenarios is to assist the reviewer to understand how the proposed facilities will be installed, the amount of time required for their construction, and potential direct and indirect environmental impacts. This information also provides essential data for making the program air quality impact forecasts using the most current CalEEMod emission forecast model.

Operational Scenarios

Possible operational scenarios are also provided as part of the discussion of each type of facility. The future modes of operation (activities) are provided to enable evaluation of the direct and indirect environmental impacts that could result from OBMPU implementation. These are representative scenarios that describe a range of plausible future operations and activities, based on the past activities carried out in the Chino Basin to implement the original OBMP Program Elements, and are a reasonable estimate of future operations based on the information available at this time.

Project Category 1: Well Development and Monitoring Devices

This Project Category includes the development of aquifer storage and recovery (ASR), injection, pumping, and groundwater monitoring wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Well development includes a total of up to 207 new wells, which will serve the varying purposes summarized here and described in more detail below: up to 66 ASR wells, 12 wells relocated to adjust up to about 25,000 afy of pumping, 8 wells to expand desalter capacity, 10 injection wells and 9 extraction wells in support of the proposed advanced water purification facility (AWPF), and 102 groundwater level and groundwater quality monitoring wells, of which 2 of those wells would also be intended to support the proposed AWPf. In addition, the OBMPU anticipates reconstruction and/or modification of up to 5 existing wells to mitigate loss of pumping capacity, and destruction and replacement of 5 wells.

The monitoring devices proposed as part of the OBMPU include up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells.

Project Category 2: Conveyance Facilities and Related Infrastructure

This category includes the construction of up to 620,600 lineal feet (LF) of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 million gallons (MG) and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Project Category 3: Storage Basins and Recharge Facilities and Storage Bands

This Project Category includes the construction of up to 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood managed aquifer recharge (MAR) facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af within this range of storage. The specific locations of the new and existing storage basins are described in the Project Description, above; however, the locations of the flood MAR facilities and MS4 compliance projects are presently unknown.

Project Category 4: Desalters and Water Treatment Facilities

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (previously analyzed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites, 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. Impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR are assumed to be part of the baseline and will not be analyzed further as part of the OBMPU.

For many of the facilities anticipated by the OBMPU, the types, configuration and exact location of future specific projects that may be constructed in support of the OBMPU have not been determined. However, there are a few specific projects that have been identified at a sufficient level of detail that a location has been pinpointed in which a specific project will be developed. For instance, the California Institution for Men (CIM) Storage Basin project is proposed to be located at the CIM; however, the project specifications at that site have not yet been identified. For the remaining projects listed below, it is possible to foresee some of the infrastructure that is likely to be constructed and to project the reasonably foreseeable direct and indirect impacts that would result from construction and operation of the infrastructure. Impacts associated with specific future projects could be evaluated in second-tier CEQA evaluations to determine if the actual impacts fall within the impacts forecast by this analysis, or require subsequent CEQA evaluations and determinations. These evaluations would be conducted under Section 15162 of the State CEQA Guidelines.

OBMPU Basin Operation Changes

Operation of the Basin under OBMPU would be required to fall within the scope of Basin management obligations stipulated by the Judgment. However, the main difference between operation of the Basin under the OBMPU versus to 2000 OBMP is that, the suite of projects proposed as part of the OBMPU would facilitate greater storage and recovery of the Basin, which would enable the increase in SSC to 900,000 af, which is described in detail under Subsection 3.5.1.4, below. Without a suite of storage and recovery program projects, such as recharge basins, ASR wells, injection wells, etc., the SSC could not be increased as proposed herein.

3.5.1 Project Category 1: Well Development and Monitoring Devices

3.5.1.1 Monitoring Wells and Devices: Construction & Operations

Groundwater-Level and Groundwater-Quality Monitoring Wells (PE1)

Under the OBMPU, up to 102 new monitoring wells will be constructed to monitor groundwater levels in the Chino Basin, which would meet the objective of **PE1** by providing the information necessary to support the implementation of all other OBMPU PEs and to evaluate their performance. The groundwater quality monitoring wells and groundwater level monitoring wells can be utilized interchangeably for both types of monitoring activities.

Groundwater-Level and Groundwater-Quality Monitoring, Wells: Summary of Facilities

The average area of disturbance of each well site is anticipated estimated to be half an acre or less, while the total depth of each well is anticipated to range from 50 to 1,500 feet. The precise location of the proposed new wells is unknown at this time, beyond that the groundwater-level monitoring wells and groundwater-quality wells will be located within the Chino Basin, shown on **Exhibit 6** and **Exhibit 7**, respectively. The new groundwater-level monitoring wells will be equipped with pressure transducer data-loggers that measure and record groundwater levels. Additionally, a subset of the new groundwater-quality monitoring wells will be equipped with probes that measure and record water-quality parameters.

Groundwater-Level Monitoring, Wells: Operational Scenario

Wells will be visited by a field technician on a monthly to quarterly frequency. There is negligible energy consumption in obtaining groundwater levels from a monitoring well.

Groundwater-Production Monitoring (PE1)

Under the OBMPU, Watermaster's ongoing groundwater-production monitoring program will be expanded, which would meet the objective of **PE1** by providing the information necessary to support the implementation of all other OBMP PEs and to evaluate their performance. Up to 300 in-line flow meters will be installed in existing private wells to accurately estimate production by the Agricultural Pool.

Groundwater-Production Monitoring: Summary of Facilities

The flow meters are installed on the existing well discharge pipe. The proposed/possible locations for the in-line flow meters on Agricultural Pool wells are shown on **Exhibit 8**.

Groundwater-Production Monitoring: Operational Scenario

Agricultural pumping wells will be visited by a field technician on a monthly to quarterly frequency to read up to 300 in-line flow meters. There is negligible energy consumption for accessing and reading the meter.

Surface Water and Climate Monitoring (PE1)

Under the OBMPU, Watermaster and IEUA's ongoing surface-water and climate monitoring efforts will be expanded, which would meet the objective of **PE1** by providing the information necessary to support the implementation of all other OBMP PEs and to evaluate their performance. Surface-water discharge and stage measuring equipment and meteorological monitoring equipment will be installed in and near stormwater drainage and recharge facilities, respectively, to improve the accuracy of surface-water diversion and recharge measurements.

Surface Water and Climate Monitoring: Summary of Facilities

The surface-water discharge equipment will consist of flow meters, data loggers and communications equipment that measure flow rate at discrete points along creeks, and inlets and outlets of existing recharge facilities, store the measure data and transmit it to IEUA's Supervisory Control and Data Acquisition (SCADA) system. The surface-water stage monitoring equipment will consist of pressure transducer data-loggers and communications equipment that measure and record water levels, store the measurement data and transmit it to IEUA's SCADA system. The meteorological monitoring equipment will be similar to the California Irrigation Management Information System (CIMIS) stations and include data loggers and communications equipment. The potential locations for the installation of surface-water and climate monitoring devices are shown on **Exhibit 9**.

Surface Water and Climate Monitoring: Operational Scenario

Flow and stage measuring equipment and meteorological monitoring equipment will be visited by a field technician on a monthly to quarterly frequency to download data and service the equipment. The monitoring equipment will likely be powered by a solar panel and connected to a telemetry system.

Ground-Level Monitoring, Extensometers (PE1)

Under the OBMPU, Watermaster's ongoing ground-level monitoring program will be expanded, which would meet the objective of **PE1** by providing the information necessary to support the implementation of all other OBMP PEs and to evaluate their performance. Up to three new extensometers will be constructed in the areas prone to subsidence with total extensometer depths of up to 1,500 feet.

Ground-Level Monitoring, Extensometers: Summary of Facilities

An extensometer is a sophisticated monitoring facility consisting of piezometers and extensometers. As the aquifer system undergoes various stresses due to groundwater production and recharge, the facility monitors the hydraulic response of the aquifer system at the piezometers and the mechanical response of the aquifer system at the extensometers. The facility is equipped with pressure transducers to measure water levels in the piezometers, linear potentiometers to measure the vertical aquifer-system deformation at the extensometers, and data loggers to record the data at frequent intervals (e.g., 15 minutes). The possible locations of the extensometers are within the Areas of Subsidence concern shown on **Exhibit 10**.

Ground-Level Monitoring, Extensometers: Operational Scenario

Wells with extensometers will be visited by a field technician on a monthly to quarterly frequency to download data and service the equipment. The extensometer will likely be powered by a solar panel and connected to a telemetry system.

3.5.1.2 Monitoring Wells: Construction Scenario

The OBMPU estimates that up to 102 monitoring wells will be installed to monitor groundwater levels and groundwater quality, which can be used interchangeably for both purposes. It is assumed that up to 20 monitoring wells may be developed in a single year. Development of each new monitoring well during a given year will require the delivery and set up of the drilling rig. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment 20 times in a year will result in twenty 50-mile round-trips.

Monitoring well development has essentially the same construction impacts as production well development, except it does not require test pumping, discussed under **3.5.1.4 ASR, Injection and Pumping Wells**, below.

3.5.1.3 Monitoring Devices: Construction Scenario

The installation of up to 300 in-line flow meters and up to 100 transducer data loggers will require one round-trip per device, or a total of 400 round trips over an undefined period of time. These trips are anticipated to occur within the Basin; as such, the average round-trip length to install one in-line flow meter is anticipated to be 40 miles. For analysis purposes up to 100 monitoring devices are assumed to be installed in a single year.

The OBMPU anticipates the installation of an unknown number of flow and stage measuring equipment and meteorological monitoring equipment in and near storm water drainage and recharge facilities. The installation of each device is anticipated to require one round-trip, for an estimated total of 50 round-trips. The average round-trip length to install one monitoring device is anticipated to be 40 miles.

The installation of up to three extensometers will require 7 round-trips, and 7 days to complete the installation of each device. For each of the 7 days required for extensometer installation, it is anticipated that average trip length will be about 40 miles in length. A truck mounted crane could be used to lower the cable extensometer anchor weight into the well casing.

3.5.1.4 ASR, Injection and Pumping Wells: Facilities Summaries & Operational Scenarios

ASR Wells (PE2, PE4, PE5, PE7, PE8/9)

ASR wells are used to inject treated supplemental water into the Basin and to pump the injected groundwater on some periodic schedule. In order to meet the objectives of **PE2 (Exhibit 12)**, the OBMPU envisions constructing up to 66 ASR wells to increase supplemental water recharge capacity by up to about 70,000 afy. Some of the new ASR wells that will be constructed for **PE 2** can be used for **PE's 4, 7 and 8/9**; as such the total number of ASR wells anticipated to be constructed under these assumptions is 66. Specific to **PE 2**, 8 ASR wells are required to meet the objectives of **PE2** when combined with the ASR wells that meet the objectives of **PE's 4, 7 and 8/9** below. This is illustrated in **Table 3.2** below. In the case that recycled water is injected into the Chino Basin, an ASR well would be replaced by one dedicated injection well plus one conventional extraction well. Some of the new ASR wells that will be constructed for **PE 2** can be used for **PE's 4, 7 and 8/9**.

In order to address the objectives of **PE4 (Exhibit 14)**, the OBMPU envisions constructing up to 15 ASR wells in Northwest MZ-1 and Central MZ-1 to increase wet-water recharge capacity in MZ-1 by up to about 25,000 afy. This will require improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to about 25,000 afy and the increase in use of imported water purchased from Metropolitan Water District of Southern California (Metropolitan) by up to about 25,000 afy. Some of the surface water supplied could be obtained through TVMWD from its Miramar treatment plant. As previously stated, these ASR wells would also meet the objectives of **PEs 2, 5, 7 and 8/9**.

In order to address the objectives of **PE8/9 (Exhibit 27)**, the OBMPU envisions constructing up to 43 new ASR wells and/or 30 new conventional production wells in MZ-2/3 north of Highway 60

to increase pumping and recharge capacity by up to about 70,000 afy to implement Storage and Recovery programs. The ASR wells also meet the objectives of **PEs 2, 4 and 5**.

For the purposes of this analysis, the OBMPU assumes that a total of 66 ASR wells would be installed to accomplish the objectives of **PEs 2, 4, 5, 7, 8/9**—which are outlined under **Section 3.6, Program Objectives**, below. Because conventional wells and ASR wells require the same construction techniques (discussed below under **3.5.1.5 Wells (ASR, Injection, and Pumping): Construction Scenario**), this analysis assumes that up to 66 ASR wells will be installed, though there is a potential that conventional wells developed to either increase pumping and recharge capacity (**PE 8/9**) or to install injection/extraction well pairs; regardless no more than 66 wells will be developed to serve ASR objectives related to **PEs 2, 4, 5, 7, 8/9**.

Table 3.2
ASR WELLS PER PROGRAM ELEMENT

PE (Location)	Number of Wells
PE 4 with potential use for PE 2 (MZ 1 north of Hwy 60)	15
PE 8/9 with potential use for PE 2 (MZ 2/3 north of Hwy 60)	43
Additional wells for PE 2 (north of Hwy 60)	8
TOTAL	66

ASR Wells: Facilities Summary

- The depth of a new ASR wells could range between 500 and 1,500 feet.
- The average area of disturbance of a well site is anticipated to be half an acre or less.
- The installation of the proposed ASR wells or injection/extraction well pairs include the construction of conveyance facilities to: (1) convey the supplemental water to the ASR wells and to convey pumped groundwater to end users; and/or (2) to supply water to the ASR wells for recharge and to convey pumped groundwater to end users. Conveyance facilities include pipelines, booster stations, water storage reservoirs and related appurtenances.
 - The length of pipelines for **PE2** is estimated to be about 150,000 LF.² The location of associated booster stations, water storage reservoirs and minor appurtenances are currently unknown.
 - The length of pipelines for **PE4** is estimated to be about 37,500 LF.³ The location of possible associated booster stations, water storage reservoirs and related appurtenances are unknown.
 - The estimated length of pipelines for **PE8/9** is estimated to be about 100,000 LF.⁴ The location of associated booster station, water storage reservoirs and related appurtenances are unknown.
- The primary physical difference between ASR and production wells is that different valve options are installed according to the type of well.
- The installation of the proposed ASR wells includes the construction of improvements to wastewater treatment plants if recycled water is injected into an ASR well (described under Wastewater Treatment Facilities below). In the case that recycled water is injected into

² The pipeline associated with ASR development is accounted for under Project Category 2.

³ ibid

⁴ ibid

the Chino Basin, an ASR well would be replaced by one dedicated injection well plus one conventional extraction well.

- The expected location of ASR wells is north of Highway 60 in Management Zone (MZ)-1, MZ-2 and MZ-3.

ASR Wells: Operational Scenario

ASR wells under **PE2** and **PE 4** will be operated seasonally, and pumping is expected to occur during the summer at an assumed utilization rate of 80 percent, while recharge is expected for the remainder of the year at an assumed utilization rate of 70 percent. The wells will pump up to 12,500 afy at an assumed rate of 1,200 gpm. Recharge for ASR wells (or injection wells) will occur by gravity flow and will require no pumping to place the water in the aquifer. Energy consumption is expected to range between 300 and 650 kilowatt hours (kWh) per af.

ASR Wells and Conventional Wells Incorporated into Watermaster Storage Management Plan: Operational Scenario

It has been calculated that the Chino Basin Parties will utilize up to 620,000 af of groundwater storage for their individual conjunctive-use activities. Metropolitan currently has a storage agreement that allows them to operate a Storage and Recovery Program (Dry-Year Yield Program [DYYP]) in the Chino Basin through 2028. Collectively, the Chino Basin Parties and Metropolitan will use up to 700,000 af through 2030 and the amount of storage space used by Chino Basin Parties for their individual conjunctive-use activities is projected to gradually decline for several decades thereafter. Beyond 2030, the anticipated operations of the Chino Basin Parties are anticipated use up to 700,000 af.

The 2023 SFI (Appendix 6b) analyzed the Basin response from the Chino Basin Parties' use of storage space up to 700,000 af and the conjunctive-use by Storage and Recovery Programs from 700,000 af to 900,000 af. Based on the work done in the 2023 SFI, the storage space was divided into two bands: First Managed Storage Band (FMSB) of 700,000 af for use by the Chino Basin Parties, Metropolitan, and IEUA and 200,000 af of storage space between 700,000 af and 900,000 af for use by future Storage and Recovery Programs. The 2020 *Storage Management Plan* (WEI, 2020) requires that the facilities used to conduct Storage and Recovery programs using the storage space between 700,000 and 900,000 af to be located in the Northern parts of MZ2 and MZ3 as shown in **Exhibit 27**.

The facilities required by the Chino Basin Parties and Metropolitan to conduct their conjunctive-use activities within the FMSB currently exist and they are in operation today. The facilities required to conduct Storage and Recovery Programs using the storage space between 700,000 af and 900,000 af consist of a combination of existing facilities (spreading basins, ASR wells and conventional wells) and new facilities. The table below summarizes the range in existing and new facilities required to implement Storage and Recovery Programs that operate in the storage band between 700,000 af and 900,000 af. For purposes of this RDSEIR and consistent with the assumptions in the 2023 SFI, the operational cycle of Storage and Recovery Programs consists of four put years, three hold years and three take years.

Table 3.3
RANGE OF EXISTING AND NEW FACILITIES REQUIRED TO IMPLEMENT STORAGE AND RECOVERY PROGRAMS

	Minimum New Facilities			Maximum New Facilities		
	Put and takes (afy)	Number of operating wells	New energy requirement (kwh)	Put and takes (afy)	Number of operating wells	New energy requirement (kwh)
Annual put	50,000			50,000		
Existing in-lieu capacity used	12,500		0	0		0
Existing spreading basin capacity used	19,520		0	0		0
Existing ASR well capacity used	5,480		438,400	0		0
Total existing put capacity used	37,500		438,400	0		0
New ASR well capacity used	12,500	6	1,000,000	50,000	24	4,000,000
Annual take	66,666			66,666		
Take through existing wells	16,666		10,166,260	0		0
Take through new ASR wells	50,000	8	30,500,000	50,000	0	30,500,000
Take through new conventional wells	0	0	0	16,666	6	10,166,260
Total new wells		14			30	
Total energy requirement			31,500,000			44,666,260

For purposes of this environmental document, it is assumed that the entire put⁵ will be accomplished with new ASR wells and the take⁶ will be accomplished with a combination of new ASR and new conventional wells. Based on the 2023 SFI, the ASR wells (totaling 66 wells) were assumed to have recharge and pumping capacities of 1,800 gpm and 2,300 gpm, respectively.

- During put years the ASR wells would be utilized 70 percent of the time. The energy required to conduct recharge through ASR would occur at treatment plants where imported water is treated prior to injection. The energy required to treat imported water prior to injection is estimated to be about 80 kwh per af based on the treatment energy requirements at the Lloyd Michael and Sand Hill water treatment plant. The annual energy requirement for a put year of 50,000 afy is estimated to be 4,000,000 kwh.
- During take periods, the ASR and conventional wells would be utilized 80 percent of the time. The energy required to pump the groundwater to service pressure is estimated to be about 600 kwh per af. The annual energy requirement for a take year of 66,670 afy is estimated to be 45,000,000 kwh.

MZ 1 Well Relocation (PE4, PE8/9)

In order to address the objectives of **PE4 (Exhibit 14)**, the OBMPU envisions constructing up to 12 wells in MZ-2 and MZ-3 to relocate up to about 25,000 afy of pumping from MZ-1 to MZ-2 and/or MZ3. The new wells could also meet the objectives of **PE 8/9**, the objectives of which are outlined under Section 3.4, Project Characteristics above.

⁵ Put: the components to recharge purified water to the Chino Basin

⁶ Take: the components to extract groundwater and convey potable water supply

MZ-1 Well Relocation: Facilities Summary

The depth of these new wells could range between 500 and 1,000 feet and the average area of disturbance of a well site is anticipated to be half an acre or less. Conveyance facilities to convey the water pumped from these new wells to MZ1 pumpers include pipelines, booster pump stations, water storage reservoirs and related appurtenances, the capacity and locations of which are presently unknown.

MZ-1 Well Relocation: Operational Scenario

New conventional pumping wells in MZ-2/3 are assumed be operated 80 percent of the time for a maximum of 25,000 afy at a pumping rate of 2,300 gpm. Based on the depth to water in this area, energy consumption would be about 550 kWh per af.

Injection and Extraction Wells in support of the New Advanced Water Purification Facility (PE5, PE7)

The OBMPU envisions constructing an advanced water purification facility, which would maximize recycled water reuse (shown on **Exhibit 16**). The new advanced treatment plant meets the objectives of **PEs 5 and 7**, the objectives of which are outlined under **Chapter 2, Introduction**, and under **Section 3.6, Program Elements**, below. This facility would require the installation of up to 21 total wells including 10 injection wells, 9 extraction wells, and 2 monitoring wells (discussed under Monitoring Wells, above). The development of these wells is contingent upon the installation of the AWPf, but are included as part of the total 207 new wells that are contemplated as part of this Project Description.

Injection and Extraction Wells in support of the New Advanced Water Treatment Plant: Facilities Summary

The depth of these new wells could range between 500 and 1,000 feet and the average area of disturbance of a well site is anticipated to be half an acre or less. Conveyance facilities to convey the water pumped or injected include pipelines (up to 52,800 LF), booster pump stations, water storage reservoirs and related appurtenances, the capacity and locations of which are presently unknown.

Injection and Extraction Wells in support of the New Advanced Water Treatment Plant: Operational Scenario

The OBMPU anticipates the installation of up to 21 total wells including 9 injection wells, 9 extraction wells, and 2 monitoring wells (discussed under Monitoring Wells, above). The Injection wells will recharge up to up to 9,000 afy per year, while the new extraction wells will pump up to up to 9,000 afy.

The 10 new injection wells are assumed to be operated 80 percent of the time for a maximum of 9,000 afy at rates of ranging from 600 to 1,000 gpm. Energy consumption is expected to range between 300 and 550 kWh per af.

The 9 extraction wells are assumed to be operated 80 percent of the time for a maximum of 9,000 afy at a rate of about 2,000 gpm each. Energy consumption is expected to range between 300 and 550 kWh per af.

Expand the Existing Chino Desalter Groundwater Pumping (PE7, PE8/9).

The OBMPU envisions expanding the existing Chino Desalter capacity by up to 6,000 afy by adding new wells. This will require constructing up to 8 wells in the existing desalter wellfield areas (shown on **Exhibit 25**) to increase pumping up to 6,000 afy to maintain Hydraulic Control and to

mitigate reductions in net recharge and Safe Yield caused by the implementation of a future land subsidence management and Storage and Recovery Programs. The new wells also meet the objectives of **PE 8/9**, the objectives of which are outlined under **Chapter 2, Introduction**, and under **Section 3.6, Program Elements**, below.

Expand the Existing Chino Desalter Groundwater Pumping: Facilities Summary

Well depths could range from 250 to 1,000 feet. The average area of disturbance of a well site is anticipated to be half an acre or less. Additionally, the effort to maintain Hydraulic Control in the future may require the Watermaster to acquire up to 5 existing wells in the Chino Creek well field area that, in aggregate, can pump up to 2,000 afy to maintain Hydraulic Control. This effort is anticipated to be ministerial in nature; however, it is possible that any one of the acquired wells may require redevelopment, removal and disposal of existing pumping equipment, installation of new pumping equipment and well head improvements to enable adequate pumping. Up to 65,000 LF of conveyance would be required to connect the new wells to a treatment facility.

Expand the Existing Chino Desalter Groundwater Pumping: Operational Scenario

New conventional pumping wells in the Chino Desalter area are assumed be operated 80 percent of the time for a maximum of 6,000 afy at pumping rates ranging from 400 to 2,300 gpm. Energy consumption is expected to range between 300 and 550 kWh per af.

Replacement and Modification to Existing Wells (PE8/9)

The OBMPU envisions constructing replacement wells and/or modification to existing wells to mitigate loss of pumping capacity caused by a future Storage and Recovery Program(s). The location of these wells has not yet been identified; however, the facilities and/or improvements to existing facilities envisioned under the OBMPU to conduct a Storage and Recovery Program within the 2020 Storage Management Plan (SMP) are listed below and shown on (**Exhibit 27**). The replacement of and modifications to existing wells would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Chapter 2, Introduction**, and under **Section 3.6, Program Elements**, below.

Replacement and Modification to Existing Wells: Facilities Summary

For planning purposes, it is anticipated that up to 5 existing wells may be modified, and a maximum of 5 existing wells will be abandoned, destroyed, and replaced with a new well; these replacement wells will not increase the overall number of wells anticipated to be developed as part of the OBMPU as they would ultimately serve the purposes of the Program Elements requiring the development of wells as outlined above. Modification of a well could include deepening the well by drilling, lowering the pump, removal of the existing pumping equipment and replacing it with new pumping equipment and other well head improvements. Replacing a well includes the drilling, well completion, installation of new pumping equipment, site and well head improvements and new conveyance facilities.

Replacement and Modification to Existing Wells: Operational Scenario

New or modified conventional pumping wells in the Chino Desalter area are assumed be operated (utilization rate) 80 percent of the time for a maximum of 6,000 afy at a pumping rate of ranging from 400 to 2,300 gpm. Energy consumption is expected to range between 300 and 550 kWh per af.

CONCLUSION

The OBMPU proposes that a total of up to 207 wells will be developed to serve the various purposes outlined above, while an additional 5 existing wells will be modified, and 5 existing wells

will be abandoned or destroyed. Furthermore, the ASR wells will require construction of conveyance and treatment facilities to supply water to the ASR wells for recharge and to convey pumped groundwater to end users. As such, it is estimated that under the OBMPU a total of 190,000 LF of pipeline will be required to connect wells to the distribution systems, which is inclusive of each of the three types of ASR well development Projects discussed above.

3.5.1.5 Wells (ASR, Injection, and Pumping/Extraction): Construction Scenario

The OBMPU anticipates a total of up to 105 new ASR, Injection, and Pumping/Extraction wells, in addition to the modification of 5 wells, and abandonment/destruction of 5 wells over a period of 20 years. Installing 105 wells over 20 years can be evaluated based on an average number of wells per year (5 wells) or based on a possible maximum number of wells per year of 12. Additionally, up to 2 wells would be anticipated to be reconstructed or abandoned in a given year. Development of up to 12 new wells during a given year will require the delivery and set up of the drilling rig at each site. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment 12 times (equal to the number of wells anticipated to be drilled in a year) in a year will result in up to 12 50-mile round-trips for the drill rigs.

ASR well development has essentially the same construction impacts as production well development.

It is assumed that the average pumping capacity for a new conventional pumping or ASR well will range from 400 to 2,300 gpm depending on the location of the well (see **Section 3.6, Summary of Operational Scenarios**).

It is anticipated that about five persons will be on a given well site at any one time to support drilling a well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 15 roundtrips per day. The types of trips including about 10 daily trips for employees plus, at various points of construction: two roundtrips for drill rigs (total for entirety of construction); between 6 and 12 roundtrips for cement trucks (total for the entirety of construction); and about 5 trips to deliver pipe (total for the entirety of construction).

For analysis purposes it is assumed that each well would be drilled using the direct rotary or fluid reverse circulation rotary drilling methods. The average area of disturbance of each well site is estimated to be one-half an acre or less. Access to the drilling site for the drilling rig and support vehicles would be from adjacent roadways. Typically, well drilling requires only minimal earth movement and/or grading.

The drilling and development of each well will require drilling to—in most cases—between 250 and 1,500 feet below ground surface (bgs). The proposed schedule for constructing each well would be as follows: drilling, construction, and testing of each well would require approximately six weeks to complete (about 45 days, of which 15 to 20 days would include 24-hour, 7-day a week drill activity). For planning purposes, a construction and testing schedule duration of 60 days per well is assumed to account for unforeseen circumstances (e.g., extreme weather, equipment break downs, etc.) that could affect the drilling and testing schedule. The well casings are expected to be welded and it will be assumed that well development and installation will require a two-week use of a diesel generator.

The borehole for the well would be drilled using at least two separate drilling passes. The first pass, or pilot borehole, would be drilled using a 17.5-inch diameter bit to an estimated maximum depth below the ground surface, which would correspond to the top of the consolidated bedrock in the area, or a depth selected by the Project hydrologist/hydrogeologist. Upon completion of the geophysical logs, the pilot borehole would be enlarged (reamed) to a diameter of 24 inches to approximately the same depth to accommodate the well casing, screen and filter pack.

Once each well is constructed it would immediately be developed through a process of swabbing and airlifting. During this process, drilling fluids and suspended sediment would be removed from the well. After the drilling fluids are removed along with most of the suspended sediment, the well would be further developed through pumping.

3.5.1.6 Well Destruction

Well Destruction (PE 1)

The objective of **PE 1** under the OBMPU includes continuing the ongoing monitoring and reporting program and developing and updating an *OBMP Monitoring and Reporting Work Plan*, which is considered part of the baseline conditions and is discussed here for completeness. A part of this PE 1 includes destroying abandoned wells due to the threat they pose to the groundwater supply. The presence of improperly abandoned wells is a threat to groundwater supply and a physical hazard. Watermaster staff periodically reviews its database, makes appropriate inspections, consults with well owners, maintains a list of abandoned wells in the Chino Basin, and provides this list to the counties for follow-up and enforcement. Watermaster requests owners of abandoned wells to properly destroy their wells pursuant to the DWR Well Standards (Bulletins 74-81 & 74-90). The State Water Resources Control Board California Well Standards for well destruction have evolved in the 20 plus years since the 2000 OBMP was approved.⁷ As such, this RDSEIR provides an update to amend the well destruction process going forward, as described below. Under the OBMPU, Watermaster will continue these efforts, though no specific abandoned wells have been identified to be destroyed at this time.

Well Destruction: Summary of Facilities

Well destruction includes sealing the upper 20 feet with an impervious sealing material (neat cement, sand-cement grout, concrete, or bentonite clay). In areas where the interchange of water between aquifers occurs, impervious material will be placed opposite the confining formations above and below the producing formations for a distance of 10 feet or more. The remainder of the well shall be filled with suitable fill (clay, silt, sand, gravel, crushed stone, native soils, or mixtures of the aforementioned types). In urban areas, additional requirements must be met. These include: 1) A hole shall be excavated around the well casing to a depth of 5 feet below the ground surface and the well casing removed to the bottom of the excavation; 2) The sealing material used for the upper portion of the well shall be allowed to spill over into the excavation to form a cap; and. 3) After the well has been properly filled, including sufficient time for sealing material in the excavation to set, the excavation shall be filled with native soil.

Well Destruction: Operational Scenario

Watermaster requests owners of abandoned wells to properly destroy their wells pursuant to the DWR Well Standards (Bulletins 74-81 & 74-90). This includes sealing the upper 20 feet with an impervious sealing material (neat cement, sand-cement grout, concrete, or bentonite clay). In

⁷ State Water Resources Control Board, 2023. California Well Standards Part III. Destruction of Water Wells. <https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Standards/Combined-Well-Standards/Water-Destruction> (accessed 07/10/23)

areas where the interchange of water between aquifers occurs, impervious material will be placed opposite the confining formations above and below the producing formations for a distance of 10 feet or more. The remainder of the well shall be filled with suitable fill (clay, silt, sand, gravel, crushed stone, native soils, or mixtures of the aforementioned types). In urban areas, additional requirements must be met. These include: 1) A hole shall be excavated around the well casing to a depth of 5 feet below the ground surface and the well casing removed to the bottom of the excavation; 2) The sealing material used for the upper portion of the well shall be allowed to spill over into the excavation to form a cap; and 3) After the well has been properly filled, including sufficient time for sealing material in the excavation to set, the excavation shall be filled with native soil.

3.5.2 Project Category 2: Conveyance Facilities and Ancillary Facilities

3.5.2.1 Recycled and Potable Water Distribution/Conveyance: Summary of Facilities

Indirect Potable Reuse Conveyance Improvements (PE5, PE8/9)

The OBMPU envisions expanding the recycled water distribution system for indirect potable reuse by constructing conveyance facilities that include pipelines, booster pump stations, water storage reservoirs and minor appurtenances. The general location of these facilities is shown in **Exhibit 16**. The proposed recycled water conveyance improvements also meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Indirect Potable Reuse Conveyance Improvements: Summary of Facilities

This pipeline project will require ancillary facilities that include booster pump stations, water storage reservoirs and related appurtenances, which are incorporated as part of the whole under this Project Category. The number, location and capacities of the proposed conveyance facility improvements are presently unknown; however, it is anticipated that the up to 102,800 LF of pipeline could be constructed underground and within existing road rights-of-ways. Included in the Indirect Potable Reuse Conveyance Improvements, the Jurupa Community Services District (JCSD) Recycled Water System Expansion Project (PE5, PE8/9) proposes specific appurtenances, including 5 booster pump stations and water supply from the Riverside Regional Water Quality Control Plant of up to 5,000 afy.

East/West Regional Pipeline (PE5, PE8/9)

The OBMPU envisions constructing an east to west up to 75,000-foot regional pipeline across the northern part of the Chino Basin to enable the efficient conveyance and distribution of supplemental and Basin waters to Chino Basin water users; and/or the construction of improvements to existing conveyance facilities to accomplish the same. The proposed regional pipeline also meets the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

East/West Regional Pipeline: Summary of Facilities

This pipeline project will require ancillary facilities that include booster pump stations, reservoirs and related appurtenances, which are incorporated as part of the whole under this Project Category. The precise locations, number and capacities of the proposed conveyance facility improvements are unknown, though the alignment envisioned under the OBMPU is shown approximately on **Exhibit 17**. It is anticipated that the proposed pipeline will be constructed underground and within existing road rights-of-ways.

North/South Regional Pipeline (PE5, PE8/9)

The OBMPU envisions constructing a north-to-south up to 45,000-foot regional pipeline across the eastern part of the Chino Basin to enable the efficient conveyance and distribution of supplemental and Basin waters to Chino Basin water users; and or the construction of improvements to existing conveyance facilities to accomplish the same. The proposed regional pipeline also meets the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

North/South Regional Pipeline: Summary of Facilities

This pipeline project will require ancillary facilities that include booster pump stations, reservoirs and related appurtenances, which are incorporated as part of the whole under this Project Category. The precise locations, number and capacities of the proposed conveyance facility improvements are unknown, though the alignment envisioned under the OBMPU is shown approximately on **Exhibit 17**. It is anticipated that the proposed pipeline will be constructed underground and within existing road rights-of-ways.

Groundwater Treatment Conveyance (PE5, PE6, PE8/9)

The OBMPU envisions constructing conveyance facilities to convey untreated groundwater to the treatment facilities and to convey treated water from the treatment facilities to water users, of which the precise location, number and capacities of the proposed conveyance systems is presently unknown. The proposed groundwater treatment conveyance facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan*. The construction of new groundwater treatment conveyance facilities has the potential to mitigate the effects of the Storage and Recovery Program on the remediation projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements** below. Additionally, the construction of new groundwater treatment conveyance facilities meets the objectives of **PE 5**, the objectives of which are outlined under **Section 3.6, Program Elements** below.

Groundwater Treatment Conveyance: Summary of Facilities

The precise location, number and capacities of the proposed conveyance systems is presently unknown; however, it is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways. It is anticipated that the treated conveyance systems would be located in proximity to the municipal wells shown **Exhibit 18** that have experienced exceedances of DDW MCLs.

Pipeline and Appurtenances in support of the New Advanced Water Purification Facility (PE5, PE7)

The OBMPU envisions constructing an advanced water purification facility, which would maximize recycled water reuse (shown on **Exhibit 16**). The new advanced treatment plant meets the objectives of **PEs 5 and 7**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. This facility would require the installation of up to 10 miles or 52,800 LF of various types of pipeline including recycled water pipeline, brine disposal pipeline, and potable water conveyance pipeline, as well as up to two booster pump stations.

Pipeline and Appurtenances in support of the New Advanced Water Treatment Plant: Facilities Summary

This project will require pipeline and ancillary facilities that include 2 booster pump stations and related appurtenances, which are incorporated as part of the whole under this Project Category. The location and capacities of the proposed conveyance facility improvements are presently

unknown; however, it is anticipated that the up to 52,800 LF of pipeline could be constructed underground and within existing road rights-of-ways.

CONCLUSION

Approximately 275,600 LF of pipelines and associated conveyance facilities improvements are required to improve the recycled and potable water distribution systems to achieve the OBMPU goals, and to supply groundwater treatment facilities to achieve the OBMPU goals. Note that the proposed pipelines that would support Indirect Potable Reuse were previously analyzed in the 2017 IEUA FMP PEIR and are considered part of the baseline conditions, and are included herein for completeness.

As stated under **Subsection 3.5.1.4 ASR, Injection and Pumping Wells: Facilities Summaries & Operational Scenarios**, it is estimated that under the OBMPU a total of 190,000 LF of pipeline will be required to connect wells to the distribution systems. Additionally, under **3.5.3.1 Storage and Recharge Facilities: Summary of Facilities and Operational Scenarios**, the conveyance facilities required to increase recharge in the Chino Basin include an estimated 275,000 LF of pipelines.

Accordingly, it is assumed at this time that the total pipeline needed to meet the OBMPU's objectives would be 740,600 LF (275,600 LF + 190,000 LF + 275,000 LF); of this total amount, however, a nominal amount of pipeline (70,000 LF) would be expected to serve dual purpose for the varying Program Elements of the OBMPU. Further, 50,000 LF were previously analyzed in the 2017 IEUA FMP and have been initiated by IEUA. Accordingly, environmental review of the OBMPU's pipeline construction will also omit the 50,000 LF previously analyzed and currently being implemented. As such, the OBMPU will analyze the construction of 620,600 LF of pipeline.

3.5.2.2 Recycled and Potable Water Distribution/Conveyance: Operational Scenario

Pipelines: Once a pipeline is installed, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required.

Booster Pump Stations: Pump stations that are incorporated into the Project will be operated to convey the water, the capacity and amounts of water pumped is anticipated to vary. Booster pump stations that are incorporated into the Project will be operated to convey the water, but the amount of water pumped is currently unknown. A total of 7 booster pump stations will be installed. It is assumed that the pump stations would range between about 650 HP to 9,000 HP, with the booster pumps averaging 4,000 HP each.

Water Storage Reservoir: Once the water storage reservoirs are installed, operation of the water storage reservoirs would not require any shifts or employees as they will be monitored and controlled remotely. Scheduled maintenance visits to each water storage reservoir site will occur in the future with one trip per maintenance event. Water storage reservoirs typically do not directly consume energy as water or recycled water is pumped into water storage reservoirs directly from wells or through booster pump stations.

3.5.2.3 Conveyance Pipelines: Construction Scenario

An estimated 620,600 LF of pipeline may be installed in support of OBMPU through 2040. The maximum pipe length that would be installed in a single year would be 100,000 LF. It is forecast

that most of the pipe will range from 10-inch to 84-inch diameter. It is assumed that an underground utility installation team can install an average of 200-400 LF of potable water pipeline, recycled water line, or storm drains per day. A team consists of the following:

- 200-400 feet of pipeline installed per day
- 1 Excavator
- 1 Backhoe
- 1 Paver
- 1 Roller
- 1 Water truck
- Traffic Control Signage and Devices
- 10 Dump/delivery trucks (40 miles round trip distance)
- Employees (14 members per team, 40-mile round-trip commute)

The emissions calculations are based upon the above assumptions for each pipeline installation team. Typically, up to 800 feet of pipeline trench could be excavated, the pipe installed, backfilled, and compacted each day during pipeline installation in undeveloped areas whereas only 400 ft per day can be installed in developed roadways. In either case equipment would be operated for roughly the same portion of the day and daily equipment emissions would be the same, except that undeveloped areas would not require pavement removal and reinstallation.

It is assumed that two teams will be installing pipelines for a maximum total of 800 LF per day ($400 \times 2 = 800$ LF). It is assumed that the proposed pipeline installation will occur for a maximum of 260 days in one calendar year.

Ground disturbance emissions assume roughly half an acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine).

The pipelines that would be installed in support of the OBMPU are anticipated to use push-on joints (e.g., gasketed bell-and-spigot) that do not require welding. However, the contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

3.5.2.4 Booster Stations: Construction Scenario

Booster stations are required to pump water from areas at a lower elevation within the Basin to areas located at a higher elevation. The total number of booster stations to be constructed in support of the OBMPU is unknown. It is forecasted that, at each site, no more than 0.5 acre will be actively graded on a given day for site preparation of each booster station. It is anticipated that grading activities will occur over a 5-day period and will require one bull dozer or motor grader operating 8 hours per day, one water truck operating 4 hours per day and one dump truck operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to each work site.

Construction of each pump station will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst-case day with an

average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation of the booster station will require the use a crane, forklift, backhoe and front loader operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to the work site.

Each booster pump station is assumed to be housed within a block building, and will require a transformer to be installed to handle the electric power delivered to the pumps. The proposed booster pump station building may include a pump room, electric control room, odor control facilities, chemical tanks, and storage room. Construction of the booster pump station would involve installation of piping and electrical equipment, excavation and structural foundation installation, pump house construction, pump and motor installation, and final site completion.

The pump stations proposed are anticipated to be located at sites that have permanent power available for construction, as such a generator is not anticipated to be required for welding required to construct the booster pump stations.

3.5.2.5 Water Storage Reservoirs: Construction Scenario

Up to 14 water storage reservoirs ranging in size between 1.0 MG and 5 MG are anticipated to be required in support of the OBMPU. The new reservoirs would be designed in accordance with the California Building Code (CBC), the Occupational Safety and Health Administration (OSHA), American Concrete Institute (ACI), and AWWA's design standards. AWWA's design standards require that water storage reservoirs be operated at fill levels below their maximum physical height in order to prevent roof damage which may be caused by a "sloshing wave" during a seismic event. As a result, the usable capacity of the new water storage reservoirs will be reduced when compared to the water storage reservoir physical capacity by approximately 30% (physical capacities would range between 1.43 MG to 7.14 MG).

Grading: The size of each water storage reservoir site is anticipated to be greater than one acre, with approximately one acre of disturbance required per water storage reservoir. Fine grading of each site will be completed after the water storage reservoir and piping are installed. It is assumed that a maximum of five to twelve workers will be on the site during grading, which would take place for about 10 days.

Foundation Construction: Following mass excavation, the reservoir foundation will be installed. The foundation will consist of concrete/steel/aggregate. It is assumed that a maximum of five to twelve workmen will be on the site during foundation construction for a maximum of about 25 days.

Reservoir Construction: The water storage reservoirs will be constructed to be circular in the following fashion: floor; walls and columns; roof; prestressing; and appurtenances. It is assumed that a maximum of 12 employees will be on the site during water storage reservoir construction for a maximum of about 120 days.

Overall, water storage reservoir construction is anticipated to require about 6 months from start to finish.

3.5.2.6 Surplus and Supplemental Water Supply Acquisition: Summary of Facilities

Imported Recycled Water Facilities (PE5, PE8/9)

The OBMPU envisions acquiring surplus recycled water supplies from non-IEUA sources and constructing conveyance facilities to import the recycled water. The proposed acquisition and importation of surplus recycled water supplies meets the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. The facilities and/or improvements to existing facilities to improve water reliability envisioned under the OBMPU are listed below and shown on **Exhibit 17**.

Imported Recycled Water Facilities: Summary of Facilities

These conveyance facilities include pipelines, booster pump stations, water storage reservoirs and minor appurtenances whose locations, lengths, and capacities are presently unknown. However, it is anticipated that the pipelines will be located below ground and within existing road rights-of-ways.

Constructing Conveyance Facilities to Enable the Distribution of Future Imported Surface Water and Groundwater from Nearby Streams and Groundwater Basins (PE5)

Installation of these conveyance facilities would meet the objectives of **PE5** by maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water. This may require new conveyance facilities including pipelines, booster pump stations, water storage reservoirs and related appurtenances whose number, locations and capacities are presently unknown. It is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways.

CONCLUSION

The conveyance facilities required to import non-IEUA recycled water include pipelines, booster pump stations, water storage reservoirs and related appurtenances whose number, locations, and capacities to achieve the OBMPU goals are presently unknown.

3.5.2.6 Surplus and Supplemental Water Supply Acquisition: Operational Scenario

Once the pipeline is installed to enable future conveyance of recycled water, imported surface water and groundwater from nearby streams and groundwater basins, to the Chino Basin, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required. Booster pump stations that are incorporated into the Project will be operated to convey the water, but the capacity and amounts of water pumped is currently unknown.

3.5.2.7 Conveyance Pipelines: Construction Scenario

Please refer to the discussion under **Subsection 3.5.2.3 Conveyance Pipelines: Construction Scenario**, above.

3.5.3 Project Category 3: Storage Basins, Recharge Facilities and Storage Bands

3.5.3.1 Storage and Recharge Facilities: Summary of Facilities and Operational Scenarios

The Recharge Master Plan Update (RMPU) was developed in open and transparent planning processes that were convened by Watermaster through an ad-hoc committee; note that, as stated under **Subsection 3.6.2 Program Element 2. Develop and Implement Comprehensive Recharge Program**, one of the findings of the 2018 RMPU was that Watermaster had enough supplemental water recharge capacity to meet its Replenishment Obligations via wet-water recharge through 2050. The new storage/recharge facilities and/or improvements to existing facilities that may result from the RMPU process as envisioned under the OBMPU are listed below and shown on **Exhibit 12**. Note that the RMPU process and facility modifications have been evaluated in detail.

The proposed storage facilities would divert surface water to be stored at the proposed facilities. The amount of surface water diverted by the proposed storage and recharge facilities is not presently known, and it would be speculative to estimate at this time. Future surface water diversions to these facilities would depend on future applications to divert surface water to a specific proposed facility and would require a second tier CEQA evaluation.

New Storage Basin: California Institution for Men (PE2, PE4, PE5, PE8/9)

The OBMPU envisions constructing and operating a new storage basin for stormwater and supplemental waters at the CIM. The location of the CIM is depicted on **Exhibit 12**. The new recharge resulting from this new storage basin meets the objectives of **PEs 2, 4, 5, and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

New Storage Basin, California Institution for Men: Summary of Facilities

The OBMPU envisions the following facilities at the CIM: a diversion structure that would divert stormwater and dry-weather discharge from Chino Creek to the new storage basin; booster pump stations, pipelines and basins that would convey stormwater and dry-weather discharge from the new storage basin to recharge facilities in the northern part of the Basin; and pipelines to convey supplemental waters to the storage basin for seasonal storage. The new storage basin at the CIM could have an estimated area between 50 and 100 acres, although its capacity and the amount of surface water diverted to it is unknown at this time. The proposed new storage basin will require conveyance facilities that include up to 60,000 LF of pipelines and presently an unknown number, locations and capacities of booster pump stations, basins and related appurtenances.

New Storage Basin, California Institution for Men: Operational Scenario

Operations at this storage basin consists of diversion and capture of stormwater and dry-weather discharges, pumping the stored water to recharge basins upstream of these storage basins and maintenance of storage and conveyance facilities. The energy required to pump stored water to recharge facilities or for other uses is presently unknown. Basin maintenance is expected to occur every two to three years for each storage basin, consisting of removal of debris and trash that is diverted with the stormwater and dry-weather discharges, removal of vegetation and vector management. Other operations may include diversion, storage and recharge of imported water and pumping of recycled water from wastewater treatment plants owned by IEUA to these storage basins.

New Storage Basin: Lower Cucamonga Ponds (PE2, PE5, PE8/9)

The OBMPU envisions constructing and operating a new storage basin at the existing Lower Cucamonga Ponds, which will meet the objective of **PE2** through the implementation of recharge Projects based on need and available resources. The location of the Lower Cucamonga Ponds is depicted on **Exhibit 12**. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

New Storage Basin, Lower Cucamonga Ponds: Summary of Facilities

The Lower Cucamonga Ponds are existing detention basins owned by the San Bernardino County Flood Control District. The ponds would be converted into one storage basin to store stormwater and dry-weather discharges, and will encompass an area of about 50 acres, although its capacity and the amount of surface water diverted to it is unknown at this time. The new storage basin at the Lower Cucamonga Ponds may include the following facilities: construction of dam and basin over the current footprint of the Lower Cucamonga ponds and adjacent Cucamonga Creek Channel; and booster pump stations, pipelines and water storage reservoirs to convey stormwater and dry-weather discharges from the new storage basin to recharge facilities in the northern part of the basin. The proposed new storage basin will require conveyance facilities that include an estimated 90,000 LF of new pipeline and presently unknown number, locations and capacities of booster pump stations, water storage reservoirs and related appurtenances.

New Storage Basin, Lower Cucamonga Ponds: Operational Scenario

Refer to the Operational Scenario under ***New Storage Basin: California Institution for Men*** above.

New Storage Basin: Mills Wetlands (PE2, PE5, PE8/9)

The OBMPU envisions constructing and operating a new storage basin at the existing Mills Wetlands. The location of the Mills Wetlands is depicted on **Exhibit 12**. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

New Storage Basin, Mills Wetlands: Summary of Facilities

The Mills Wetlands are existing artificial wetlands used to treat Cucamonga Creek discharge with an area of about 30 acres. The wetlands would be converted into a storage basin to store stormwater and dry-weather discharges, although its capacity and the amount of surface water diverted to it is unknown at this time. The new storage basin at the Mills Wetlands may include the following components: expansion of the storage capacity of the existing Mills wetland by excavation of the bottom and other grading improvements to expand storage capacity; improvements to existing diversion facilities and or the construction of new diversion structures to divert stormwater and dry-weather discharge from Cucamonga Creek to the new storage basin; and booster pump stations, pipelines and storage basins to convey stormwater and dry-weather discharges from the new basin to recharge facilities in the northern part of the basin. The proposed new storage basin will require conveyance facilities that include an estimated 30,000 LF of new pipelines and presently unknown number, locations and capacities of booster pump stations, water storage reservoirs and related appurtenances.

New Storage Basin, Mills Wetlands: Operational Scenario

Refer to the Operational Scenario under ***New Storage Basin: California Institution for Men*** above.

New Storage Basin: Vulcan Basin (PE2, PE5, PE8/9)

The OBMPU envisions constructing and operating a new storage basin for stormwater and supplemental waters at the existing Vulcan Basin. The location of the Vulcan Basin is depicted on **Exhibit 12**. The new recharge resulting from this new storage basin will meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

New Storage Basin, Vulcan Basin: Summary of Facilities

The Vulcan Basin is an existing facility formerly used as a sand and gravel mine. It has an area of about 60 acres. The new storage basin at the Vulcan Basin may include the following components: facilities to divert stormwater and dry-weather flow from the West Fontana Channel and surrounding urban areas to the new storage basin; booster pump stations, pipelines, water storage reservoirs and minor appurtenances to convey supplemental water to the Basin; grading improvements within the Basin to expand the storage capacity and to regulate stored water; and booster pump stations, pipelines, water storage reservoirs and minor appurtenances to convey stored water to recharge facilities in the northern part of the Basin, the RP3 recharge facilities and to IEUA recycled water system for reuse. The proposed new storage basin may require conveyance facilities that include an estimated 20,000 LF of pipelines and presently unknown number, locations and capacities of booster pump stations, water storage reservoirs and related appurtenances, although its capacity and the amount of surface water diverted to it is unknown at this time.

New Storage Basin, Vulcan Basin: Operational Scenario

Refer to the Operational Scenario under ***New Storage Basin: California Institution for Men*** above.

Modifications to an Existing Basin: Riverside Basin (PE2, PE5, PE8/9)

The OBMPU envisions constructing and operating a new storage basin at the existing Riverside Basin and potentially developing the Riverside Basin for recharge. The location of the Riverside Basin is depicted on **Exhibit 12**. The new recharge resulting from this new storage and/or recharge basin will meet the objectives of **PEs 2, 5, and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Modifications to an Existing Basin, Riverside Basin: Summary of Facilities

The Riverside Basin is an existing detention basin owned by the San Bernardino County Flood Control District. The basin would be converted into a multipurpose facility that would maintain its flood control function and temporarily store and/or recharge stormwater and dry-weather discharges, although its capacity and the amount of surface water diverted to it is unknown at this time. It has an area of about 60 acres. The new storage and/or recharge basin at the Riverside Basin includes the following components: expansion of the storage capacity of the existing Riverside Basin by excavation of the bottom and other grading improvements to expand storage capacity, create conservation storage, and facilitate recharge; and booster pump stations, pipelines and storage basins to convey stormwater and dry-weather discharges from the new storage basin to recharge facilities in the northern part of the Basin. The proposed new storage and/or recharge basin will require conveyance facilities that include an estimated 5,000 LF of pipelines and presently unknown number, locations and capacities of booster pump stations, water storage reservoirs and related appurtenances.

Modifications to an Existing Basin, Riverside Basin: Operational Scenario

Refer to the Operational Scenario under ***New Storage Basin: California Institution for Men*** above. To facilitate recharge, the Riverside Basin may have to undergo annual maintenance.

Modifications to an Existing Basin: Jurupa Basin (PE2, PE5, PE8/9)

The OBMPU envisions constructing improvements at the Jurupa Basin. The location of the Jurupa Basin is depicted on **Exhibit 12**. The new recharge resulting from this new storage basin will meet the objectives of **PEs 2, 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Modifications to an Existing Basin, Jurupa Basin: Summary of Facilities

The modifications to Jurupa Basin includes demolition of existing internal berms, constructing new internal berms, grading improvements to improve internal hydraulics within the basin, removing fine-grained materials from the basin floor to improve its infiltration rate and increase recharge capacity, and improvements at the Jurupa pump station intake that include the construction of trash racks or their functional equivalent and access to remove trash and debris from the pump intake structure.

Modifications to an Existing Basin, Jurupa Basin: Operational Scenario

This Jurupa Basin improvements in this Project Category will change the operation of the basin from a temporary storage basin to a temporary storage and recharge basin, although its capacity and the amount of surface water to be diverted and recharged is unknown at this time. This would result in increased diversions from San Sevaine Creek, increased pumping to the RP3 recharge basin and increased recharge in the basin. Basin maintenance is expected to occur every two to three years, consisting of grading activities to remove fine-grained sediments, repair berms and hydraulic structures, removal of debris and trash that's diverted with the stormwater and dry-weather discharges, removal of vegetation and vector management.

Flood Managed Aquifer Recharge (PE2, PE5, PE8/9)

The OBMPU envisions constructing flood MAR facilities in the northeast part of Chino Basin to recharge supplemental water. This assumes that land in existing agricultural uses can be flooded to achieve managed aquifer recharge. The potential cumulative area of these facilities is about 200 acres, which represents the total agricultural land use area in the northern part of the Chino Basin. The precise location of the proposed new flood MAR facilities is unknown at this time, beyond that they would be located within northern portion of the Chino Basin as shown on **Exhibit 12**, and its capacity and the amount of surface water diverted to it is unknown at this time. The new recharge resulting from this new storage basin will meet the objectives of **PEs 2, 5, and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Flood Managed Aquifer Recharge: Summary of Facilities

Facilities to implement this include diversion structures and conveyance facilities that would convey surface water to the available agricultural land. Conveyance facilities include pipelines, booster stations, basins and related appurtenances. The proposed new MAR facilities would require conveyance facilities that include an estimated 35,000 LF of new pipelines and presently unknown number, locations and capacities of booster pump stations, basins and related appurtenances.

Flood Managed Aquifer Recharge: Operational Scenario

Operations at these facilities consist of diversion and capture of supplemental water to flood existing agricultural land. Facility maintenance is expected to occur every two to three years,

consisting of minor grading activities to remove fine-grained sediments, repair berms and hydraulic structures and removal of nuisance vegetation, debris and trash.

MS4 Compliance Projects (PE2, PE4, PE8/9)

The OBMPU envisions collaborating with the MS4 permittees (typically cities and counties) to ensure MS4-compliance projects prioritize recharge. This will result in the construction of new MS4-compliance facilities that increase recharge in the Chino Basin. The Watermaster does not directly develop any MS4-compliance projects; these projects will occur as development within the overall Chino Basin area occurs. The MS4 compliance initiative meets the objectives of **PEs 2, 4 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

MS4 Compliance Projects: Operational Scenario

Operation of these MS4 compliance projects consists of diversion and capture of on-site stormwater and dry-weather discharges for treatment and recharge, although the location and volume of such diversion and recharge projects is unknown at this time. Maintenance is expected to occur annually and will include activities specific to each facility type and could include: removal of debris and trash and replacement of components (e.g., filters).

CONCLUSION

The conveyance facilities required to increase recharge in the Chino Basin include an estimated 275,000 LF of pipelines and presently unknown booster pump stations, water storage reservoirs and minor appurtenances whose locations and capacities to achieve the OBMPU goals are presently unknown.

3.5.3.2 Storage Basins: Construction Scenario

The OBMPU proposes to develop 4 new storage basins (CIM, Mills Wetlands, Vulcan Basin, and the Confluence Project), and install modifications to 3 existing basins (Riverside Basin, Lower Cucamonga Ponds, and Jurupa Basin).

With respect to new storage basins, it is forecast that for site preparation of a basin and access road, no more than 2 acres will be actively graded on a given day, while the OBMPU envisions constructing an area of up to 260 to 310 acres of new storage basins. Each new basin is anticipated to be excavated to depths ranging from 20 to 100 feet. Given the area required to install the 3 new storage basins, it is anticipated that the time required for the construction of these 3 new storage basins is about 6-18 months per basin or a total of 18 months to 4.5 years to construct all basins.

It is anticipated that grading activities will occur over an average of up to 90 to 120-day period and will require two bulldozers, two front end loaders, two water trucks, several scrapers, two excavators and four dump/haul trucks operating 6-8 hours per day. Calculations assume 20 workers will each commute 40 miles round-trip to each of the three storage basin sites. It is anticipated that no more than two basins would be constructed per year.

Construction of each storage basin—including the construction of modified basins—will require the delivery and installation of equipment and materials. It is not known whether each site will balance as the basins will require excavation to reach the desired depth. However, it is anticipated that no more than 2 million cubic yards (cy) of materials total would be hauled off site by 15 cy trucks. No more than 100 round trips per day at 30 miles round-trip would be required to

accomplish the effort to remove excess materials off-site. This would occur over the 20-year horizon with some periods of no hauling activities, and other periods that would reach 100 round trips per day. An estimated total of 110 round trips per day (trucks and employees) would be required to haul excess materials to a soil receiving facility. Additionally, given that it is known that contaminated soils may exist at one or more of the proposed storage basin sites, any contaminated soils will need to be properly characterized by identifying the contaminant discovered and, based on the contaminants discovered, the soils will either be treated, blended, or directly disposed of at an appropriate facility.

It is assumed that at least two of the storage basins described herein will require lining to prevent high groundwater issues in perched aquifers. The lining will consist of filling the basin floor with bentonite and soil, and compacting the top soil by rolling or tamping.

In addition to the above construction equipment, heavy duty trucks will be employed for on-site deliveries. Smaller trucks and automobiles will be utilized for on-site supervision and employee commuting. The diesel delivery trucks are assumed to require 300 on-road miles per day for a total of 30 days.

For the modifications proposed at the Lower Cucamonga Ponds, Riverside Basin, and Jurupa Basin, it is anticipated that each facility will require 60 days to complete grading activities, and will require one bulldozer, a front-end loader, water truck, grader, excavator and two dump/haul trucks operating 8 hours per day. Completion of the modifications to these basins is anticipated to require a total of 6 months to a year to complete per facility. As with the above outline for construction of new storage basins, it is anticipated that the proposed basin modification will require the delivery and installation of equipment and materials. This phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 40 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Calculations assume six workers will each commute 40 miles round-trip to the work site. In addition to the above construction equipment, heavy duty trucks will be employed for on-site deliveries. Smaller trucks and automobiles will be utilized for on-site supervision and employee commuting. The diesel delivery trucks are assumed to require 300 on-road miles per day for a total of 10 days. Any additional excavation required would fall under the construction scenario discussed in the paragraphs above, and would fall within the anticipated 2 million cy of materials total that would be hauled off the 7 storage basin sites.

Flood Managed Aquifer Recharge Facilities

In addition to the proposed storage basins, the OBMPU proposes up to 200 acres of Flood MAR facilities within existing agricultural use areas. MAR facility construction consists of grading existing agricultural lands to be able to hold and recharge surface water. The precise locations of the proposed new flood MAR facilities are unknown at this time, beyond that they will be located within northern portion of the Chino Basin as shown on **Exhibit 12**. As such, impacts related to the construction of these facilities have not been fully defined beyond that Flood MAR facilities are assumed to be a fraction of the impacts of the storage basins.

3.5.3.3 Storage Bands: Summary

The OBMPU proposes the expansion of the safe storage capacity up to 900,000 af going forward. In order to ensure safe storage capacity within the Chino Basin, the facilities outlined herein (as part of **Section 3.5 Summary of All Facilities**) are intended to support this expansion. This component of the OBMPU is analyzed in detail in the 2023 SFI, provided as Appendix 6b to this RDSEIR.

3.5.4 Project Category 4: Desalters and Water Treatment Facilities

3.5.4.1 Water Treatment Plants: Summary of Facilities, Operational Scenarios, and Construction Scenarios

Please note that IEUA's 2017 FMP PEIR previously analyzed extensive evaluations of future modifications to its four Water Reclamation Plants (WRPs: Regional Plant No. 1 (RP-1), Regional Plant No. 4 (RP-4), Regional Plant No. 5 (RP-5), and the Carbon Canyon Water Reclamation Facility (CCWRF)), which remain pertinent. Accordingly, this SEIR incorporates by reference the environmental review provided in the 2017 FMP PEIR, and will only evaluate the incremental changes presented by the OBMPU. The modifications to RP-1, RP-4, RP-5, and CCWRF are summarized here for completeness. The findings of this five-year old PEIR will be extensively referenced in this document.

Modifications to an Existing Imported Water Treatment Facility: Water Facilities Authority Agua de Lejos Treatment Plant (PE2, PE4, PE5, PE8/9).

In order to meet the objectives of **PE2 (Exhibit 12)** and **PE4 (Exhibit 14)**, the OBMPU envisions constructing improvements to the Water Facilities Authority (WFA) Agua de Lejos Treatment Plant. The WFA modifications also meet the objectives of **PEs 5 and 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Modifications to an Existing Imported Water Treatment Facility, Water Facilities Authority Agua de Lejos Treatment Plant: Summary of Facilities

These modifications include the removal of some or all its solids handling limitations, and envisions other improvements to increase its capacity, thereby increasing in-lieu recharge capacity. Additionally, the OBMPU envisions constructing improvements to the WFA Agua de Lejos Treatment Plant to increase its capacity by up to about 25,000 afy and also envisions an increase in the use of imported water purchased from Metropolitan by up to about 25,000 afy. The specific improvements needed to increase the capacity of the plant are currently unknown, though some of the surface water supplied could be obtained through Three Valleys Municipal Water District (TVMWD) and its Miramar Treatment Plant.

Modifications to an Existing Imported Water Treatment Facility, Water Facilities Authority Agua de Lejos Treatment Plant: Operational Scenario

This project consists of expanding the existing solids handling capacity at the Water Facilities Authority Agua de Lejos Treatment Plant from 20 mgd in wintertime and 40 mgd in summertime, to a constant capacity of 81 mgd. This will result in constantly operating the plant at two to four times its current capacity. The energy consumption anticipated to result from increasing operations at the plant is not known at this time, though the overall program operational impacts are discussed under **Subchapter 4.5, Energy**.

Modifications to an Existing Imported Water Treatment Facility, Water Facilities Authority Agua de Lejos Treatment Plant: Construction Scenario

The OBMPU envisions constructing improvements to the WFA Agua de Lejos Treatment Plant to remove some or all its solids handling limitations, and envisions other improvements to increase its capacity to its original design capacity, thereby increasing in-lieu recharge capacity. The specific improvements needed to increase the capacity of the plant are currently unknown.

Upgrade Existing Recycled Water Treatment Plant(s) (PE7)

The OBMPU envisions constructing new treatment trains at one or more IEUA recycled water treatment plants (RP-1, RP-4, RP-5, CCWRF) to reduce the TDS concentration of recycled water to levels that ensure compliance with IEUA and Watermaster's recycled water permits, which would meet the objectives of **PE7** by enabling the Watermaster to maintain Hydraulic Control. The facilities and/or improvements that may need to be implemented are listed below and shown on **Exhibit 25**.

Upgrade Existing Recycled Water Treatment Plant(s): Summary of Facilities

The area disturbed during construction of the new treatment train capacity expansion would be limited to the disturbed areas at IEUA's existing recycled water treatment plants, as described in IEUA's 2017 FMP PEIR.

Upgrade Existing Recycled Water Treatment Plant(s): Operational Scenario

Upgrades to the existing recycled water treatment plants will result in the operation of new treatment trains at one or more IEUA recycled water treatment plants. (See IEUA's 2017 FMP PEIR.)

Upgrade Existing Recycled Water Treatment Plant(s): Construction Scenario

The construction of a new treatment train (i.e., advanced water treatment to minimize TDS concentration in the recycled water generated at IEUA's Treatment Plants) may occur at one or more of IEUA's Recycled WRPs. As analyzed in IEUA's 2017 FMP, it is assumed that advanced recycled water treatment would be developed at one or more of IEUA's existing Treatment Plants, and that no more than one water treatment facility would be constructed per year.

3.5.4.2 Desalters and Advanced Water Treatment Facilities

Modifications to the Chino Desalters (PE4, PE7, PE8/9)

In order to achieve the objectives of **PE4** and **PE7**, the OBMPU envisions expanding the existing Chino Desalter capacity by between 2,000 afy (to achieve **PE4**'s goals alone) and 6,000 afy (to achieve both **PE4**'s and **PE7**'s goals) by adding new wells and either expanding the Chino-I and/or Chino-II treatment capacity or constructing a new treatment facility and product conveyance facilities. The location of the Chino Desalters is shown on **Exhibit 14**. The facilities that would enable the Watermaster to maintain Hydraulic Control as envisioned under the OBMPU are shown on **Exhibit 25**. The expansion of the Chino Desalters or construction of new functionally equivalent facilities could be used to mitigate the loss of net recharge and Safe Yield caused by a Storage and Recovery Program, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Modifications to the Chino Desalters: Summary of Facilities

The new wells required to expand the Chino Desalters are discussed under **Subsection 3.5.1.2 ASR, Injection and Pumping Wells**, above. The area disturbed during construction of the treatment plant capacity expansion—either through expansion of existing facilities or construction of a new facility—would be limited to the disturbed areas at the existing Chino Desalter treatment plant sites. Conveyance facilities will be required to convey the treatment plant product water to its end potable use. These conveyance facilities include pipelines, booster pump stations, water storage reservoirs and minor appurtenances whose number, locations and capacities are presently unknown.

Modifications to the Chino Desalters: Operational Scenario

Desalter groundwater well production would increase by 2,000 to 6,000 afy. This would result in upgrades to the existing Chino Desalters to increase their combined capacities by up to 6 mgd or operation of up to a new 6 mgd desalter facility. Upgrades to the existing Chino Desalters or a new desalter facility will result in the operation of an additional 6 mgd of treatment through RO and pumping the additional product water into the distribution systems. The RO process would result in brine that would be disposed of through existing, expanded, or new brine management facilities as discussed under **Brine Management Facilities (PE7)**, below. The energy consumption anticipated to result from increasing operations at the Chino Desalters is not known at this time, though the overall program operational impacts are discussed under **Subchapter 4.5, Energy**.

Advanced Water Purification Facilities (PE5, PE7)

The OBMPU envisions constructing an advanced water purification facility, which would maximize recycled water reuse (shown on **Exhibit 16**). The new advanced water purification facility meets the objectives of **PEs 5 and 7**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. The location of the treatment plant is currently unknown; however, it could be located at an existing IEUA Water Reclamation Plant (WRP). The OBMPU assumes that an AWPf may be considered due to the interest by the City of Ontario in developing an up to 9,000 afy AWPf. This facility is anticipated to obtain recycled water for advanced treatment from IEUA's regional system. Of the approximately up to 10,200 afy that would be processed by the AWPf, up to 9,000 afy of advanced treated water will be recharged to the Chino Basin annually and an estimated up to 1,200 afy will be transported as reject water (brine) that will need to be disposed of through the Non-Reclaimable Waste System (NRWS).

Advanced Water Purification Facilities: Summary of Facilities

Advanced water purification refers to the following wastewater treatment processes: RO, membrane filtration, or functionally equivalent processes, and potentially ultraviolet (UV) disinfection. The area expected to be disturbed by the construction and operation of the plant is 10 to 20 acres. The location of this treatment plant is currently unknown; however, it could be collocated at an existing IEUA treatment plant.

The water produced by the new treatment plant could be used for direct potable reuse (DPR) and/or indirect potable reuse (IPR), though it is anticipated that the majority of the purified water would be utilized for groundwater recharge through new injection wells and ultimately extracted for direct use by several new extraction wells. In either case, conveyance facilities will be required to convey the treatment plant product water to either use. These conveyance facilities include pipelines, booster pump stations, water storage reservoirs and minor appurtenances whose number, locations and capacities are presently unknown. However, it is anticipated that the pipelines will be located below ground and within existing road rights-of-ways. In general, this project is anticipated to require the following facilities, which are discussed in detail as part of the total for each given facility type under the corresponding Project Categories, provided herein:

- Up to 10 injection wells
- Up to 9 extraction wells
- Up to 2 monitoring wells
- Up to 10 miles or 52,800 LF of various types of pipeline including recycled water pipeline, brine disposal pipeline, and potable water conveyance pipeline
- Up to 2 booster pump stations

Advanced Water Purification Facilities: Operational Scenario

Operations consist of running and maintaining the treatment plant. Operations will consist of treating up to 10 mgd of water through RO and microfiltration or functionally equivalent processes, and potentially ultraviolet (UV) disinfection. The plant will run 90 percent of the time. The energy requirements are anticipated to be 1,665 kWh per af. The specific chemicals required to operate the plant are presently unknown. Waste generation is presently unknown, though the brine generated by the proposed AWPf operations is anticipated to total up to 1,200 afy per year, and it is anticipated that the brine will be disposed of through the Non-Reclaimable Waste System (NRWS) or Inland Empire Brine Line (IEBL).

Brine Management Facilities (PE7)

The OBMPU envisions constructing brine management facilities for the expanded desalting described above that result in no net increase in brine disposal, which would meet the objectives of **PE7** by enabling the Watermaster to maintain Hydraulic Control. The specific brine management facilities are currently unknown. However, as stated above under Advanced Water Purification Facilities (3.5.4.2 Desalters and Advanced Water Treatment Facilities), the OBMPU envisions disposal of up to 1,200 afy of brine per year to the NRWS or IEBL. IEUA operates the NRWS, which ultimately conveys flow to the Los Angeles County Sanitation Districts (LACSD) through the Joint Outfall System (JOS), and the IEBL, which directly conveys flow to the Orange County Sanitation District (OCSD) by gravity.

Brine Management Facilities: Operational Scenario

The OBMPU envisions constructing brine management facilities that result in no net increase in brine disposal. The specific brine management facilities are currently unknown. The energy requirements for the AWPf brine disposal are anticipated to be 1,665 kWh per af, which is similar to that which would be generated by the AWPf commensurate with the amount of brine generated by the operation of this new facility.

3.5.4.3 Desalters and Advanced Water Treatment Facilities: Construction Scenario

The OBMPU envisions expanding the existing Chino Desalter capacity by a total of up to 6,000 afy. The area disturbed during construction of the treatment plant capacity expansion would be limited to the disturbed areas at the two existing Chino Desalter treatment plant sites. As such, desalter expansion is proposed to occur within an existing facility and would not require grading or site preparation. Installation of the expansion equipment would require a maximum of 15 workers and typical construction site equipment (cranes for setting ion exchange vessels, front end loaders, fork lifts, etc.) Impact estimates will assume 1 vehicle round-trip per worker and 10 deliveries per day resulting in about 25 round-trips per day over a construction period of 12 months. The average daily round-trip is anticipated to be 40-miles.

Conversely, the OBMPU envisions constructing a new advanced water purification facility. The area expected to be disturbed by the construction and operation of the plant is 10 acres. It is anticipated that a new advanced treatment plant would be designed to treat up to 20 mgd of water. The construction of the 20 mgd advanced water treatment facility would consist of site clearing, grading, construction of facilities, installation of equipment, and site completion. Construction equipment would include the following: one bulldozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 15 persons. The maximum number of truck deliveries is forecasted at 10 per day at 40-miles round-trip per day of construction. Materials and equipment would be delivered

to the site including piping, building materials, concrete forms, roofing materials, HVAC equipment, pumps, diffusers, screens, belt presses, and screw presses. The advanced water treatment facility would require about 18 months to construct.

Brine Management Facilities

The OBMPU envisions constructing brine management facilities that result in no net increase in brine disposal. The specific brine management facilities are currently unknown.

3.5.4.4 Groundwater Treatment Facilities: Summary of Facilities, Operational Scenarios, and Construction Scenarios

Groundwater Treatment at or near Well Sites (PE5, PE6, PE8/9)

The OBMPU envisions constructing up to 20 water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use; this would meet the objectives of **PE6** because groundwater treatment facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan*. The construction of water treatment facilities at well sites or at sites near to wells to treat groundwater has the potential to mitigate the effects of Storage and Recovery Programs on the remediation Projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. Additionally, the construction of groundwater treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Groundwater Treatment at or near Well Sites: Summary of Facilities

Groundwater treatment at well sites could be installed within existing well sites or at new sites near existing wells. The area expected to be disturbed by the construction and operation of the 20 proposed treatment facilities would be limited to existing well sites if the plant is located at an existing well site. For new treatment facilities located near a well site, the area of disturbance will range from about 0.5 acres to 2 acres per facility. For treatment facilities not collocated by a well site, new pipelines, booster pumps, water storage reservoirs and related appurtenances will be required to convey groundwater to each treatment plant. The precise number, locations and capacities of the proposed new water treatment plants, pipelines, booster pumps, water storage reservoirs and related appurtenances are presently unknown. However, it is anticipated that for off-wellsite treatment plants, the pipelines will be constructed underground and within existing road rights-of-ways. The length of pipelines to convey groundwater to an off-wellsite treatment plant is expected to range between 2,500 to 10,000 LF, connecting one to four wells to the treatment plant. It is assumed that the groundwater treatment facilities would be located at or near wells shown on **Exhibit 18** where contaminants of concern (COCs) in water produced at those wells currently exceed drinking water maximum contaminant levels (MCLs), though the most common COCs in the Chino Basin are nitrate, 1,2,3-trichloropropane (1,2,3-TCP), and perchlorate concentrations. The treatment trains which may be considered include, but are not limited to the following:

- Granular Activated Carbon (GAC) for 1,2,3-TCP⁸
- Perchlorate and nitrate removal through ion exchange (IX) treatment system⁹
- Reverse Osmosis (RO)

⁸ GAC is an adsorbent material that removes a variety of natural organic compounds, taste and odor compounds, and synthetic organic compounds. Adsorption removes contaminants from the bulk liquid through the accumulation of contaminants at the interface of the liquid and the media surface.

⁹ IX is the reversible interchange of ions between a solid and a liquid such as water. Ion exchange resins remove harmful contaminants from liquids, replacing them with beneficial, desired ions.

- Biological treatment systems¹⁰
- Disinfection

Groundwater Treatment at or near Well Sites: Operational Scenario

Operations consist of running and maintaining the treatment plants. The treatment plants are assumed to operate 50 to 90 percent of the time. The energy requirements and chemicals required to operate these plants are presently unknown, though the most common COCs in the Chino Basin are nitrate, 1,2,3-TCP, and perchlorate concentrations. Chemicals utilized in the operation of these treatment trains include, but are not limited to the following: sodium chloride (NaCl), sodium hypochlorite (NaClO), and hydrochloric acid (HCl). Waste generation is presently unknown.

Groundwater Treatment at or near Well Sites: Construction Scenario

The OBMPU envisions constructing water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use. The area expected to be disturbed by the construction and operation of the proposed treatment facilities would be limited to existing well sites; and will range from about 0.5 acres to 2 acres per facility for new treatment facilities located near a well site. Construction of water treatment facilities may involve site demolition; site paving; site prep/grading; excavation and installation of yard pipes; installation of treatment facilities; site finishing (landscaping, misc. curb/cutter, etc.); site drainage (above and below grade). Construction equipment would include the following: one bulldozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 5 persons. The maximum number of truck deliveries is forecasted at 5 per day at 40-miles round-trip per day of construction. Each water treatment facility will require about three months to construct.

Regional Groundwater Treatment (PE5, PE6, PE8/9)

The OBMPU envisions constructing up to 4 regional water treatment facilities that treat groundwater from multiple wells to meet drinking water standards for local use and/or export; this would meet the objectives of **PE6** because groundwater treatment facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan*. The construction of regional water treatment facilities has the potential to mitigate the effects of Storage and Recovery Program on the remediation Projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. Additionally, the construction of regional groundwater treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Regional Groundwater Treatment: Summary of Facilities

The area expected to be disturbed by the construction and operation of the up to 4 proposed treatment facilities is expected to be less than 20 acres per facility. New pipelines, booster pumps, water storage reservoirs and related appurtenances will be required to convey groundwater to each treatment plant. The precise number, locations and capacities of the proposed new water treatment plants are presently unknown. However, it is anticipated that the pipelines will be constructed underground and within existing road rights-of-ways. The length of pipelines to convey groundwater to the proposed treatment plants is expected to range between 5,000 to

¹⁰ Biological wastewater treatment is designed to degrade pollutants dissolved in effluents by the action of microorganisms. The microorganisms utilize these substances to live and reproduce where the pollutants are used as nutrients. (H. Jung, D. Pauly, in *Treatise on Water Science*, 2011)

50,000 LF, connecting up to ten wells to the treatment plant. It is assumed that the regional groundwater treatment facilities will be located in close proximity to wells shown in on **Exhibit 18** where the quality of water produced at those wells currently exceed drinking water MCLs.

Regional Groundwater Treatment: Operational Scenario

Operations consist of running and maintaining the treatment plants. The treatment plants are assumed to operate 50 to 90 percent of the time. The energy requirements and chemicals required to operate these plants are presently unknown. Waste generation is presently unknown.

Regional Groundwater Treatment: Construction Scenario

The OBMPU envisions constructing up to 4 regional water treatment facilities located in the vicinity of multiple wells. The area expected to be disturbed by the construction of the proposed treatment facilities would be 10 acres due to the pipeline installation required to convey water from multiple wells to a centralized location at which the treatment facility will be located. A regional groundwater treatment facility would range from about 2 acres to 4 acres in size per facility. Construction of water treatment facilities may involve site demolition; site paving; site prep/grading; excavation and installation of yard pipes; installation of treatment facilities; site finishing (landscaping, misc. curb/cutter, etc.); site drainage (above and below grade).¹¹ Construction equipment would include the following: one bulldozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 10 persons. The maximum number of truck deliveries is forecasted at 10 per day at 40-miles round-trip per day of construction. Each regional water treatment facility will require about 12-months to construct.

Improve Existing Groundwater Treatment Facilities (PE5, PE6, PE8/9)

The OBMPU envisions constructing improvements at existing treatment facilities to enable them to continue to treat contaminated groundwater to drinking water standards for local use; this would meet the objectives of **PE6** because groundwater treatment facilities would address the contaminants of concern within the Chino Basin based on the recommendations of the *Groundwater Quality Management Plan*. The improvement of existing groundwater treatment facilities has the potential to mitigate the effects of Storage and Recovery Programs on the remediation Projects, which would meet the objectives of **PE 8/9**, the objectives of which are outlined under **Section 3.6, Program Elements**, below. Additionally, the construction of improvements at existing treatment facilities meets the objectives of **PE 5**, the objectives of which are outlined under **Section 3.6, Program Elements**, below.

Improve Groundwater Treatment Facilities: Summary of Facilities

These treatment plants treat contaminants known at the time they were designed and constructed. New treatment processes may need to be added to these existing plants with current and future drinking water regulations. The capacities of these treatment improvements are presently unknown. The treatment processes that could be used include granulated activated carbon, air stripping, ion exchange, reverse osmosis, biological, and other processes.

Improve Groundwater Treatment Facilities: Operational Scenario

Operations consist of running and maintaining the treatment plant. The treatment plants are assumed to operate 80 to 90 percent of the time. The energy requirements and chemicals

¹¹ Please refer to the discussion of the construction scenario for conveyance facilities for a depiction of the construction associated with installation of pipeline that may be associated with the proposed regional groundwater treatment facilities.

required to operate the proposed improvements at these plants are presently unknown. Waste generation associated with the proposed improvements at these plants is presently unknown.

Improve Groundwater Treatment Facilities: Construction Scenario

Construction required to improve existing groundwater treatment facilities are presently unknown, though some of the components provided under Groundwater Treatment at or near Well Sites: Construction Scenario and Regional Groundwater Treatment: Construction Scenario may apply to the proposed improvements.

3.5.5 Other: Biological Monitoring

3.5.5.1 PBHSP Biological Monitoring (PE1)

The objective of PE 1 under the OBMPU includes continuing the ongoing monitoring and reporting program and developing and updating an *OBMP Monitoring and Reporting Work Plan*, which is considered to be part of the baseline and is included here as it is a part of the comprehensive OBMPU. Watermaster's biological monitoring program is conducted pursuant to the adaptive monitoring program (AMP) for the Prado Basin Habitat Sustainability Program (PBHSP). The objective of the PBHSP is to ensure that the groundwater-dependent ecosystem in Prado Basin will not incur unforeseeable significant adverse impacts due to implementation of the Peace II Agreement. The monitoring program produces time series data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both pre- and post-Peace II implementation. Two types of monitoring and assessment are performed: regional and site-specific. Regional monitoring and assessment of the riparian habitat is performed by mapping the extent and quality of riparian habitat over time using multi-spectral remote-sensing data and air photos. Site-specific monitoring performed in the Prado Basin includes field vegetation surveys and seasonal ground-based photo monitoring. Under the OBMPU, Watermaster will continue these efforts, and as such this activity will be treated as part of the baseline against which the OBMPU is evaluated.

3.6 OBMPU PROGRAM ELEMENTS

There are physical, institutional, and financial impediments to achieving the four (4) OBMPU goals identified above in **Subsection 3.3**. The Stakeholders identified and described several management activities that, if implemented, could remove these impediments and achieve the OBMPU goals. These activities have objectives and tasks that work together and are directly related accomplishing the 2000 OBMP PEs, as shown on **Table 3.4**, below. Thus, the nine PEs defined in the 2000 OBMP have been retained for the OBMPU.

Table 3.4
RELATIONSHIP OF OBMPU GOALS TO THE PROGRAM ELEMENTS

Monitoring and Reporting Requirement	OBMPU Goals			
	Goal 1: Enhance Basin Water Supplies	Goal 2: Protect and Enhance Water Quality	Goal 3: Enhance Management of the Basin	Goal 4: Equitably Finance the OBMP
Program Element 1. Develop and Implement Comprehensive Monitoring Program (Comprehensive Monitoring Program)	✓	✓	✓	✓
Program Element 2. Develop and Implement Comprehensive Recharge Program (Comprehensive Recharge)	✓	✓	✓	✓
Program Element 3. Develop and Implement a Water Supply Plan for Impaired Areas (Groundwater Desalting)	✓	✓	✓	✓
Program Element 4. Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1 (Land Subsidence Management)			✓	✓
Program Element 5. Develop and Implement Regional Supplemental Water Program (Recycled Water Reuse)	✓	✓	✓	✓
Program Element 6. Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management (Water Quality Management)	✓	✓	✓	✓
Program Element 7. Develop and Implement Salt Management Plan (Salt and Nutrient Management Plan)	✓	✓	✓	✓
Program Element 8. Develop and Implement Groundwater Storage Program (Groundwater Storage Management)	✓	✓	✓	✓
Program Element 9. Develop and Implement Conjunctive Use Program (Conjunctive Use)	✓	✓	✓	✓

Source: 2020 OBMPU Report (Appendix 6a)

The OBMPU Program Elements are highly related as is shown in the figure below. For example, the management activities associated with groundwater recharge impact land subsidence (a possible land subsidence management tool), groundwater storage and conjunctive use (recharge as a means to get water into storage), recycled water reuse (recharge as a means to get recycled and dilution water into the Basin), and the salt and nutrient management plan (managed recharge must be blended to meet Salt and Nutrient Management Plan [SNMP] requirements). Furthermore, recharge impacts water quality directly, it has the potential to displace contaminant plumes, and future recharge increases with high quality storm and imported waters will be used to increase pumping rights and reduce future desalting requirements.

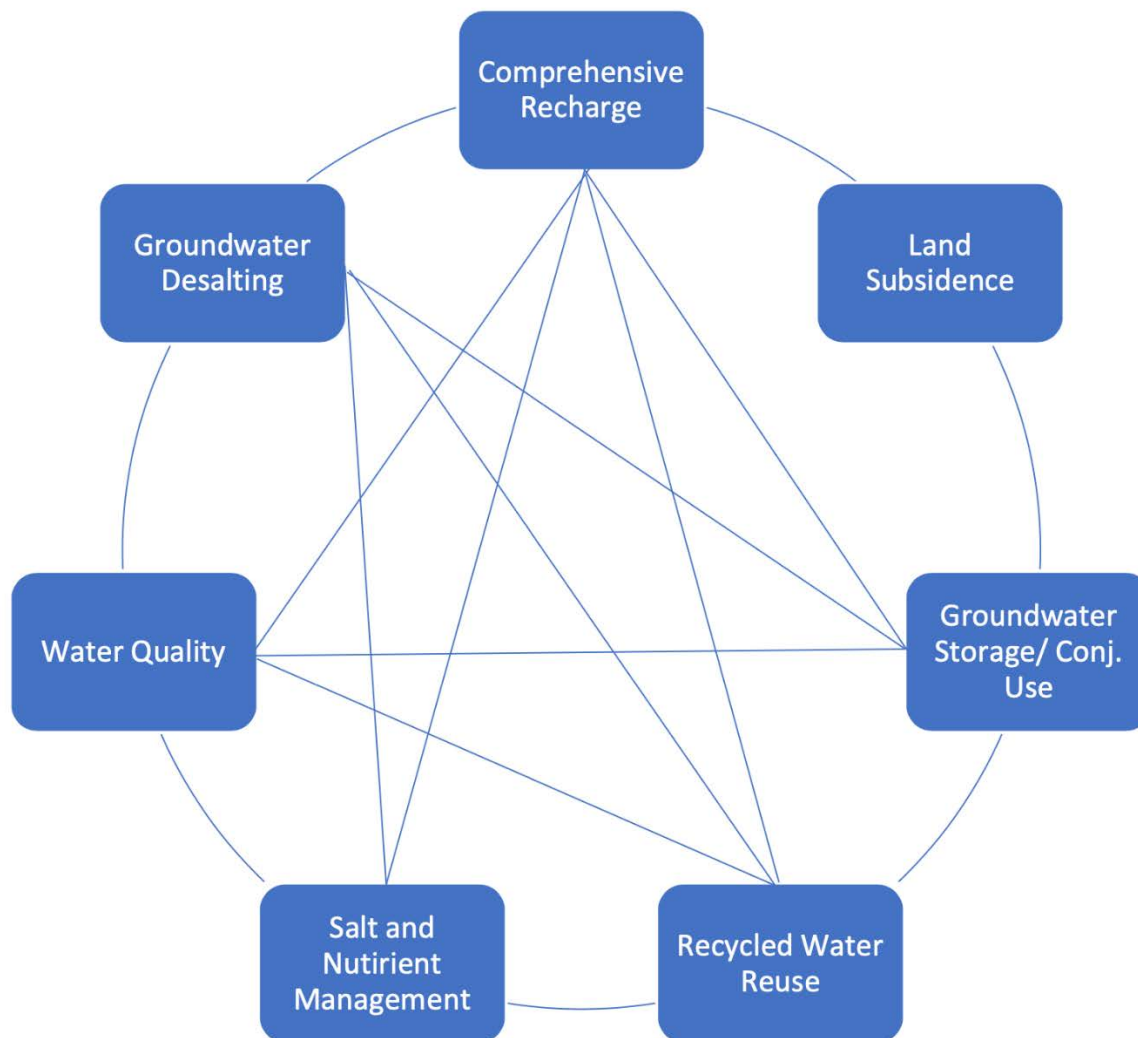


Figure 3-1: RELATIONSHIP OF THE OBMPU MANAGEMENT ACTIVITIES ¹²

This section describes a series of one-time actions and new management processes, that help achieve the OBMPU's Project objectives and set the framework for the next 20 years of Basin-management activities (2020-2040). The implementation actions are listed by PE in **Exhibit 4**. Implementation of these management actions may result in the construction and operation of new facilities or the substantial upgrade of existing facilities and their operations. The facilities improvements that could result from the implementation of the OBMPU are listed in **Exhibit 5**.

For each PE, the following subsections (3.6.1 through 3.6.8) describe: the objectives and implementation actions established in 2000, implementation progress since 2000, and the implementation actions of the OBMPU, including the potential facility improvements that could result from implementation.

¹² Source: 2020 OBMPU Report (Appendix 6a)

3.6.1 Program Element 1. Develop and Implement Comprehensive Monitoring Program

3.6.1.1 Objectives

The objective of PE 1 in the 2000 OBMP—*Develop and Implement Comprehensive Monitoring Program*—was to provide the information necessary to support the implementation of all other OBMP PEs and to evaluate their performance over time. The OBMPU restates the objective of PE 1: to collect the data and information necessary to support the implementation of all other OBMP PEs and to satisfy other regulations and Watermaster’s obligations under its agreements, Court orders, and CEQA.

3.6.1.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

Watermaster began implementing its monitoring programs during the development of the 2000 OBMP. Pursuant to the 2000 OBMP Implementation Plan, long-term plans for monitoring groundwater production, groundwater level, groundwater quality, ground level (including remote sensing), surface water, and well construction/destruction monitoring programs have been developed and implemented. The monitoring programs have evolved over time to ensure that the data and information acquired not only meet the OBMP requirements, but also other regulatory requirements and Watermaster obligations under agreements, Court orders, and CEQA. In some instances, the monitoring programs were expanded to satisfy new Basin-management initiatives and regulations. In other instances, the scope of the monitoring programs has been reduced with periodic reevaluation and redesign to achieve the monitoring objectives at reduced cost.

OBMPU Change: Exhibit 4 shows the implementation actions for PE 1 under the OBMPU, which include continuing the ongoing monitoring and reporting program described below and developing and updating an *OBMP Monitoring and Reporting Work Plan*. Implementation of these actions may result in the construction of new monitoring facilities in the Chino Basin as described by monitoring type below. The following summarizes each of the Watermaster’s ongoing monitoring and reporting programs, and any new monitoring facilities envisioned in the OBMPU that are needed to comply with regulations or to meet Watermaster’s obligations under its agreements, Court orders, and CEQA. **Table 3.5** below is a list of the monitoring and reporting requirements and the associated regulatory entities.

Table 3.5
WATERMASTER MONITORING AND REPORTING REQUIREMENTS

Monitoring and Reporting Requirement	Requiring Entity					
	Court	State Board	Regional Board	California DFW	California DWR	CEQA
Water Rights Compliance Annual Reports		X		X		
SGMA Annual Report for Adjudicated Basins					X	
Biannual Evaluation of the Cumulative Effect of Transfers	X					
Biannual Evaluation of the Balance of Recharge and Discharge	X					
Annual Finding of Substantial Compliance with the Recharge Master Plan	X					
Annual Report of Compliance with SB 88 and SWRCB Regulations for Measurement and Reporting of Diverted Surface Water		X				
Safe Yield Recalculation	X					
Recharge Master Plan Update (RMPU)	X					
State of the Basin Report	X					
California Statewide Groundwater Elevation Monitoring Program (CASGEM)					X	
Chino Basin Maximum Benefit Annual Report			X			
Annual Report of the Prado Basin Habitat Sustainability Committee						X
Water Recycling Requirements for the Chino Basin Recycled Water Groundwater Recharge Program			X			
Annual Report of the Ground-Level Monitoring Committee	X					
OBMP Semi-Annual Status Reports	X					

Groundwater-level monitoring. Watermaster's groundwater-level monitoring program supports many Watermaster management functions, including: groundwater model development and recalibration, periodic recalculations of Safe Yield, evaluating the cumulative impacts of transfers and the balance of recharge and discharge, subsidence management, MPI evaluations, estimation of storage changes, other scientific demonstrations required for groundwater management, and many regulatory requirements, such as the demonstration of Hydraulic Control, the triennial recomputation of ambient water quality, and Prado Basin habitat sustainability. The monitoring program includes field work implemented by Watermaster staff and consultants at private wells and monitoring wells, and cooperative programs to collect, compile, and store data from well owners and other entities including municipal water agencies, private water companies, the California Department of Toxic Substance Control (DTSC), the County of San Bernardino, and various private consulting firms.

The 2000 OBMP estimated that about 500 wells would be initially surveyed for groundwater levels to develop a long-term key-well monitoring program. The 2000 OBMP acknowledged that key wells located in agricultural areas would need to be replaced as necessary if the original well is destroyed when the agricultural land is converted to another use. From 1998 to 2001, Watermaster conducted the initial survey and developed the long-term monitoring program. The current groundwater-level monitoring program consists of about 1,300 wells: about 250 wells are

measured by Watermaster at monthly to quarterly frequencies and about 1,050 wells are measured by the owners at various frequencies who then report the data to Watermaster. **Exhibit 6** is a map that depicts the existing current groundwater-level monitoring program.

OBMPU change: To continue to comply with regulations and meet Watermaster's obligations under its agreements, Court orders, and CEQA, under the OBMPU, it is anticipated that new monitoring wells will need to be constructed. Many of the new monitoring wells will be needed to replace private wells that are currently used for monitoring, but will be destroyed as agricultural lands are converted to urban land uses. Other new monitoring wells will be needed to support regulatory compliance or other Watermaster management initiatives. As such, up to 102 new monitoring wells will be constructed to monitor groundwater levels and groundwater quality (see below) in the Chino Basin with total depths ranging from 50 to 1,500 feet and four- to six-inches in diameter. The average area of disturbance of each well site is anticipated estimated to be half an acre or less. Additionally, the ongoing groundwater-level monitoring program will continue. (See **Exhibit 6**).

Groundwater-quality monitoring. Watermaster's groundwater-quality monitoring program supports many Watermaster management and regulatory-compliance functions including: compliance with the maximum benefit SNMP, characterization of non-point source contamination and plumes associated with point-source discharges, support for ground-water modeling, characterization of groundwater/surface-water interactions in the Prado Basin area, and characterization of Basin-wide trends in groundwater quality as part of the Watermaster's biennial State of the Basin report. The monitoring program includes sampling and analysis programs implemented by Watermaster staff at private wells and monitoring wells, and cooperative programs to collect, compile, and store data from well owners and other entities that conduct groundwater-quality monitoring programs.

The 2000 OBMP estimated that about 600 wells would be initially surveyed for groundwater quality to develop a long-term key-well monitoring program. The long-term monitoring program would consist of a minimum set of key wells monitored by Watermaster, but the number of wells was not specified. Additional groundwater-quality data would be obtained from the California Division of Drinking Water. From 1999 to 2001, Watermaster conducted the initial survey and developed a long-term monitoring program. The current groundwater-level quality program consists of about 800 wells: about 150 wells are sampled by Watermaster at quarterly to annual frequencies and about 650 wells are measured by the owners at various frequencies who then report it to the State Water Board's Division of Division Water (DDW). **Exhibit 7** is a map that depicts the current groundwater-quality monitoring program.

OBMPU change: To continue to comply with regulations and meet Watermaster's obligations under its agreements, Court orders, and CEQA, under the OBMPU, it is anticipated that new monitoring wells will need to be constructed. Monitoring wells can serve a dual purpose by monitoring groundwater levels and providing water quality sampling sites. (See **Exhibit 7**). Accordingly, the same groundwater wells used to monitor groundwater levels can also be used to monitor groundwater quality.

Groundwater-production monitoring. Watermaster uses groundwater-production data to quantify and levy assessments pursuant to the Judgment. Estimates of production are also essential inputs to recalibrate Watermaster's groundwater flow model, which is used to inform the recalculation of Safe Yield, evaluate the state of Hydraulic Control, perform MPI evaluations, and support many other Watermaster initiatives. Members of the Appropriative and Overlying Non-

Agricultural Pools and CDA record their own meter data and submit them to Watermaster. For Agricultural Pool wells, Watermaster performs a field program to install totalizing flow meters, repair or replace broken meters, and visit the wells quarterly to record the metered data. Watermaster has determined that for some Agricultural Pool wells it is not practical to repair, replace or install new meters. In these cases, Watermaster applies a water-duty based method to estimate production on an annual basis.

The 2000 OBMP estimated that in-line totalizing flow meters would be installed at about 300 wells owned by private parties within the Agricultural Pool and assumed that Watermaster staff would visit all active wells in the Agricultural Pool to record groundwater-production data. It also assumed that the Appropriative and Overlying Non-Agricultural Pool well owners, and some Agricultural Pool well owners, would report production records to Watermaster. The groundwater-production monitoring program also included reporting of the sources of water used by each producer and how that water is disposed of after use to enable accurate salt budget estimates per PE 7 and for other water management investigations. Meters were installed at most Agricultural Pools wells by 2003. Currently, Watermaster staff monitors groundwater production at 150 agricultural wells, as well as collecting and compiling groundwater-production data reported by the Appropriative and Overlying Non-Agricultural Pool well owners. **Exhibit 8** is a map that depicts the current groundwater-production monitoring program.

OBMPU change: Under the OBMPU, the expanded groundwater production monitoring efforts include the installation of up to 300 in-line flow meters in agricultural wells to accurately estimate production by the Agricultural Pool. Watermaster's ongoing groundwater-production monitoring program will continue. (See **Exhibit 8**). Ongoing monitoring is an activity that is an ongoing management activity being carried out by the Watermaster.

Surface-water discharge and quality monitoring. Watermaster's surface-water and climate monitoring program supports many Watermaster management functions, including: groundwater model development and recalibration, periodic recalculations of Safe Yield, evaluating the cumulative impacts of transfers and the balance of recharge and discharge, evaluating Storage and Recovery Program applications, evaluating MPI, recharge master planning, evaluating Prado Basin habitat sustainability, evaluating compliance with the SWRCB diversion permits, supporting maximum benefit SNMP compliance, and supporting recycled-water recharge permits compliance. Most of the data are collected from publicly available sources, including POTW discharge data, USGS stream gaging station data, and precipitation and temperature data measured at public weather stations or downloaded from spatially gridded datasets. Chino Basin stormwater, imported water, and recycled water recharge data are collected by the IEUA and shared with Watermaster. Watermaster staff also performs surface-water monitoring of the Santa Ana River to comply with the maximum-benefit SNMP.

The 2000 OBMP estimated that 16 new water-level sensors would be installed at recharge and retention basins to estimate recharge. These water-level meters were installed in 2005 and are currently used to estimate recharge at these basins. It also assumed that Watermaster would assess the existing surface-water discharge and water-quality programs of the Santa Ana River and Chino Basin tributaries to determine the adequacy of the monitoring for characterizing ambient water quality and the impacts of Basin management activities. In 2004 Watermaster implemented a surface-water monitoring program as part the maximum benefit monitoring program; this program has been modified over time with approval from the Regional Board. Currently, the program includes compiling discharge and water quality data from existing POTW discharges and USGS stream gaging stations and collecting grab water quality samples from

sites along the Santa Ana River, as described above. **Exhibit 9** is a map that depicts the current surface-water monitoring program.

OBMPU change: Under the OBMPU, Watermaster and IEUA's ongoing surface-water and climate monitoring efforts will be expanded. Surface-water discharge and stage measuring equipment and meteorological monitoring equipment will be installed in and near stormwater drainage and recharge facilities, respectively, to improve the accuracy of surface-water diversion and recharge measurements. The surface-water stage monitoring equipment will consist of up to 100 pressure transducer data-loggers and communications equipment that measure and record water levels, store the measurement data and transmit it to IEUA's SCADA system. The meteorological monitoring equipment will be similar to the California Irrigation Management Information System (CIMIS) stations and include a portion of the up to 100 data loggers and communications equipment that would monitor surface water, described above. Watermaster and IEUA's ongoing surface-water and climate monitoring efforts will continue. (See **Exhibit 9**).

Ground-level monitoring. Watermaster's ground-level monitoring program is conducted pursuant to the *Chino Basin Subsidence Management Plan*. The objective of the plan is to minimize or stop the occurrence of land subsidence and groundwater fissuring within the Chino Basin. The ground-level monitoring program is focused across the western portion of Chino Basin within defined Areas of Subsidence Concern—areas of Chino Basin that are susceptible to land subsidence.

The 2000 OBMP assumed that a network of ground-elevation stations in subsidence-prone areas would be installed and surveyed periodically. Currently, the ground-level monitoring program consists of high-frequency, groundwater-level monitoring at wells, remote-sensing and traditional leveling surveys at benchmarks to monitor vertical ground motion, monitoring of the vertical component of aquifer-system compression and expansion at Watermaster extensometer facilities, and measurement of horizontal ground-surface deformation across areas that are experiencing differential land subsidence by electronic distance measurements (EDMs) to understand the potential threats and locations of ground fissuring. **Exhibit 10** is a map that depicts the existing ground-level monitoring program.

OBMPU change: Under the OBMPU, up to three extensometers will be constructed in the areas prone to subsidence with a total depth ranging from 50 to 1,500 feet. The extensometers are installed in conjunction with new or existing wells. Watermaster's ongoing ground-level monitoring program will continue. (See **Exhibit 10**).

Well construction, abandonment, and destruction. Watermaster maintains a database of all wells in the Basin and performs periodic well inspections. Sometimes, Watermaster staff identifies a new well while implementing its monitoring programs. Well owners must obtain permits from appropriate county and state agencies to drill and construct a well and put it into use. The presence of abandoned wells is a threat to groundwater supply and a physical hazard. Watermaster staff periodically reviews its database, makes appropriate inspections, consults with well owners, maintains a list of abandoned wells in the Chino Basin, and provides this list to the counties for follow-up and enforcement. The owners of the abandoned wells are requested to properly destroy their wells following the ordinances developed by the county in which they are located.

The 2000 OBMP assumed that Watermaster would develop cooperative agreements with the counties of Los Angeles, Orange, Riverside, and San Bernardino to be informed when a new well

has been constructed. Additionally, Watermaster would review its well database, make appropriate inspections, consult with well owners, compile a list of abandoned wells, and request that wells be properly destroyed by the owner. Watermaster continues to implement this program. Watermaster has developed cooperative agreements with the DDW and the Counties of Los Angeles, Orange, Riverside, and San Bernardino to ensure that the appropriate entities know that a new well has been constructed. Watermaster staff makes best efforts to obtain well design information, lithologic and geophysical logs, groundwater-level and quality data, and aquifer-stress testing data.

OBMPU change: As stated under **Subsection 3.5.1.6, Well Destruction**, State Water Resources Control Board California Well Standards for well destruction have evolved in the 20 plus years since the 2000 OBMP was approved. As such, the OBMPU RDSEIR provides an update to amend the well destruction process going forward. Watermaster will continue these efforts, which will not involve any new or upgraded facilities.

Biological monitoring. Watermaster's biological monitoring program is conducted pursuant to the adaptive monitoring program (AMP) for the Prado Basin Habitat Sustainability Program (PBHSP). The PBHSP was created under a Peace II mitigation measure to monitor potential impacts on Prado Basin habitat from implementing hydraulic control. The objective of the PBHSP is to ensure that the groundwater-dependent ecosystem in Prado Basin will not incur unforeseeable significant adverse impacts due to implementation of the Peace II Agreement. The monitoring program produces time series data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both pre- and post-Peace II implementation. Two types of monitoring and assessment are performed: regional and site-specific. Regional monitoring and assessment of the riparian habitat is performed by mapping the extent and quality of riparian habitat over time using multi-spectral remote-sensing data and air photos. Site-specific monitoring performed in the Prado Basin includes field vegetation surveys and seasonal ground-based photo monitoring.

OBMPU change: Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities. Since the 2000 OBMP PEIR and related CEQA documents have already evaluated the environmental impacts associated with the OBMP, the OBMPU will simply continue this previously analyzed program component.

Water-supply and water-use monitoring. Watermaster compiles water supply and water-use data from the Parties to support two required reporting efforts: the Watermaster Annual Report to the Court and annual reporting requirements for adjudicated basins pursuant to the Sustainable Groundwater Management Act (SGMA). The data are also used to support calibration of Watermaster's surface-water and groundwater models. Monthly water use volumes for supply sources other than Chino Basin groundwater are collected from the Parties; this includes groundwater from other basins, recycled water, imported water, and native surface water.

OBMPU change: Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities.

Planning information. Watermaster periodically collects and compiles information on the Parties' best estimates of their future demands and associated water-supply plans. The data are used for future planning investigations that require the use of Watermaster's surface-water and groundwater models, such as Safe Yield recalculations and RMP updates.

OBMPU change: Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities.

3.6.2 Program Element 2. Develop and Implement Comprehensive Recharge Program

3.6.2.1 Objectives

The 2000 OBMP included PE 2—*Develop and Implement Comprehensive Recharge Program*—to increase stormwater recharge to offset the recharge lost due to channel lining, to ensure there will be enough supplemental water recharge capacity available to Watermaster to replenish overdraft, and to maximize the recharge of recycled and supplemental waters to protect or enhance Safe Yield. Through the OBMPU process it was determined that the objective of PE 2 remains the same.

3.6.2.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The comprehensive recharge program, as described in the 2000 OBMP PEIR, consisted of three phases: (1) to screen and assess potential recharge sites (completed prior to the development of the 2000 OBMP PEIR); (2) to develop engineering and institutional assessments for the sites that passed the screening assessment, including expected recharge rates, cost, etc.; and (3) to develop a recharge master plan (RMP) to design, construct, and manage recharge basins. The RMP would incorporate recycled water and imported water recharge.

The specific projects described in the 2000 OBMP PEIR included improvements to the Upland, College Heights, Brooks, Eight and Seventh Street, Etiwanda Conservation, Lower Day, Victoria, San Sevaine, Turner, Hickory, Etiwanda Percolation, Jurupa, and Wineville Basins, and the construction of the RP-3 Basins.

Watermaster completed the RMP in 2001. The 2001 RMP and subsequent Recharge Master Plan Updates (RMPU) (2010, 2013, and 2018) were developed in open and transparent planning processes that were convened by Watermaster through an ad-hoc committee. As part of the *2013 Amendment to the 2010 RMPU* (2013 RMPU), the RMPU Steering Committee, now referred to as the Recharge Investigations and Projects Committee (RIPComm), was created to assist Watermaster and the IEUA in preparing RMPUs. The RIPComm is open to all interested Stakeholders and meets regularly to discuss the status of recharge projects under construction and potential new projects for inclusion in future RMPUs. The outcomes of the 2001 Recharge Master Plan and subsequent RMPUs (2010, 2013, and 2018) are summarized below:

- 2001 Recharge Master Plan: Watermaster and the IEUA, constructed the first set of recharge facilities to exercise its rights pursuant to its diversion permits, increasing average annual stormwater recharge by about 9,500 afy. As part of this work, Watermaster and the IEUA modified seventeen existing flood retention and conservation facilities to increase diversion rates, conservation storage, and recharge, and constructed two new recharge facilities. The cost of these recharge improvements was about \$60 million. The IEUA and Watermaster paid for about half of this cost, while the other half was funded through Proposition 13 grants and other grant programs.
- 2013 RMPU: As of this writing, Watermaster and the IEUA are completing the final design/construction of five of the recommended 2013 RMPU facilities, and they should be online in 2023. These facilities are expected to increase stormwater recharge by about 4,700 afy with a cumulative increase to 14,200 afy.

- 2018 RMPU: The 2018 RMPU did not recommend any new recharge projects. One of the findings of the 2018 RMPU was that Watermaster, based on the best available planning information at that time, had enough supplemental water recharge capacity to meet its Replenishment Obligations via wet-water recharge through 2050.

Upon completion of the 2013 RMPU facilities, the annual average stormwater recharge performed pursuant to its diversion permits is expected to be about 15,000 afy.¹³ Thus, in the first 20 years of OBMP implementation, average annual stormwater recharge will have increased by about 14,200 afy, and supplemental water recharge capacity will have increased by 27,600 afy. And, the IEUA has increased the recharge of recycled water from about 500 afy in 2000 to about 13,000 afy in 2018. The next RMPU must be completed and submitted to the Court by October 2023. **Exhibit 11** shows the recharge basins improvements by recharge master plan effort.

There are four managed recharge mechanisms in the Chino Basin:

Recharge basins. Imported water, stormwater, dry-weather flow, and recycled water are recharged at 17 recharge basins. Watermaster has permits from the State Water Resources Control Board (SWRCB) (which are held in trust for Watermaster Parties). This allows the Parties to divert stormwater and dry-weather flow to the recharge basins for recharge, store it in the Chino Basin, and subsequently recover it for beneficial use.

Aquifer Storage and Recovery (ASR) wells. ASR wells are used to inject treated imported water into the Basin and to pump groundwater. The MVWD owns and operates four ASR wells in the Chino Basin.

In-lieu recharge. In-lieu recharge can occur when a Chino Basin Party with pumping rights in the Chino Basin elects to use supplemental water directly in lieu of pumping some or all its rights in the Chino Basin for the specific purpose of recharging supplemental water.

MS4 facilities. The 2013 RMPU implementation included a process to create and update a database of all known runoff management projects implemented through the Municipal Separate Storm Sewer System (MS4) permits in the Chino Basin. This was done to create the data necessary to evaluate the significance of new stormwater recharge created by MS4 compliance projects. As of FY 2016/2017, a total of 114 MS4 compliance projects were identified as complying with the MS4 permit through infiltration features. These 114 projects have an aggregate drainage area of 1,733 acres.

Table 3.6 below describes the existing recharge capacity in the Chino Basin by source water and recharge mechanism.¹⁴

¹³ WEI (2018). Recharge Master Plan Update. September 2018.

http://www.cbwm.org/docs/engdocs/2018%20RMPU/20180914_2018_RMPU_final.pdf

¹⁴ WEI (2018). Recharge Master Plan Update. September 2018.

http://www.cbwm.org/docs/engdocs/2018%20RMPU/20180914_2018_RMPU_final.pdf

Table 3.6
ESTIMATED RECHARGE CAPACITIES IN THE CHINO BASIN

Source Water	Recharge Mechanism	2018 Conditions	2018 Conditions Plus Current Recommended 2013 RMPU Projects	2018 Conditions Plus Current Recommended 2013 RMPU Projects and Restoration of WFA Capacity ¹⁵
Stormwater	Average Stormwater Recharge in Spreading Basins	10,150	14,950	14,950
	Average Expected Recharge of MS4s	380	380	380
	Subtotal	10,530	15,330	15,330
Supplemental Water	Spreading Capacity for Supplemental Water	56,600	56,600	56,600
	ASR Injection Capacity	5,480	5,480	5,480
	In-Lieu Recharge Capacity	17,700	17,700	40,900
	Subtotal	79,780	79,780	102,980
Total		90,310	95,110	118,310

OBMPU Change: Exhibit 4 shows the implementation actions for PE 2 under the OBMPU, which includes continuing to convene RIPComm, complete the 2023 RMPU and update it no less than every five years thereafter, and implementing recharge projects based on need and available resources. The RMPU process, as mentioned above, is an ongoing requirement of the Peace Agreement, the Peace II Agreement, and the December 2007 Court Order that approved the Peace II Agreement. The next RMPU is due to the Court by October 2023 and must be updated no less frequently than every five years thereafter.

Through the OBMPU Stakeholder process, the Parties expressed interest in maximizing the recharge of recycled, imported, and stormwaters where feasible. Although meeting these objectives is not a requirement for the RMPU, the next (or a future) RMP process could accomplish this by considering projects that will meet other needs of the Parties, such as providing additional recharge capacity for Storage and Recovery Programs and addressing pumping sustainability and land subsidence challenges. There are opportunities and challenges for increasing these efforts in the future:

Stormwater Recharge:

¹⁵ The Water Facilities Authority (WFA) Agua de Lejos Treatment Plant (WFA plant) treats imported water purchased from the IEUA at the WFA plant and delivers it to the cities of Chino, Chino Hills, Ontario, and Upland, and to the MVWD. Each of these WFA member agencies has a contracted share of the plant's total capacity of 81 million gallons per day (mgd) (90,700 afy). The WFA plant's current capacity is less than its rated capacity of 81 mgd (90,700 afy) due to solids handling limitations. According to WFA, the current capacity of the WFA plant is about 40 mgd in the summer months and about 20 mgd in the winter months. Based on the estimated recharge capacities developed in the 2018 Recharge Master Plan, restoring the WFA plant to its rated capacity would increase in-lieu recharge capacity in the Chino Basin by about 23,000 afy.

- The theoretical average annual stormwater discharge available for diversion under the existing water rights permits is about 74,000 afy (ranging from 21,400 to 110,500 afy for the combined permitted diversions) and the annual average stormwater recharge performed pursuant to these permits is expected to be about 14,950 afy. The difference between these two values, about 60,000 afy, is a lost opportunity for stormwater recharge. Additional improvements to existing facilities and operations and/or new facilities are required to achieve the stormwater recharge potential.
- Using criteria developed by the Watermaster Parties, Watermaster and IEUA shall select projects to be implemented only if it is cost effective, for instance a metric could be the melded unit cost of stormwater recharge resulting from the projects is less than the avoided unit cost of purchasing imported water from the Metropolitan Water District of Southern California [Metropolitan]). No new recharge projects were recommended for implementation in the 2018 RMPU. New evaluation criteria that include both cost and reliability of the new recharge will be required to increase stormwater recharge.
- The criteria on how and where to conduct recharge needs to be reviewed and updated if it can be demonstrated that recharge can be used to effectively address existing Basin management challenges that include salinity management, land subsidence, maintaining Hydraulic Control, and pumping sustainability. Historically, Watermaster has attempted to manage the recharge of stormwater and supplemental water to promote the balance of recharge and discharge to, in part, address these challenges. Additional investigation needs to be done to determine if recharge improvements can be made to better address these Basin management challenges. New evaluation and selection criteria will be developed that consider both cost and reliability to increase the stormwater available for recharge.
- New recharge facilities and/or improvements to existing facilities will be needed if Parties or others want to increase supplemental water recharge capacity for Storage and Recovery Programs.

Recycled Water and Imported Water Recharge:

- Recharge of recycled and imported water via recharge basins is limited by competing uses for recharge basins for storm, imported and recycled water recharge and by seasonal storage – recycled and imported water supplies in excess of demands tend to be available in the winter, at the same time the recharge basins are being used for stormwater recharge. Thus, groundwater recharge facilities that increase recycled and imported water recharge and storage capacity, specifically during the wintertime should be evaluated.

The new recharge facilities and/or improvements to existing facilities that may result from the RMPU process as envisioned under the OBMPU are listed below and shown on **Exhibit 12**. The proposed storage facilities would divert surface water to be stored at the proposed facilities. The amount of surface water diverted by the proposed storage and recharge facilities is not presently known, and it would be speculative to estimate at this time. Future surface water diversions to these facilities would depend on future applications to divert surface water to a specific proposed facility and would require a second-tier CEQA evaluation.

CIM Storage Basin:

- Constructing and operating a new surface water storage basin for stormwater and supplemental waters at the CIM, facilities to divert stormwater from Chino Creek to the new storage basin, facilities to convey stormwater and dry-weather flow from the new storage basin to recharge facilities in the northern part of the Basin, and facilities to convey supplemental waters to the storage basin.

Flood MAR Facilities:

- Constructing flood MAR facilities in the northeast part of Basin to recharge supplemental water. This assumes that land in existing agricultural uses can be flooded to achieve managed aquifer recharge. The potential cumulative area of these facilities is about 200 acres, the total agricultural land use area in the northern part of the Chino Basin.

Lower Cucamonga Ponds Storage Basin:

- Constructing and operating a new surface water storage basin at the existing Lower Cucamonga Ponds, facilities to divert stormwater and dry-weather flow from Cucamonga Creek to the new storage basin, and facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the Basin.

Mills Wetlands Conversion to a Storage Basin:

- Constructing and operating a new surface water storage basin at the existing Mills Wetlands, facilities to divert stormwater and dry-weather flow from Cucamonga Creek to the new storage basin, and facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the Basin.

Riverside Basin Conversion to a Storage Basin:

- Constructing and operating a new surface water storage basin at the existing Riverside Basin, facilities to divert stormwater and dry-weather flow from Day Creek to the new storage basin, and facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the Basin.

Vulcan Basin Conversion to a Storage Basin:

- Constructing and operating a new surface water storage basin for stormwater and supplemental waters at the existing Vulcan Basin, facilities to divert stormwater and dry-weather flow from the West Fontana Channel and surrounding urban areas to the new storage basin, facilities to convey stormwater from the new storage basin to recharge facilities in the northern part of the Basin, and facilities to convey supplemental waters to the storage basin.

Jurupa Basin Improvements:

- Constructing improvements at the Jurupa Basin that include grading improvements to enable the diversion and storage of storm and supplemental waters, removing fine-grained material from the Jurupa Basin to improve its infiltration rate and increase recharge capacity, and improvements at the Jurupa pump station to increase the time the pump station can operate at full capacity. The amount of area that may be impacted has not yet been defined.

WFA Plant Improvements:

- Constructing improvements to the WFA plant to remove some or all its solids handling limitations and other improvements to increase its capacity to its original design capacity and thereby increase in-lieu recharge capacity.

MS4 Compliance Projects:

- Collaborating with the MS4 permittees to ensure MS4 compliance projects prioritize recharge. This would result in the construction of new MS4 compliance facilities that increase recharge in the Chino Basin. No estimate of potential area impacts is available.

ASR Wells:

- Constructing up to 66 ASR wells to increase supplemental water recharge capacity by up to about 70,000 afy. In the case that recycled water is injected into the Basin, a subset of these wells would also be injection wells.
 - ASR Wells may be installed in conjunction with the construction of improvements to wastewater treatment plants if recycled water is injected (described in **Subsection 3.6.5.2**).

As shown in **Exhibit 5**, some of these facilities help achieve the objectives of PE 4 by creating additional recharge capacity in MZ-1 that could be used to increase piezometric levels in that area (see **Subsection 3.6.3.4**). The additional recharge capacity created from these facilities can also help achieve the objectives of PE 5 and PE 8/9, because these facilities can be used to recharge supplemental water to improve water supply reliability and/or implement a Storage and Recovery Program. Finally, these facilities will help address pumping sustainability issues in the JCSD and FWC service areas, and Chino-II Desalter wellfield areas.

3.6.3 Program Element 3. Develop and Implement a Water Supply Plan for Impaired Areas

3.6.3.1 Objectives

The 2000 OBMP included PE 3— *Develop and Implement a Water Supply Plan for Impaired Areas*—to maintain and enhance Safe Yield and maximize beneficial uses of groundwater. The OBMP recognized that urban land uses would ultimately replace agricultural land uses, which had been the primary land use in the southern portion of the Basin throughout the 20th century, and that if municipal pumping did not replace agricultural pumping, groundwater levels would rise and discharge to the Santa Ana River. The potential consequences would be the loss of Safe Yield and the outflow of high-TDS and high-nitrate groundwater from the Chino Basin to the Santa Ana River—the latter of which could impair downstream beneficial uses in Orange County.

The OBMP estimated that to maintain the Safe Yield, approximately 40,000 afy of groundwater would need to be produced to replace Agricultural Pool pumping in the southern part of the Basin. The Chino Basin Desalters were identified as the optimal multi-benefit project to replace the expected decrease in agricultural production to maintain or enhance Safe Yield, to pump and treat high-salinity groundwater in support of PE 7, to meet growing municipal demands in support of PE 5, and to protect the beneficial uses of the Santa Ana River. Additionally, PE 6 envisioned that the Chino Basin Desalters could also be used to clean up the volatile organic compound (VOC) plumes that would eventually be intercepted by the Desalter wells. Through the OBMPU process it was determined that the objective of PE 3 remains the same.

3.6.3.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The water-supply plan for impaired areas, as described in the 2000 OBMP PEIR, consisted of two options: an RO only alternative and an RO/IX alternative. Both alternatives involved the construction of two RO regional desalter facilities with their associated wellfields, expansion of the Chino Desalter Number 1, and construction of water transmission pipelines, brine disposal pipelines and pump stations. The RO/IX alternative would also include an IX treatment train. The wellfields would be located north of the Santa Ana River along the southern portion of the Chino Basin to help maintain Safe Yield by reducing losses to the river. The locations of the groundwater treatment plant would be based on the location of the proposed well fields, proposed product

water delivery points and access to the Inland Empire Brine Line for brine disposal. Facility capacities for both RO and RO/IX were based on the assumption that approximately 40,000 afy of poor-quality groundwater would need to be pumped in the southern portion of the Chino Basin in order to maintain Safe Yield value and to prevent approximately 40,000 afy of poor-quality groundwater from discharging into the Santa Ana River. Both facilities would require the installation of approximately 32,000 feet of pipeline ranging in size from 10 to 20 inches in diameter and two pump stations of 200 to 250 HP.

As of January 2020, there are 31 Chino Desalter wells with the capacity to pump about 34 mgd (37,600 afy) of brackish groundwater from the southern portion of the Chino Basin, though not all wells are currently in operation. Pumped groundwater is conveyed to the Chino-I and Chino-II Desalters that treat the groundwater with RO, IX and air strippers. The treated water is then conveyed to the CDA's member agencies. The brine created in the treatment process is discharged to the Inland Empire Brine Line. Over the last five years, total desalter production has ranged from about 28,100 to 30,000 afy, averaging 29,200 afy. The following describes the history of the expansion of the Chino Basin Desalters:

- The Chino-I Desalter, which included 11 production wells, began operating in 2000 with a design capacity of 8 million gallons per day (mgd; about 9,000 afy).
- In 2005, the Chino-I Desalter capacity was expanded to 14 mgd (about 16,000 afy) with the construction of three additional wells.
- The Chino-II Desalter, which included eight production wells, began operating in June 2006 with a design capacity of 15 mgd (about 17,000 afy).
- In 2012, the CDA completed construction of the Chino Creek Well Field (CCWF) in the western portion of the Basin, which added five wells and additional capacity of about 1.3 mgd (1,500 afy) to the Chino-I Desalter; four of these wells began pumping between 2014 and 2016.
- In 2015, two additional Chino-II Desalter wells were constructed, and pumping began in 2018. These two wells, plus one additional well that is planned for construction, are part of the final expansion of the Chino Basin Desalters to meet the 40,000 afy pumping requirement of the OBMP, Peace Agreements, and maximum benefit SNMP (refer to P.34). This final expansion is expected to be completed by 2021.

The construction and operation of the Chino Basin Desalters became a fundamental component of the Chino Basin maximum benefit SNMP developed pursuant to PE 7. Watermaster and the IEUA are jointly responsible for the implementation of the maximum benefit SNMP, which enables the recycled-water reuse and recharge programs in the Chino Basin in support of PEs 2 and 5. The SNMP (refer to P. 34) includes nine "maximum benefit commitments." One commitment is the achievement and attainment of Hydraulic Control to limit groundwater outflow from the Chino-North Groundwater Management Zone (GMZ) to *de minimis* levels to protect downstream beneficial uses. Hydraulic Control is also necessary to maximize the Safe Yield. The operation of the Chino Basin Desalters is necessary to attain Hydraulic Control. Three of the nine maximum benefit commitments are related to the design and construction of the Chino Basin Desalters.

OBMPU Change: No Change. Through the OBMPU process it was determined that no new or upgraded facilities beyond those previously envisioned to achieve PE 3 would be implemented.

3.6.4 Program Element 4. Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1

3.6.4.1 Objectives

The 2000 OBMP included PE 4—*Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1*—to characterize land subsidence spatially and temporarily, identify its causes and, where appropriate, develop and implement a program to manage it. Through the OBMPU process, the objective of PE 4 was refined to: reduce or stop the occurrence of land subsidence and ground fissuring in the Chino Basin or reduce it to tolerable levels. PE 4 achieves this objective by implementing the Watermaster’s Subsidence Management Plan and adapting the plan as warranted by data, analyses, and interpretations.

3.6.4.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The comprehensive groundwater management plan for MZ-1, as described in the 2000 OBMP PEIR, called for the development and implementation of an interim management plan for MZ-1 that would:

- Minimize subsidence and fissuring in the short-term.
- Collect information necessary to understand the extent, rate, and mechanisms of subsidence and fissuring.
- Formulate a management plan to reduce to tolerable levels or abate future subsidence and fissuring.

The interim management plan for MZ-1 included: (1) a voluntary reduction of production in the deep aquifer system in southern MZ-1 for a 5-year period to evaluate its impacts on subsidence; (2) an effort to balance the recharge and discharge in MZ-1, in part, through the physical recharge of 6,500 afy of Supplemental Water in MZ-1; and (3) an aquifer-system and land-subsidence investigation in the southwestern region of MZ-1 to support the development of a long-term management plan for MZ-1 (second and third bullets above). The investigation was titled the *MZ-1 Interim Monitoring Program* (IMP).¹⁶

From 2001 to 2005, Watermaster developed and conducted the IMP under the guidance of the MZ-1 Technical Committee, which consisted of the MZ-1 Parties and their technical consultants. The implementation of the IMP provided enough information for Watermaster to develop “Guidance Criteria” for the MZ-1 Parties that, if followed, would minimize the potential for subsidence and fissuring in the investigation area (Managed Area). The methods, results, and conclusions of the IMP, including the Guidance Criteria, were described in detail in the *MZ-1 Summary Report*.¹⁷ The Guidance Criteria formed the basis for the long-term management plan, documented as the *MZ-1 Subsidence Management Plan* (MZ-1 Plan).¹⁸ To minimize the potential for future subsidence and fissuring in the Managed Area, the MZ-1 Plan recommended that the

¹⁶ Chino Basin Watermaster. (2003). *Optimum Basin Management Program, Management Zone 1 Interim Monitoring Program*. Prepared by Wildermuth Environmental, Inc. January 8, 2003.

¹⁷ Chino Basin Watermaster. (2006). *Optimum Basin Management Program, Management Zone 1 Interim Monitoring Program, MZ-1 Summary Report*. Prepared by Wildermuth Environmental, Inc. February, 2006.
http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20071017_MZ1_Plan%20--%20Appendix_A_MZ1_SummaryReport_20060226.pdf (accessed 07/10/23)

¹⁸ Chino Basin Watermaster. (2007). *Chino Basin Optimum Basin Management Program, Management Zone 1 Subsidence Management Plan*. October, 2007.
http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20071017_MZ1_Plan.pdf (accessed 07/10/23)

MZ-1 Parties manage their groundwater pumping pursuant to the Guidance Criteria. Implementation of the MZ-1 Plan began in 2008. The MZ-1 Plan called for the continuation of monitoring, data analysis, annual reporting, and adjustments to the MZ-1 Plan, as warranted by the data. Additionally, the MZ-1 Plan expanded monitoring of the aquifer-system and land subsidence into other areas of the Chino Basin where the IMP indicated concerns for future subsidence and ground fissuring. These so-called “Areas of Subsidence Concern” are: Central MZ-1, Northwest MZ-1, Northeast Area, and Southeast Area (see **Exhibit 10**).

The MZ-1 Plan stated that if data from existing monitoring efforts in the Areas of Subsidence Concern indicate the potential for adverse impacts due to subsidence, Watermaster would revise the plan to avoid those adverse impacts. This resulted in the development of the *2015 Chino Basin Subsidence Management Plan* (Subsidence Management Plan)¹⁹ and a recommendation to develop a subsidence management plan for Northwest MZ-1. Land subsidence in Northwest MZ-1 was first identified as a concern in 2006 in the MZ-1 Summary Report and again in 2007 in the MZ-1 Plan. Since then, Watermaster has been monitoring vertical ground motion in this area via InSAR and groundwater levels with pressure transducers at selected wells. Of concern is that subsidence across the San Jose Fault in Northwest MZ-1 has occurred in a pattern of concentrated differential subsidence—the same pattern of differential subsidence that occurred in the Managed Area during the time of ground fissuring. Ground fissuring is the main subsidence-related threat to infrastructure. Because of the threat for ground fissuring, Watermaster increased monitoring efforts in Northwest MZ-1 beginning in FY 2012/13 to include ground elevation surveys and EDMs to monitor ground motion and the potential for fissuring.

In 2015, the GLMC developed the *Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area* (Work Plan).²⁰ The Work Plan is an ongoing Watermaster effort and includes a description of a multi-year scope-of-work, a cost estimate, and an implementation schedule. The Work Plan was included in the Subsidence Management Plan as Appendix B. Implementation of the Work Plan began in 2015.

Pursuant to the Subsidence Management Plan, each year, Watermaster has produced the *Annual Report of the Ground-Level Monitoring Committee (GLMC)* that contains the results of ongoing monitoring efforts, interpretations of the data, and recommended adjustments to the Subsidence Management Plan, if any. The annual report includes recommendations for Watermaster’s ground-level monitoring program for the subsequent fiscal year. The Watermaster publishes the annual reports on its website. The most recent annual report was finalized in October 2019.

Although not specifically described in the 2000 OBMP PEIR, Watermaster has exercised best efforts to arrange for the physical recharge of 6,500 afy of Supplemental Water at the MZ-1 spreading facilities. Although not a party to the Peace II Agreement, Watermaster committed to continue the physical recharge of at least 6,500 afy of Supplemental Water as an annual average through the term of the Peace Agreement (2030).

¹⁹ Chino Basin Watermaster. (2015). *Chino Basin Subsidence Management Plan*. July 23, 2015. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20150724%20-%20Chino%20Basin%20Subsidence%20Management%20Plan%202015/FINAL_2015_CBSMP.pdf (accessed 07/10/23)

²⁰ Chino Basin Watermaster. (2015). *Work Plan, Develop a Subsidence-Management Plan for the Northwest MZ-1 Area*. July 23, 2015. http://www.cbwm.org/docs/engdocs/Land%20Subsidence/20150724%20-%20Chino%20Basin%20Subsidence%20Management%20Plan%202015/FINAL_CBSMP_Appendix_B.pdf (accessed 07/10/23)

OBMPU Change: **Exhibit 4** shows the implementation actions for PE 4 under the OBMPU, which include continuing to implement Watermaster's Subsidence Management Plan, and adapt it as necessary, and continuing the physical recharge of at least 6,500 afy of Supplemental Water as an annual average through the term of the Peace Agreement.

The Chino Basin will always be susceptible to the future occurrence of land subsidence and ground fissuring, so Watermaster will continue to implement the Subsidence Management Plan pursuant to PE 4, which includes:

- Conducting the ground-level monitoring program pursuant to the Subsidence Management Plan and the recommendations of the GLMC. The monitoring program includes the monitoring of groundwater pumping, recharge, groundwater levels, aquifer-system deformation, and vertical and horizontal ground motion across the western portion of the Chino Basin. The then-current description of the ground-level monitoring program is always included in each Annual Report of the GLMC [third bullet below].
- Convening the GLMC annually to review and interpret the data from the ground-level monitoring program.
- Preparing annual reports of the GLMC that include recommendations for changes to the monitoring program. The annual report describes recommended activities for the monitoring program for the future fiscal year(s) in the form of a proposed scope-of-work, schedule, and budget. The recommended scope-of-work, schedule, and budget is run through Watermaster's budgeting process for revisions (if needed) and approval. The final scope-of-work, schedule, and budget for the upcoming fiscal year is included in the final annual report.

A key element of the Subsidence Management Plan is the verification of its protective nature against land subsidence and ground fissuring in the Chino Basin. This verification is accomplished through continued monitoring, testing, and reporting by the GLMC, and revision of the Subsidence Management Plan when appropriate. In this sense, the Subsidence Management Plan is adaptive. The GLMC will make these recommendations within its annual reports and prepare a draft revised Subsidence Management Plan that will be run through the Watermaster process for revisions and/or approval. Upon Watermaster Board approval, the revised Subsidence Management Plan will be submitted to the Court.

A potential recommendation of the Subsidence Management Plan for Northwest MZ-1 is conducting wet-water and/or in-lieu recharge methods that will result in a net increase in recharge. Interim work performed in Northwest MZ-1 to support the development of a subsidence management plan for this area²¹ suggests that land subsidence could be reduced or abated if recharge in Northwest MZ-1 is increased by at least 20,000 afy, pumping is decreased by at least 20,000 afy, or some combination of both totaling about 20,000 afy. **Exhibit 13** is a time-series chart of groundwater pumping, wet-water recharge, and land subsidence (represented as negative vertical ground motion) in Northwest MZ-1 from 1978-2019. Recent pumping in Northwest MZ-1 has decreased significantly: 2017-2019 pumping averaged about 12,000 afy compared to about 19,000 afy since the implementation of the OBMP (2001-2016), a reduction of about 7,000 afy. The reduced pumping is mainly due to water quality issues. Additionally, recent wet-water recharge in Northwest MZ-1 has increased: 2017-2019 recharge averaged about 15,000 afy compared to about 9,000 afy since the implementation of the OBMP (2001-2016), an increase of about 6,000 afy. **Exhibit 13** shows that these recent decreases in pumping and

²¹ Chino Basin Watermaster. 2017. *Task 3 and Task 4 of the Work Plan to Develop a Subsidence Management Plan for the Northwest MZ-1 Area: Development and Evaluation of Baseline and Initial Subsidence-Management Alternatives*.

increases in recharge, totaling about 13,000 afy, appear to coincide with reduced rates of land subsidence in Northwest MZ-1. This suggests that reduced pumping and/or increased recharge can abate land subsidence in Northwest MZ-1. If the Subsidence Management Plan for Northwest MZ-1 recommends a combination of reduced pumping and wet-water recharge to abate ongoing land subsidence, the pumpers in this area who elect to reduce pumping in accordance with the plan may have difficulty in fully utilizing their water rights with existing infrastructure.

Under the OBMPU, facilities may be needed to: (1) relocate pumping from Northwest MZ-1 to MZ-2 and/or MZ-3; (2) replace some of their pumping with surface or recycled water as a form of in-lieu recharge; (3) facilitate increased wet-water recharge; or (4) a combination of some or all of the above. The operation of these facilities would result in increased groundwater levels that would impact the state of Hydraulic Control; thus, facilities and operations would be needed to ensure that Hydraulic Control is maintained.

The facilities and/or improvements to existing facilities envisioned under the OBMPU to address land subsidence are listed below and are shown on **Exhibit 14**.

Pumping Well Development:

- Constructing up to 12 wells in MZ-2 and MZ-3 to relocate up to about 25,000 afy of pumping from MZ-1 to MZ-2 and/or MZ3. A total of 2 of the 12 wells have been included under PE4 have been proposed by Cucamonga Valley Water District (CVWD).

Increase WFA Agua de Lejos Treatment Plant Capacity:

- Constructing improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to about 25,000 afy and the increase in use of imported water purchased from Metropolitan by up to about 25,000 afy. Some of the surface water supplied could be obtained through TVMWD and its Miramar treatment plant.²²

ASR Well Development:

- Constructing up to 15 ASR wells in Northwest MZ-1 and Central MZ-1 to increase wet-water recharge capacity in MZ-1 by up to about 25,000 afy. This would require improvements to the WFA Agua de Lejos treatment plant to increase its capacity by up to about 25,000 afy and the increase in use of imported water purchased from Metropolitan by up to about 25,000 afy. Some of the surface water supplied could be obtained through TVMWD and its Miramar treatment plant.²³

Combination Approach:

- Implementing a combination of the facilities and operating concepts to achieve an overall net increase in recharge of 25,000 afy.

Expand Chino Desalter Capacity:

- Expanding the existing Chino Desalter capacity by up to 2,000 afy by adding new wells in the Chino Creek wellfield area and expanding the Chino-I and/or Chino-II treatment capacity (see facilities in **Subsection 3.6.7.2**).

²² Note that this project is also discussed under PE 2.

²³ Some of the new ASR wells that will be constructed for PE 2 can be used for PE 4.

As shown in **Exhibit 5**, some of these facilities help achieve the objectives of PE 8/9, because these facilities that provide additional recharge capacity in MZ-1 and pumping capacity in MZ-2/3 can be used to implement Storage and Recovery programs.

3.6.5 Program Element 5. Develop and Implement Regional Supplemental Water Program

3.6.5.1 Objectives

The 2000 OBMP included PE 5—*Develop and Implement Regional Supplemental Water Program*—to improve regional conveyance and the availability of imported and recycled waters throughout the Basin. Through the OBMPU process it was determined that the objective of PE 5 remains the same.

3.6.5.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The regional supplemental water program, as described in the 2000 OBMP PEIR, consisted of expanding the IEUA's recycled water distribution system for recycled water reuse and importing potable water from the Bunker Hill Basin for direct use through the expansion of the Baseline Feeder.²⁴

Watermaster and the IEUA have aggressively pursued programs to improve water supply reliability through the implementation of PEs 2, 3, and 5. Since 2000, the IEUA has constructed and operated a recycled water conveyance system throughout the Basin, enabling it to provide recycled water to its customer agencies for direct reuse and indirect potable reuse. The IEUA owns and operates four wastewater treatment facilities: RP-1, RP-4, RP-5, and CCWRF. Recycled water produced by these plants is used for direct reuse, groundwater recharge (indirect potable reuse), and discharged to Chino Creek or Cucamonga Creek, which are tributaries to the Santa Ana River. Historically, the IEUA's operating plan has prioritized the use of recycled water as follows: (1) to meet the IEUA's Base Flow Obligation to the Santa Ana River; (2) to meet direct reuse demands for recycled water; and (3) to recharge the remaining recycled water. Without prejudice to potential future use and distribution of recycled water, IEUA has historically produced and provided recycled water for various purposes depending on a review of its annual recycled water demand priorities. Neither the OBMP nor the proposed OBMPU alter existing rights and responsibilities for the use and distribution of recycled water, whatever they may be, nor do they establish any specific priorities or commitments for future use of recycled water. It is assumed that the amount of recycled water available in the Basin will increase in the future based on forecasts for population growth in the Chino Basin. No portion of the OBMPU prevents the future substitution of new sources of supply to meet the beneficial use requirements that currently receive recycled water. **Exhibit 15** shows the location of the IEUA's treatment plants, discharge points to surface water, recharge facilities receiving recycled water, and recycled water distribution pipelines for direct use deliveries.

Although recycled water had been reused since the 1970s, the growth of the IEUA's recycled water reuse programs started in 1997, and in 2005 have been aggressively expanded. When the OBMP was completed in 2000, the IEUA was recharging about 500 afy of recycled water and utilizing about 3,200 afy for non-potable direct uses. The incorporation of Watermaster and the IEUA's maximum benefit SNMP (refer to P.34) into the Basin Plan in 2004 triggered the ability to

²⁴ Note that the Baseline Feeder was not specifically identified as an implementation action in the 2000 OBMP Implementation Plan and has not been implemented.

rapidly increase recycled water reuse. Over the last five years, the annual direct reuse of recycled water ranged from 17,000 afy to 24,600 afy and averaged 20,600 afy. The annual recycled water recharge ranged from 10,800 to about 17,000 afy and averaged 13,000 afy.

The recycled water provided by the IEUA has replaced a like amount of groundwater and imported water that would have otherwise been used for non-potable purposes. Much of the post-2000 increase in supplemental water storage in the Chino Basin is attributable to the increased availability and recharge of recycled water.

OBMPU Change:

Recycled Water Reuse: **Exhibit 4** shows the implementation actions for PE 5 under the OBMPU, which include maximizing recycled water reuse and establishing or expanding future recycled water planning efforts to maximize the reuse of all available sources of recycled water.

The IEUA is continuing to expand its recycled-water distribution system and recharge facilities throughout the Chino Basin for direct non-potable reuses and recharge. Growth is still occurring in the Chino Basin and will result in additional wastewater flows to the IEUA's treatment plants and an increase in recycled water production. The new recycled water will be used to meet part of the demand created by urban growth.

The facilities and/or improvements to existing facilities to maximize recycled water reuse envisioned under the OBMPU are listed below and shown on **Exhibit 16**.

AWPF:

- Constructing an advanced water purification facility.²⁵ The area expected to be disturbed by the construction and operation of the plant is 10-20 acres. The location of the treatment plant is currently unknown and it could be co-located at an existing IEUA WRP. The OBMPU assumes that an AWPf may be considered due to the interest by the City of Ontario in developing an up to 9,000 afy AWPf. This facility is anticipated to obtain recycled water for advanced treatment from IEUA's regional system. Of the approximately up to 10,200 afy that would be processed by the AWPf, up to 9,000 afy of advanced treated water will be recharged to the Chino Basin annually and an estimated up to 1,200 afy will be transported as reject water (brine) that will need to be disposed of through the Non-Reclaimable Waste System (NRWS). The AWPf project proposes the following:
 - Up to 10 injection wells
 - Up to 9 extraction wells
 - Up to 2 monitoring wells
 - Up to 10 miles or 52,800 LF of various types of pipeline including recycled water pipeline, brine disposal pipeline, and potable water conveyance pipeline
 - Up to 2 booster pump stations of unknown sizes and capacities

Expand Recycled Water Distribution:

- Expanding the recycled water distribution systems for indirect potable reuse by constructing up to 152,800 LF of pipelines of various diameters in the shaded regions shown on **Exhibit 16**.
 - JCSD has proposed a recycled water system expansion project. This project would expand the recycled water system by installing new pipeline to convey recycled

²⁵ Advanced water treatment refers to the following waste water treatment processes: RO, membrane filtration, or functionally equivalent processes, and potentially ultraviolet (UV) disinfection.

water to non-potable and irrigation customers to reduce the amount of groundwater used from the Chino Basin. This project would include pipeline to connect to additional sources, including but not limited to Riverside's Regional Water Quality Control Plant and non-potable wells. This project proposes the following:

- Up to 10 miles or 52,800 LF of additional recycled water pipeline.
- Up to 5 booster stations to serve customers in multiple water pressure zones, of which the sizing and capacities are presently unknown.
- Water supply from the Riverside Regional Water Quality Control Plant of up to 5,000 afy.

Direct Potable Reuse:

- Conducting DPR that will require the construction of the advanced water treatment plant described in the first bullet and conveyance facilities to move the product water to the potable system, preferably using existing potable water line(s) within the general area.

Acquire Surplus Recycled Water Supplies:

- Acquiring surplus recycled water supplies from other entities and constructing conveyance facilities to distribute the water to the Chino Basin. IEUA has evaluated one specific program for transfer of recycled water from Pomona to the Montclair Basins area. Additionally, the Western Riverside County Regional Wastewater Authority (WRCRWA) parties have begun evaluating plans for a recycled water program that could potentially include recycled water reuse in the Chino Basin.

As shown in **Exhibit 5**, some of these facilities help achieve the objectives of PE 7 by removing salts from the Basin through advanced treatment of recycled water.

Water Reliability: **Exhibit 4** shows the implementation actions for PE 5 under the OBMPU, which include maximizing recycled water reuse and establishing or expanding future integrated water resources planning efforts to address water supply reliability for all Watermaster Parties.

As described above (see **Table 3.1**), the total water demand of the Chino Basin Parties is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand by the Appropriative Pool Parties drives the increase in aggregate water demand as some Appropriative Pool Parties are projected to serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses. A similar challenge was observed during the development of PEs 3 and 5 in the 2000 OBMP. Each of the water sources available to the Chino Basin Parties listed has its limitations:

- The ability to produce groundwater from the Chino Basin is limited by current Basin management challenges, such as ongoing land subsidence in MZ-1 and parts of MZ-2, pumping sustainability issues in the JCSD and CDA well field areas, and water quality.
- The challenges to the use of imported water include the reliability of the individual imported sources and infrastructure required to convey it to the Chino Basin and the local capacity to treat it if required for municipal use
- The reliability of non-Chino Basin groundwater supplies depends on water quality, water rights, and infrastructure to convey the supplies to a Party's water system.
- The reliability of local surface water supplies depends on the hydrologic characteristics of the individual supplies, water quality, water rights, and infrastructure to convey it from points of diversion to a Party's water system.

- The challenges to maximizing the reuse of recycled water include the timing of recycled water demands, recycled water availability, and complying with the maximum benefit SNMP and water quality regulations.

In addition to the challenges to specific water sources, climate change is expected to result in higher temperatures, longer dry periods, and shorter more intense wet periods, which is expected to affect the availability and management of all water supply sources. For example, shorter more intense precipitation periods are expected to result in reduced recharge, and longer dry periods are expected to result in reduced imported water supplies (as occurred with State Water Project supplies in the recent drought from 2013 to 2016). And, many of the challenges are interrelated and compounding. For example, the reliability of imported water (and other non-groundwater supplies) not only affects the imported water supply but also the groundwater supplies that are dependent on imported water for blending and replenishment.

The facilities and/or improvements to existing facilities to improve water reliability envisioned under the OBMPU are listed below and shown on **Exhibit 17**.

Conveyance Facilities:

- Constructing conveyance facilities to enable the distribution of future imported water supplies. The amount of new pipeline needed has not yet been determined.

East/West Regional Pipeline:

- Constructing an east-to-west 75,000-lineal foot regional pipeline across the northern part of the Chino Basin to enable the efficient conveyance and distribution of Basin waters to Chino Basin water users; and/or the construction of improvements to existing conveyance facilities to accomplish the same.

North/South Regional Pipeline:

- Constructing a north-to-south 45,000-lineal foot regional pipeline across the eastern part of the Chino Basin to enable the efficient conveyance and distribution of Basin waters to Chino Basin water users; and/or the construction of improvements to existing conveyance facilities to accomplish the same

As shown in **Exhibit 5**, the new supplemental supplies and facilities contribute to achieving the objectives of PE 8/9.

3.6.6 Program Element 6. Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management

3.6.6.1 Objectives

The 2000 OBMP included PE 6—*Develop and Implement Cooperative Programs with the Regional Board and other Agencies to Improve Basin Management*—to assess water quality trends in the Basin, to evaluate the impact of OBMP implementation on water quality, to determine whether point and non-point contamination sources are being addressed by water quality regulators, and to collaborate with water quality regulators to identify and facilitate the cleanup of soil and groundwater contamination. Through the OBMPU process, the objective of PE 6 was refined to: to perform routine and coordinated water quality monitoring to characterize water quality in the Chino Basin so that there is adequate information to ensure that contamination sources are being addressed by water quality regulators and to help address compliance with

new and increasingly stringent drinking water regulations for emerging contaminants established by the DDW.

3.6.6.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The cooperative programs to improve Basin management, as described in the 2000 OBMP PEIR, consisted of working cooperatively with the Regional Board and other agencies to identify water quality anomalies through monitoring, assist in determining sources of the water quality anomalies, and establish priorities for clean-up.

Through its own monitoring at private wells and dedicated monitoring wells and the monitoring efforts of others, Watermaster reports on water quality trends and findings in several reports, including the State of the Basin Reports, which are prepared and submitted to the Court every two years.

In 2003, the Watermaster convened a Water Quality Committee to coordinate many of the activities performed under PE 6. The Committee met intermittently through 2010. The main activities of the Water Quality Committee included investigations to characterize and address point and non-point sources of groundwater contamination in the Chino Basin and collaboration with the Regional Board in its efforts to facilitate the cleanup of groundwater contamination. Some of the significant groundwater quality investigations performed under the guidance of the committee included: the characterization of groundwater contamination in MZ-3 near the former Kaiser Steel Mill and Alumax facilities; tracking studies on the source and extent of the Chino Airport plume; identification of sources and responsible parties for the South Archibald plume; and the identification of the sources of legacy perchlorate contamination in groundwater throughout the Basin. The investigations were coordinated through the Water Quality Committee for the Chino Airport and South Archibald plumes and contributed to the definitive identification of responsible parties and the issuance of cleanup and abatement orders by the Regional Board.

Since 2010, Watermaster has continued to perform monitoring for contaminants related to point-source and non-point source contamination, to assist the Regional Board with the investigation and regulation of point source contaminant sites in the Chino Basin, and to prepare status reports on the monitoring and remediation of point-source contaminant sites in the Basin. Periodic status reports have been prepared for: the Chino Airport and South Archibald plumes²⁶ and the General Electric (GE) Test Cell plume, the GE Flatiron plume, the former Kaiser Steel Mill Facility plume, the CIM plume, the Stringfellow plume, and the Milliken Landfill plume. Updated delineations of the spatial extent of the plumes in the Chino Basin are prepared every two years by Watermaster and are included in the plume status reports and biennial State of the Basin Reports.

Currently, the responsible parties for the Chino Airport plume and South Archibald plume are initiating remedial actions that include the use of the Chino Basin Desalters described in PE 3 (see **Section 3.6.1.3**) for pumping and treating the contaminated groundwater associated with these plumes. This use of the Chino Basin Desalters as a mutually beneficial project was recognized in the 2000 OBMP Implementation Plan as a potential management strategy and provides cost sharing benefits to all involved parties. Additionally, the CDA and IEUA have acquired over \$85 million in federal and state grant funds for the Chino Basin Desalter Phase III

²⁶ Status reports for the Chino Airport and South Archibald plumes were prepared monthly in 2013; quarterly from 2014-2017; and semi-annually effective in 2018. Status reports for the other plumes and sites are prepared annually effective 2018.

expansion project that is planned to be used for the remediation of the Chino Airport and South Archibald plumes.

OBMPU Change: Exhibit 4 shows the implementation actions for PE 6 under the 2023 OBMP which include re-convening the water quality committee, developing and implementing an initial emerging contaminant monitoring plan, preparing a water quality assessment of the Chino Basin to evaluate the need for a *Groundwater Quality Management Plan*, and preparing a long-term emerging contaminant monitoring plan.

Pursuant to the PE 6 implementation plan, Watermaster will continue to perform the following to ensure that point-source contamination is being adequately addressed: monitor water quality at monitoring wells and private wells within the Basin and collect data from others to support the quantification of point-source contaminant plumes; prepare updated delineations of the plume extents for the biennial State of the Basin Reports; track and report on the status of plumes and remediation in the recurrent plume status reports; and other ad-hoc investigations needed to support the Regional Board in their efforts to address groundwater contamination. Watermaster will continue to support the Regional Board and other parties to identify and implement mutually beneficial projects for addressing groundwater contamination cleanup and identify funding opportunities to help pay for the cleanup efforts. Watermaster will continue to characterize and report on water-quality in the biennial State of the Basin Reports using data collected for the PE 1 Groundwater Quality Monitoring Program. Watermaster will also develop a *Groundwater Quality Management Plan* as a proactive and Basin-wide approach to address emerging contaminants to prepare the Parties for addressing compliance with new and increasingly stringent drinking water regulations, defined by the DDW.

Exhibits 18 through 21 show the most current characterization of regulated drinking water contaminants in the Chino Basin. **Exhibit 18** shows the locations of active municipal supply wells and symbolizes them based on the number of regulated drinking water contaminants that have been detected in exceedance of their respective primary MCLs. Of the 141 recently active municipal supply wells, 45 have at least one drinking water contaminant, 17 wells have two contaminants, 14 have three contaminants, five have four contaminants, and five have five contaminants. The wells with regulated drinking water contaminants are primarily located in the southern (south of the 60 freeway) and western (west of Euclid Avenue) areas of the Basin. **Exhibits 19 through 21** show the spatial distribution of the maximum observed nitrate, 1,2,3-TCP, and perchlorate concentrations – the three most prevalent contaminants in the Chino Basin – at all wells for the five-year period of 2014 to 2018.

Several of the drinking water contaminants found in the Chino Basin are associated with known point-source contaminant discharges to groundwater. Characterizing and understanding point-sources contaminant sites are critical to the overall management of groundwater quality to ensure that Chino Basin groundwater remains a sustainable resource. Watermaster closely monitors the status, decisions, cleanup activities, and monitoring data pertaining to point-source contamination within the Chino Basin. The following is a list of the regulatory and voluntary point-source contaminant sites in the Chino Basin that are tracked by Watermaster, the locations of which are shown in **Exhibit 22**.

Table 3.7
POINT-SOURCE SITES TRACKED BY WATERMASTER

Site Name	Constituents of Concern	Order
Alumax Aluminum Recycling Facility	TDS, sulfate, nitrate, chloride	Regional Board Cleanup and Abatement Order 99-38
Alger Manufacturing Co	volatile organic chemicals (VOCs)	Voluntary Cleanup and Monitoring
Chino Airport	VOCs	Regional Board Cleanup and Abatement Orders 90-134, R8-2008-0064, and R8-2017-0011
California Institution for Men	VOCs	Voluntary Cleanup and Monitoring (No Further Action status, as of 2/17/2009)
GE Flatiron Facility	VOCs and hexavalent chromium	Voluntary Cleanup and Monitoring
GE Test Cell Facility	VOCs	Department of Toxic Substances Control (DTSC) Consent Order Docket No. 88/89-009CO. Regional Board Status of Open-Verification Monitoring
Former Kaiser Steel Mill	TDS, total organic carbon (TOC), VOCs	Regional Board Order No. 91-40 Closed. Kaiser granted capacity in the Chino II Desalter to remediate
Former Kaiser Steel Mill – CCG Property	chromium, hexavalent chromium, other metals, VOCs	DTSC Consent Order 00/01-001
Milliken Sanitary Landfill	VOCs	Regional Board Order No. 81-003
Upland Sanitary Landfill	VOCs	Regional Board Order No 98-99-07
South Archibald Plume	VOCs	Stipulated Settlement and Cleanup and Abatement Order No. R8-2016-0016 to a group of eight responsible parties
Stringfellow Site National Priorities List (NPL) Superfund Site	VOCs, perchlorate, N-nitrosodimethylamine (NDMA), trace metals	United States Environmental Protection Agency (USEPA) Records of Decision (RODs): R09-83/005, R09-84/007, R09-87/016, and R09-90/048.

Finally, tracking emerging contaminants that are being considered for regulation and performing monitoring to characterize their occurrence in the Chino Basin will help to identify and plan for optimal solutions to manage groundwater quality for drinking water supply. **Exhibit 23** shows the occurrence of two emerging contaminants that may be regulated in the future – the per-and polyfluoroalkyl substances (PFAS) compounds — perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) — in groundwater and some blending sources for the recycled water recharge in the Chino Basin as of March 2019, based on all monitoring performed since 1998. The exhibit shows that the majority of wells in the Chino Basin have not been sampled for PFOA and/or PFOS. The 30 wells in the Chino Basin that have been sampled for PFOA and PFOS were tested using the laboratory detection limits four and eight times higher than the current notification levels (NLs) for these emerging contaminants. Monitoring of recycled water recharge blending sources shows that many of the sources sampled have detectable concentrations of PFOA and PFOS, and many are above the NLs. The EPA and the DDW have both indicated that they are moving forward with the process to adopt MCLs for PFOA and PFOS in the near future. The occurrence of PFOA and PFOS in Chino Basin groundwater as of March 2019 is not well characterized at concentrations equivalent to or below the current NLs, and there are recharge water sources with concentrations of PFOA and PFOS above the NLs.

The facilities and/or improvements to that may be implemented based on the recommendations of the *Groundwater Quality Management Plan* to address the contaminants described herein and other contaminants are listed below.

Groundwater Treatment Facilities at or near Well Sites:

- Constructing up to 20 water treatment facilities at well sites or at sites near to wells to treat groundwater to meet drinking water standards for local use, including one or more to address perchlorate and PFAS in MZ-1.

Regional Groundwater Treatment Facilities:

- Constructing regional water treatment facilities taking groundwater from multiple wells to treat groundwater to meet drinking water standards for local use and or export.

Improve Existing Groundwater Treatment Facilities

- Constructing improvements at existing treatment facilities to treat contaminated groundwater to drinking water standards for local use.

Conveyance Facilities:

- Constructing conveyance facilities to convey the untreated groundwater to the treatment facilities and to convey treated water from the treatment facilities to water users.

3.6.7 Program Element 7. Develop and Implement Salt Management Plan

3.6.7.1 Objectives

The 2000 OBMP included PE 7— *Develop and Implement Salt Management Plan* — to characterize current and future salt and nutrient conditions in the Basin and to subsequently develop and implement a plan to manage them. Such a management strategy was necessary to address historical salt and nutrient accumulation from agricultural operations and to support the aggressive expansion of recycled water recharge and reuse envisioned in PEs 2 and 5. Through the OBMPU process, the objective of PE 7 was refined to: implement, and periodically update, the maximum benefit SNMP. The maximum benefit SNMP is a Regional-Board-approved management program incorporated into the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) to monitor, characterize, and address current and future salt and nutrient conditions in the Chino Basin. The maximum benefit SNMP enables the implementation of the recycled water recharge program in PE 2 and the direct reuse of recycled water in PE 5.

3.6.7.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The maximum benefit SNMP, as described in the 2000 OBMP PEIR, consisted of computing a salt budget for existing conditions as the baseline, developing alternatives to reflect the OBMP Implementation, and computing the salt budget for these alternatives to ensure that Watermaster reduced the salt loading then projected to occur in the Chino Basin.

In 2002, recognizing that implementing the recycled water reuse program would require large-scale treatment and mitigation of salt loading under the then-current antidegradation objectives for TDS and nitrate defined in the Basin Plan, Watermaster and the IEUA petitioned the Regional Board to establish a maximum benefit-based SNMP that involved: (1) defining a new groundwater quality management zone that encompasses the northern parts of MZ-1, MZ-2 and MZ-3 called

the Chino-North GMZ; (2) establishing TDS and nitrate objectives for the Chino-North GMZ²⁷ to numerically higher values than established for MZ-1, MZ-2 and MZ-3 to enable maximization of recycled water reuse; and (3) committing to a program of salt and nutrient management activities and projects ("maximum benefit commitments") that ensure the protection of beneficial uses of the Chino-North GMZ and downgradient waters (the Santa Ana River and the Orange County GMZ). The technical work performed to support the maximum benefit SNMP proposal included the development and use of an analytical salt budget tool to project future TDS and nitrate concentrations in the Chino-North GMZ with and without the maximum benefit SNMP. The maximum benefit SNMP was incorporated into the Basin Plan by the Regional Board in January 2004.

Implementation of the maximum benefit SNMP is a regulatory requirement of the Basin Plan. The requirement is also incorporated into Watermaster and the IEUA's recycled water recharge program permit (R8-2007-0039) and the IEUA's recycled water discharge and direct reuse permit (R8-2015-0021; NPDES No. CA 8000409). There are nine maximum benefit commitments included in the Basin Plan and recycled water permits:

1. The development and implementation of a surface-water monitoring program
2. The development and implementation of a groundwater monitoring program
3. The expansion of the Chino-I Desalter to 10 mgd and the construction of the Chino-II Desalter with a design capacity of 10 mgd
4. The additional expansion of desalter capacity to a total capacity of 40 mgd pursuant to the OBMP and the Peace Agreement
5. The construction of the recharge facilities included in the Chino Basin Facilities Improvement Program
6. The management of recycled water quality to ensure that the IEUA agency-wide, 12-month running average wastewater effluent quality does not exceed 550 milligrams per liter (mg/l) for TDS and 8 mg/l for total inorganic nitrogen (TIN)
7. The management of the Basin-wide, volume-weighted TDS and nitrate concentrations of artificial recycled, storm, and imported waters to concentrations that are less than or equal to the maximum benefit objectives as a five-year rolling average
8. The achievement and maintenance of the Hydraulic Control of groundwater outflow from the Chino Basin, specifically from the Chino-North GMZ, to protect the water quality of the Santa Ana River and downstream beneficial uses
9. The triennial recalculation of ambient TDS and nitrate concentrations of the Chino Basin GMZs

These commitments are all activities that were planned to be implemented in the 2000 OBMP through implementation actions within PEs 1, 2, 3, 5, and 7.

Watermaster and the IEUA are also required to prepare an annual report to the Regional Board on the status of implementation of the maximum benefit commitments, including reporting of annual data collected through the monitoring program and assessments of compliance with the groundwater and recycled water-quality limits defined in the SNMP. If the maximum benefit commitments are not implemented to the Regional Board's satisfaction, the antidegradation-based objectives would apply for regulatory purposes. The application of the antidegradation objectives would result in a finding of no assimilative capacity for TDS and nitrate in the Chino-North GMZ, and the Regional Board would require mitigation for all recycled water discharges to Chino-North that exceeded the antidegradation objectives retroactively to January 1, 2004. The

²⁷ The Chino-North GMZ has a maximum-benefit TDS objective of 420 mg/l and is a combination of the Chino-1, Chino-2, and Chino-3 antidegradation GMZs that have lower TDS objectives, ranging from 250 to 280 mg/l.

retroactive mitigation for past discharges would be required to be completed within a ten-year period, following the Regional Board's finding that the maximum benefit commitments were not met.

Watermaster has prepared and submitted annual reports to the Regional Board every year since 2005. As of the most recent annual report for CY 2018, Watermaster and the IEUA remain in compliance with all requirements of the maximum benefit commitments.²⁸

OBMPU Change: Exhibit 4 shows the implementation actions for PE 7 under the OBMPU, which include: (1) completing the 2023 update of TDS and nitrate projections to evaluate compliance with maximum benefit SNMP and, if necessary, based on the outcome, preparing a plan and schedule to implement a salt offset compliance strategy;²⁹ (2) continuing to implement the maximum-benefit SNMP pursuant to the Basin Plan (see list below); and (3) starting in 2025, and every five years thereafter, updating water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan.

Compliance with the maximum benefit commitments is an ongoing requirement of the Basin Plan. The ongoing actions to implement the maximum benefit SNMP as currently defined in the Basin Plan, and thus PE 7, will include:

- Implementing monitoring program and reporting requirements
- Maintaining Hydraulic Control through operation of the Chino Basin Desalters and other means, as necessary
- Increasing and maintaining desalter pumping at 40,000 afy
- Continuing storm and imported water recharge program to comply with recycled water recharge dilution requirements
- Complying with recycled water TDS and TIN limitations
- Computing ambient water quality every three years
- Constructing treatment and/or salt offset facilities if one or more of the compliance limits are exceeded.

There are three water-quality limitations and associated compliance metrics established in the maximum benefit SNMP. When these metrics are exceeded, Watermaster and the IEUA must develop a plan and schedule to achieve compliance. The limitations, compliance metrics, and compliance actions are summarized in **Exhibit 24**.

The management actions for achieving compliance with the metrics once the action level is reached could include, but are not limited to: desalting recycled water to reduce TDS concentrations; increasing the recharge of low-TDS supply sources (storm or imported waters); and additional desalting of high-TDS groundwater as a salt offset or combination of the above.

With the exception of the ambient nitrate concentration of the Chino-North GMZ, which has exceeded the objective of 5.0 mg/l since it was established in 2004, none of the other TDS and nitrate limitations have been exceeded. That said, the ambient TDS and nitrate concentrations in the Chino-North GMZ continue to increase due to legacy agricultural activities and current

²⁸ WEI. (2019). *Optimum Basin Management Program Chino Basin Maximum Benefit Annual Report 2018*. April 2019.

²⁹ The management actions for achieving compliance with the metrics once they are exceeded could include, but are not limited to: desalting recycled water to reduce TDS concentrations; increasing the recharge of low-TDS supply sources (storm or imported waters); or additional desalting of high-TDS groundwater as a salt offset. It could also include: new regulatory compliance metric based on a longer-term averaging period for recycled water TDS

irrigation practices regardless of water source. The current ambient TDS and nitrate concentrations are 360 and 10.3 mg/l, respectively. Based on the rate of increase of the ambient TDS concentration since 1997, which has been about three mg/l per year, the maximum benefit objective of 420 mg/l is not expected to be exceeded until about 2035.

More recently, the TDS concentration of recycled water has approached the compliance metric defined in commitment number 6. During the 2012 to 2016 drought, the 12-month running-average IEUA agency-wide TDS concentration in recycled water approached the 545 mg/l action limit that would require the IEUA and Watermaster to submit a water-quality improvement plan and schedule. In analyzing the available data, the IEUA determined that the primary drivers for the increasing recycled water TDS concentration were the increase in the TDS concentration of the water supplies used by its customer agencies and an increase of the TDS waste increment³⁰ due to indoor water conservation. Similarly, drought conditions also threaten the ability to comply with the recycled water recharge dilution requirements. During drought conditions there is: a reduction in the amount of high-quality stormwater recharge; limited or no availability of imported water for recharge, an increase in the TDS concentrations of imported water; and a concomitant increase in the TDS concentrations of the recycled water. Not only are the two primary sources of low-TDS recharge water less available during drought periods, but the source water quality of municipal water supplies is also higher in TDS due to increases in imported water TDS and indoor water conservation practices. It is expected that future droughts, the duration and frequency of which could be exacerbated by climate change, could potentially threaten compliance with the existing permit limits.

Although the 12-month running-average IEUA agency-wide TDS concentration declined from the 2015 peak before reaching the 545 mg/l action limit, it was an important indicator that the TDS concentration of recycled water is likely to approach or exceed the recycled water action limit during the next prolonged dry period and trigger the planning for recycled water quality improvements. In May 2017, recognizing the potential cost of implementing recycled water quality improvements for what might be only short-term exceedances of the action limit, Watermaster and the IEUA petitioned the Regional Board to consider updating the maximum benefit SNMP to incorporate a revised compliance metric for recycled water TDS and nitrate specifically to allow a longer-term averaging period. The Regional Board agreed that an evaluation of the recycled water compliance metric is warranted and directed Watermaster and the IEUA to develop a technical scope of work to demonstrate the potential impacts of the revised compliance metric.

The primary objectives of the technical work to support the maximum benefit SNMP and permit updates are: to develop and use an updated groundwater solute-transport model to evaluate the TDS and nitrate concentrations of the Chino Basin (e.g., a new salt-budget tool); to define alternative salinity management scenarios; and to project the future TDS and nitrate concentrations in the Chino Basin for each scenario. The results will be used to work with the Regional Board to develop a regulatory compliance strategy that potentially includes a new compliance metric based on a longer-term averaging period for recycled water TDS, contingent on the ongoing modeling and analysis efforts. The regulatory compliance strategy can also address any projected challenges in complying with the recycled water dilution requirements. The

³⁰ The TDS concentration of wastewater that is treated at a given reclamation plant is higher than the source water TDS concentration served in the sewer shed tributary to the reclamation plant. The TDS "waste increment" is the increase in the TDS concentration, measured in mg/l, that occurs due to indoor water use activities (showering, toilet flushing, laundry, etc.). Indoor water conservation measures that reduce indoor water use volumes can increase the TDS waste increment because the same mass of TDS additions from the indoor activities are being disposed of with a smaller volume of water.

work began in September 2017 and was adopted as Resolution R8-2021-0025 in December of 2021.³¹

The Regional Board has indicated that in accepting any proposal to modify the recycled water compliance metrics, it will require Watermaster and the IEUA to add a new maximum benefit commitment to the Basin Plan that involves updating the TDS and nitrate projections every five years. Thus, proactive planning to achieve compliance is a required ongoing activity under PE 7 and the maximum benefit SNMP.

If compliance with the maximum benefit limitations were to become an issue, and/or if changes in Basin management and operation as described herein impact the ability to maintain Hydraulic Control, the facilities and/or improvements to that may need to be implemented are listed below and shown on **Exhibit 25**.

Upgrade Existing Recycled Water Treatment Plant(s):

- Constructing a new treatment train at one or more IEUA recycled water treatment plants (RP-1, RP-4, RP-5, CCWRF) to reduce the TDS concentration of recycled water to levels that ensure compliance with IEUA and Watermaster's recycled water permits. The area disturbed during construction of the new treatment train capacity expansion would be limited to the disturbed areas at IEUA's existing recycled water treatment plants.

AWPF:

- Constructing an AWPF (see **Section 3.6.5.2**).

Expand Chino Desalters:

- Expanding the existing Chino Desalter capacity by up to 6,000 afy by adding new wells and either expanding the Chino-I and/or Chino-II treatment capacity or constructing a new treatment facility and product water conveyance facilities.
 - The area disturbed during construction of the treatment plant capacity expansion would be limited to the disturbed areas at the existing Chino Desalter treatment plant sites.
 - Developing 6,000 afy of new groundwater supply

Well Development:

- Constructing up to 8 wells in the existing desalter well field areas to increase pumping up to 6,000 afy to maintain Hydraulic Control and to mitigate reductions in net recharge and Safe Yield caused by land subsidence management and Storage and Recovery Programs. Well depths could range from 250 to 1,000 feet. The average area of disturbance of a well site is anticipated to be half an acre or less.

Acquire Existing Wells:

- Acquiring up to 5 existing wells in in the Chino Creek well field area that, in aggregate, can pump up to 2,000 afy to maintain Hydraulic Control.

³¹ Santa Ana RWQCB, 2021. Basin Plan Amendment to Revise and Update the Total Dissolved Solids and Nitrogen Management Program (TDS/N Management Program).
https://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2021/r8-2021-0025.pdf (accessed 09/11/23)

Construct New and Acquire Existing Wells:

- Combination of constructing new and acquiring existing wells up to a pumping capacity of 6,000 afy to maintain Hydraulic Control and to mitigate reductions in net recharge and Safe Yield caused by land subsidence management and Storage and Recovery Programs.

Brine Management Facilities:

- Constructing brine management facilities.

Combination Approach:

- Construct a new treatment plant, new wells, and new conveyance facilities to accomplish the same effect as described above to expand the existing Chino Desalter system capacity by up to 6,000 afy.³²

3.6.8 Program Element 8. Develop and Implement Groundwater Storage Program and Program Element 9. Develop and Implement Conjunctive Use Program

3.6.8.1 Objectives

The objectives of PE 8 are: (1) to develop and implement a storage management plan that prevents overdraft, protects water quality, and ensures equity among the Parties; and (2) to periodically recalculate Safe Yield. The objective of PE 9 is to develop Storage and Recovery Programs that benefit all Parties in the Basin and ensure that Basin waters and storage capacity are put to maximum beneficial use without causing MPI to any producer or the Basin. Through the OBMPU process, the objectives of PEs 8 and 9 have been refined to:

- PE 8: Implement, and periodically update, a storage management plan that: (1) is based on the most current information and knowledge of the Basin; (2) prevent unauthorized overdraft; and (3) prioritize the use of storage space to meet the needs and requirements of the lands overlying the Chino Basin and of the Parties over the use of storage space to store water for export.
- PE 9: Support the development and implementation of Storage and Recovery Programs in the Chino Basin that provide defined benefits to the Parties and the Basin.

3.6.8.2 OBMPU Changes to the 2000 OBMP Project Description and Implementation Progress

The groundwater storage management program described in the 2000 OBMP PEIR considered, four potential methodologies for setting storage limits that included: (1) deducting rising water losses from planned storage for all local storage accounts and for the storage accounts of non-Judgment Parties; (2) establishing arbitrary storage limits, such as a multiple of the Safe Yield; (3) limiting storage based on the time that water is in storage, such as not being able to store water for more than 10 years; and (4) limiting storage based on total storage and the time that water is in storage. Under all methodologies, the Parties would sell their current year underproduction to Watermaster or other parties to the Judgment each year if their local storage accounts are full, and the water would then be used to meet Replenishment Obligations. The conjunctive use programs, as described in the 2000 OBMP PEIR, consisted of: (1) completing the existing short-term conjunctive-use project; (2) seasonal peaking program for in-Basin use and dry-year yield program to reduce the demand on various water supply entities to 10 percent

³² Same as footnote above (footnote 31).

of normal summer demand (requiring 150,000 af of storage); (3) dry-year yield export program; and (4) seasonal peaking export program.

Watermaster has developed rules and regulations, standard storage agreements, and related forms pursuant to the Judgment and Peace Agreement. There are three types of storage agreements that result in five types of storage accounts: Excess Carryover, Local Supplemental-Recycled, Local Supplemental-Imported, Pre-2000 Quantified Supplemental, and Storage and Recovery. An Excess Carryover account includes a Party's unproduced rights in the Safe Yield (Safe Yield for Overlying Non-Agricultural Pool Parties and Operating Safe Yield for Appropriative Pool Parties) and Basin Water acquired from other Parties. A Local Supplemental Water account includes imported and recycled water that is recharged by a Party and similar water acquired from other Parties. A Storage and Recovery account includes Supplemental Water and is intended to produce a "broad and mutual benefit to the Parties to the Judgment" (§5.2(c)(iv)(b) of the Peace Agreement). Watermaster tracks the puts, takes, losses, and end of year storage totals for all of these storage accounts, and reports on this accounting in the annual assessment process. The losses assessed by Watermaster are based on the amount of water in managed storage (excluding Carryover), and they offset the increase in groundwater discharge to the Santa Ana River from the Chino Basin attributable to managed storage (excluding Carryover). Watermaster also assesses losses due to evaporation on the puts when water is recharged in spreading basins. In evaluating applications for storage agreements, Watermaster must conduct an investigation to determine if the water stored and recovered under a proposed storage agreement has the potential to cause MPI to a Party or the Basin. If Watermaster determines that implementation of the proposed storage agreement has the potential to cause MPI, the applicant must revise its application and demonstrate that there will be no MPI, or Watermaster must impose conditions in the storage agreement to ensure there is no MPI. Watermaster cannot approve a storage agreement that has the potential to cause MPI.

The Parties, amongst themselves, are actively involved in water transfers of annual unproduced rights in the Safe Yield and water in their storage accounts. Watermaster has an application and review process for transfers that is similar to the storage agreement application process. Transfers are one way that the Parties recover water held in storage accounts.

A final SSC of 500,000 af was established in the 2000 OBMP Implementation Plan. The water occupying the SSC includes Carryover, and water stored in Excess Carryover and Local Supplemental Storage accounts. Water stored for Storage and Recovery Programs also occupies space in the SSC. Water in Carryover, Excess Carryover, local supplemental, and Storage and Recovery accounts are referred to collectively as "managed storage."

Watermaster keeps a record of the puts, takes, losses, and end of year storage totals for all of these storage accounts, and reports on this accounting in the annual assessment process. Starting in 2005, pursuant to the Peace Agreement and OBMP Implementation Plan, Watermaster began assessing losses in stored water at a rate of two percent per year. In February 2016, Watermaster changed the loss rate to 0.07 percent per year, based on the estimated groundwater discharge from the Chino-North GMZ to the Santa Ana River (a finding of the Safe Yield recalculation).

The only active Storage and Recovery Program in the Basin is the Metropolitan Dry-Year Yield Program (DYYP). The DYYP can store up to 100,000 af with maximum puts of 25,000 afy and maximum takes of 33,000 afy. The DYYP Storage and Recovery agreement provides that puts

and takes can exceed these values if agreed to by Watermaster (as was done in fiscal years 2018 and 2009, respectively). The agreement that authorizes the DYYP will expire in 2028.

Exhibit 26 summarizes the amount of water in managed storage by the Parties and for the DYYP. The total volume of water in managed storage as of June 30, 2019 was about 549,200 af, which includes about 46,000 af stored in the DYYP account. As previously stated, and described below, in 2017, the IEUA adopted an Addendum to the Peace II SEIR that provided a temporary increase in the SSC to 600,000 af through June 30, 2021 and required Watermaster to update the 2020 SMP.

OBMPU Change: **Exhibit 4** shows the implementation actions for PE 8/9 under the OBMPU, which include: (1) complete and submit to the Court the 2020 Safe Yield Recalculation; (2) completing and submitting to the Court the 2020 SMP, (3) developing a *Storage and Recovery Master Plan* to support the design of optimized storage and recovery programs that are consistent with the 2020 SMP and provide the Watermaster with criteria to review, condition, and approve applications in a manner that is consistent with the Judgment and the Peace Agreement; (4) assessing losses from storage accounts based on the findings of the 2020 Safe Yield Recalculation; (5) updating the SMP; (6) perform safe yield recalculation every 10 years (2030, 2050); and (7) updating the storage loss rate following each recalculation of Safe Yield (2030, 2040, 2050) and during periodic updates of the SMP.

2020 Storage Management Plan: The 2000 OBMP storage management plan is based on fixed storage volumes (e.g., the Operating Safe Yield [OSY] and the Safe Storage), and its technical basis is not supported by new information available after the plan was first developed. Review of the new information developed pursuant to the OBMP since 1999 indicates that it is possible to expand the use of storage space beyond that anticipated in the 2000 OBMP and Peace Agreement implementation plan. This new information includes: an updated hydrogeologic conceptual model; 20 years of intensive monitoring of Basin operations (not available in 1999), including monitoring the Basin in response to managed storage activities; and groundwater model-based projections of the Basin response to future management plans where the managed storage exceeded the SSC of 500,000 af. Re-operation, which over time will reduce the amount of Basin Water in storage by 400,000 af, was not accounted for in the 2000 OBMP storage management plan.

New information developed since 1999 suggests that the use of managed storage to meet future desalter and other Replenishment Obligations could cause potential MPI and other adverse impacts: it has the potential to exacerbate land subsidence and pumping sustainability challenges, impact net recharge and Safe Yield, increase groundwater discharge through the CCWF and cause a loss of Hydraulic Control, and change the direction and speed of the contaminant plumes. Thus, Watermaster initiated a process to update the 2000 OBMP storage management plan to enable increased storage by the Parties and to include features that will ensure there is no MPI to a Party or the Basin caused by the conjunctive-use activities of the Parties and Storage and Recovery Programs.

The *Storage Framework Investigation*³³ (SFI) was completed in 2018 to provide technical information required to update the 2000 OBMP storage management plan that is included in the Peace Agreement implementation plan. In the SFI, future projections of the use of managed

³³ WEI. (2018). *Storage Framework Investigation – Final Report*. Prepared for the Chino Basin Watermaster. October 2018.

storage³⁴ were estimated and evaluated for potential MPI and other adverse impacts³⁵. The SFI projected that MPI and other adverse impacts could occur due to the implementation of prospective Storage and Recovery Programs and described potential facilities and operating concepts that, if implemented, would minimize potential MPI and adverse impacts. The results of the SFI, together with the *Final 2020 Storage Management Plan White Paper*,³⁶ were used to inform the development of the *2020 Storage Management Plan* (SMP).

As stated under **Subsection 3.4.1.6**, a 2023 SFI has been prepared as a result of the modified OBMPU Project Description resulting from Stakeholder input in late 2022. The 2023 SFI is meant to provide a technical analysis of the hydrologic impacts of Storage and Recovery Programs that are contemplated in the OBMPU Project Description. Pursuant to this objective, the scope of work to develop the 2023 SFI was to (i) define Storage and Recovery Program scenarios based on this OBMPU Project Description, and (ii) evaluate the response of the Chino Basin to the scenarios for MPI and adverse impacts.

The Watermaster completed the 2020 SMP in December 2019. The 2020 SMP includes the following provisions regarding the use of storage space in the Basin:

- An aggregate amount of 800,000 af is reserved for the Parties' conjunctive-use activities (includes Carryover, Excess Carryover, and Supplemental Accounts) and Metropolitan's DYYP. This amount is referred to as the "First Managed Storage Band" (FMSB).
- The managed storage space between 800,000 and 1,000,000 af is reserved for Storage and Recovery Programs.
 - Storage and Recovery Programs that utilize the managed storage space above 800,000 af will be required to mitigate potential MPI and other adverse impacts as if the 800,000 af in the FMSB is fully used.
 - Renewal or extension of the DYYP agreement would require the DYYP to use storage space above the 800,000 af of the FMSB.

In the time that has elapsed since the 2020 SMP was completed, it has become clear that the FMSB would amount to 700,000 af, rather than 800,000 af. The managed storage space between 700,000 af and 900,000 af would be reserved for Storage and Recovery Programs, rather than between 800,000 af and 1,000,000 af. The 2023 SFI (Appendix 6b) analyzed the Basin response from the Chino Basin Parties' use of storage space up to 700,000 af and the conjunctive-use by Storage and Recovery Programs from 700,000 af to 900,000 af. Based on the work done in the 2023 SFI, the storage space was divided into two bands: FMSB of 700,000 af for use by the Chino Basin Parties, Metropolitan and IEUA, and 200,000 af of storage space between 700,000 af and 900,000 af for use by future Storage and Recovery Programs. The *2020 Storage Management Plan* (WEI, 2020) requires the facilities used to conduct Storage and Recovery programs using the storage space between 700,000 af and 900,000 af to be located in the Northern parts of MZ2 and MZ3 as shown in **Exhibit 27**.

The 2020 SMP includes the following provisions specific to the Parties and Storage and Recovery Program:

³⁴ Managed storage refers to water stored by the Parties and other entities and includes Carryover, Local Storage, and Supplemental Water held in storage accounts by the Parties and for Storage and Recovery Programs.

³⁵ Adverse impacts include and are not limited to reductions in net recharge and Safe Yield and increases in groundwater discharge from the Chino North GMZ to the Santa Ana River that have the potential to cause a loss of Hydraulic Control.

³⁶ WEI. (2019). *Final 2020 Storage Management Plan White Paper*. Prepared for the Chino Basin Watermaster. July 2019.

- Watermaster will prioritize the use of spreading basins to satisfy Watermaster's recharge and Replenishment Obligations over the use of spreading basins for other uses.
- With regard to the storage management activities of the Parties:
 - Watermaster acknowledges transfers or leases of water rights and water held in managed storage (hereafter transfers) from Parties that are situated such that they pump groundwater outside of MZ-1 to Parties that pump in MZ-1 have the potential to cause potential MPI.
 - The reduction in net recharge caused by storage in the FMSB is an adverse impact, and Watermaster considers this adverse impact to be mitigated by the prospective calculation of Safe Yield.
- With regard to the Storage and Recovery Programs:
 - Puts and takes should be prioritized to occur in MZ-2 and MZ-3 to avoid new land subsidence and interfering with land subsidence management in MZ-1, to minimize pumping sustainability challenges, to minimize the impact of Storage and Recovery operations on solvent plumes, to preserve the state of Hydraulic Control, and to take advantage of the larger and more useful storage space in MZ-2 and MZ-3.
 - Watermaster will evaluate Storage and Recovery Program impacts, assess MPI (including, but not limited to land subsidence, pumping sustainability, water quality, shallow groundwater, and liquefaction), and define mitigation requirements. The Storage and Recovery Program applicants must develop mitigation measures acceptable to Watermaster and include them in the Storage and Recovery Program agreements.
 - Watermaster will evaluate the Storage and Recovery Program, assess adverse impacts (including, but not limited to reductions in net recharge and Safe Yield and an increase in the groundwater discharge from the Chino North GMZ to the Santa Ana River contributing to a loss of Hydraulic Control), and define mitigation requirements. The Storage and Recovery Program applicants must develop mitigation measures acceptable to Watermaster and include them in the Storage and Recovery Program agreements.
 - Watermaster will periodically review current and projected Basin conditions and compare this information to the projected Basin conditions prepared in the evaluation of the Storage and Recovery Program applications; compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations; make findings regarding the efficacy of related mitigation of MPI and other adverse impact requirements and measures in the Storage and Recovery Program storage agreements; and based on its review and findings, require changes in the Storage and Recovery Program agreements to mitigate MPI and adverse impacts.
- Watermaster will modify the existing *Form 8 Local Storage Agreements* to be consistent with an "evergreen agreement" paradigm and establish that the evergreen agreements will be valid for the duration of the Peace Agreement and will be automatically adjusted upon Watermaster's approval of each subsequent Assessment Package so long as the cumulative amount of water in storage is less than the quantity reserved for the Parties' conjunctive-use operations and Metropolitan's DYYP (cumulatively, the FMSB) and Watermaster has made no finding that MPI is threatened to occur as a result of the increase in the quantity of water in storage.
- Watermaster will periodically review and update the SMP at a frequency of no less than once every five years, when the Safe Yield is recalculated, when it determines a review and update is warranted based on new information and/or the needs of the Parties or the

Basin, and at least five years before the aggregate amount of managed storage by the Parties is projected to fall below 340,000 af.

The facilities and/or improvements to existing facilities envisioned under the OBMPU to conduct a Storage and Recovery Program within the SMP are listed below and shown on **Exhibit 27**.

ASR or Pumping Wells:

- Constructing up to 43 new ASR wells and/or 30 new conventional production wells in MZ-2/3 north of Highway 60 to increase pumping and recharge capacity by up to about 25,000 afy to implement Storage and Recovery programs.³⁷ Of the 43 proposed ASR wells proposed under PEs 8/9, 3 have been proposed by CVWD. These ASR wells are included in the total of 66 ASR wells considered under PE2.
 - Depth of new wells could range between 500 and 1,500 feet.
 - The average area of disturbance of a site is anticipated to be half an acre or less.
 - Constructing conveyance and treatment facilities to supply water to the ASR wells for recharge.
 - Constructing conveyance and treatment facilities to supply the recovered stored groundwater from the ASR wells to municipal and industrial users within and outside of the Chino Basin.
 - The installation of the proposed ASR wells or injection/extraction well pairs include the construction of conveyance facilities to: (1) convey the supplemental water to the ASR wells and to convey pumped groundwater to end users; and/or (2) to supply water to the ASR wells for recharge and to convey pumped groundwater to end users. Conveyance facilities include pipelines, booster stations, water storage reservoirs and related appurtenances.

Regional Groundwater Treatment Facilities:

- Constructing up to 4 new regional water treatment facilities to treat the additional groundwater supplied by Storage and Recovery Programs. These treatment facilities can also treat groundwater to meet the objectives of other PEs (e.g., PE 6).

Water Storage Reservoirs:

- Constructing up to 14 water storage reservoirs of various sizes to accommodate the increased water storage needed as a result of increased water supply from Storage and Recovery Programs. This includes CVWD's 4 proposed water storage reservoirs.

Booster Pump Stations:

- Constructing up to 18 new 10,000 gallon per minute (gpm) booster pump stations to convey water supplied from Storage and Recovery Programs. This includes CVWD's proposed booster pump station with a capacity up to 10,000 gpm.

Expand Chino Desalters:

- Expanding the Chino Desalters or construction of new functionally equivalent facilities (see **Section 3.6.7.2**) to mitigate increases in groundwater discharge from the Chino North GMZ to the Santa Ana River caused by a Storage and Recovery Program that has the potential to cause a loss of Hydraulic Control. These same facility improvements could be

³⁷ Some of the new conventional pumping wells and ASR that will be constructed for PE 2 and 4, respectively, can be used for PE 8/9.

used to mitigate the loss of net recharge and Safe Yield caused by a Storage and Recovery Program.

Facility Improvements:

- Constructing facility improvements at active groundwater remediation projects to mitigate the effects of a Storage and Recovery Program on the remediation projects (see **Section 3.6.6.2**). These improvements could include construction of additional wells and raw water conveyance facilities, treatment plant expansions and other treatment modifications and product water facilities.

Replacement Wells or Modifications to Existing Wells:

- Constructing replacement wells and or modification to existing wells to mitigate loss of pumping capacity caused by a Storage and Recovery Program. Additionally, the WRCRWA parties have begun evaluating plans for a recycled water program that could potentially include recycled water reuse in the Chino Basin.

3.7 ENTITLEMENTS, APPROVALS AND OTHER AGENCY PARTICIPATION

Implementation of future individual project(s) in accordance with the OBMPU may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as future environmental review processes proceed. Consequently, it should not be considered exhaustive.

Other California agency approvals (if required) for which this environmental document may be utilized are outlined in **Table 1.3-1**, repeated from **Chapter 1, Executive Summary**, below:

**Table 1.3-1
PROGRAM APPROVALS**

Agency	Approvals Necessary
Chino Basin Stakeholders	Future site-specific projects may be enacted by OBMPU Stakeholders. This RDSEIR and subsequent environmental documents may be reviewed by each City or Stakeholder as part of the review process for future OBMPU related Projects.
Monte Vista Water District	
Cucamonga Valley Water District	
City of Chino	
City of Chino Hills	
City of Fontana	
City of Norco	
City of Ontario	
City of Pomona	
City of Upland	
County of San Bernardino	
Jurupa Community Services District	
West Valley Water District	
IEUA	
Three Valleys Municipal Water District	
Western Municipal Water District	
Chino Basin Water Conservation District	

Agency	Approvals Necessary
California Department of Public Health (CDPH)	CDPH is responsible for issuing water supply permits administered under the Safe Drinking Water Program and funds various loan and grant programs for drinking water related infrastructure projects. As such, CDPH would be considered a “responsible agency” if IEUA or other Stakeholders request any permits and/or funding from CDPH for the OBMPU.
State Water Resources Control Board (SWRCB)	Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the Project area, the Santa Ana Regional Board enforces the BMP requirements contained in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor under contract to IEUA or a Stakeholder agency, with the Regional Board providing enforcement oversight.
Jurisdictional Waters	The Project includes the potential discharge of fill into or alterations of “waters of the United States,” “waters of the State,” and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to Project activities such as pipeline installation are likely be required.
Army Corps of Engineers (ACOE)	<ul style="list-style-type: none"> • A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE
Santa Ana Regional Water Quality Control Board	<ul style="list-style-type: none"> • A Section 401 Water Quality Certification may be required from the Regional Board
California Department of Fish and Wildlife (CDFW)	<ul style="list-style-type: none"> • 1600 Streambed Alteration Agreement may be required from the CDFW
U.S. Fish and Wildlife Service (USFWS) CDFW	These agencies may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
San Bernardino County Riverside County City of Chino City of Chino Hills City of Claremont City of Eastvale City of Fontana City of Jurupa Valley City of Montclair City of Ontario City of Pomona City of Rancho Cucamonga City of Upland	Land use permits may be required from local jurisdictions
South Coast Air Quality Management District (SCAQMD)	Air quality permits may be required from the SCAQMD.
California Department of Transportation (Caltrans) County of Riverside County of San Bernardino	Encroachment permits may be required.

Agency	Approvals Necessary
City of Chino City of Chino Hills City of Claremont City of Eastvale City of Fontana City of Jurupa Valley City of Montclair City of Ontario City of Pomona City of Rancho Cucamonga City of Upland Flood Control Agencies Southern California Edison, The Gas Company, Other private companies such as: BNSF Railway Company Union Pacific Railroad	
Watermaster	Watermaster has a separate approval process for determining material physical injury to the Stakeholders within the Chino Basin.
State Water Resources Control Board	State Water Resources Control Board will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or Division of Drinking Water.

3.8 CEQA RESPONSIBLE AGENCIES

In addition to the above agencies that may be required to review and grant authorizations for future OBMPU projects, the Chino Basin Watermaster functions as a unique entity that has been created by the Court. The Watermaster is composed of a board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. Individual members of the various pools may assume responsibility for implementing individual projects and activities covered by this OBMPU PEIR. To do this the individual agency would identify a specific project or activity evaluated in this CEQA document and then conduct a shortened environmental review under Sections 15162 and 15168 of the State CEQA Guidelines. Such a review for CEQA compliance could conclude that an implementation project or activity falls within the scope of analysis in this document, i.e., it is consistent with the findings in this RDSEIR; decide that the proposed project or activity is a minor technical change relative to the OBMPU project description and is subject to an Addendum; or the agency could find that a project or activity exceeds the scope of the this CEQA document's evaluation and requires a supplemental or subsequent environmental document as outlined in State CEQA Guidelines Sections 15162 and 15163. In the situations discussed above, the level of environmental review will be determined on a project-by-project basis. These Responsible Agencies include:

Agricultural Pool, 2023

State of California
County of San Bernardino

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of all Agricultural Pool participants.

Non-Agricultural Pool, 2023

City of Ontario
County of San Bernardino
Monte Vista Water District

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of Non-Agricultural Pool participants.

Appropriative Pool Committee, 2023

Monte Vista Water District
Cucamonga Valley Water District
City of Chino
City of Chino Hills
City of Fontana
City of Norco
City of Ontario
City of Pomona
City of Upland
County of San Bernardino
Jurupa Community Services District
West Valley Water District

- Please note that specific companies or parties that are not public agencies are part of the Appropriative Pool Committee, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of all Appropriative Pool Committee participants.

Other Agencies Participating in the Judgment/Agreements

IEUA
Three Valleys Municipal Water District
Western Municipal Water District
Chino Basin Water Conservation District

In all future circumstances, IEUA will remain the Lead Agency for the OBMPU CEQA document, and the Watermaster will maintain annual records for cumulative projects implemented under the OBMPU on an annual basis. A CEQA Responsible Agency shall coordinate with these agencies when it assumes CEQA Lead Agency status for a future specific project. Thus, IEUA and Watermaster will continue to accumulate information on implementation of the OBMPU and provide a future project specific Lead Agency with essential information regarding the cumulative impact circumstances at the time a proposed specific project is ready for implementation.

3.9 CUMULATIVE PROJECTS

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contributions to area-wide or community environmental impacts when added to other or all development proposed in an area. The State CEQA Guidelines provide two alternative methods for making cumulative impact forecasts: (1) a list of past, present and reasonably anticipated projects in the project area, or (2) the broad growth impact forecast contained in general or regional plans, such as the OBMPU. Because of the planning character of this project, it will be evaluated in the context of adopted General Plans.

From a water planning perspective, the 2000 OBMP PEIR (Peace I Agreement) and the 2010 Peace II SEIR (Peace II Agreement) represent a cumulative, or carrying capacity, evaluation of water resources in the Chino Basin. Thus, the analysis of Chino Basin water resources contained in this RDSEIR represents a cumulative analysis of the activities and facilities required to manage the Basin's water resources, under current conditions.

Since the DSEIR was circulated in 2020, some cumulative projects with regional significance have been analyzed in certified CEQA documents, and/or approved for implementation. For instance, in May of 2022, IEUA certified the Chino Basin Program (CBP) PEIR. While this document is presently undergoing CEQA litigation that is ongoing as of the publication of this RDSEIR, the CBP as a whole was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded \$206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 afy of recycled water in the Chino Basin and extract the water during call years, which will likely be in future dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new 15,000 afy AWPf and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPf for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits. In order to accomplish the water exchange outlined above, the CBP would install new water and wastewater type infrastructure within the Chino Basin, and would ultimately result in additional groundwater supply therein. The CBP contemplates the development of 37 wells of various types, use of up to 4 existing IEUA customer agency wells, installation of about 30 miles of pipeline, a 5 MG reservoir, 4 pump stations, 6 turn-outs, and up to 3 wellhead treatment facilities in addition to the AWPf and increase in SSC described above. Where pertinent, the impacts from implementing the CBP on behalf of the IEUA will be considered in this document as a cumulative impact.

Additionally, the CBP contemplated an increase in Safe Storage Capacity that would supersede the SSC that was accepted by the Court in 2021 as a result of the 2021 LSLs Addendum. Should the CBP PEIR be upheld in the CEQA litigation process, and subsequently approved by the Court, the SSC would be increased up to 720,000 af from July 1, 2030 through June 30, 2042, and to 580,000 af from July 1, 2042 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 af thereafter. Even if the CBP were not to go forward, it is anticipated that other Storage and Recovery Programs that use an equivalent volume of managed storage would come online. The increase in SSC contemplated by both the 2021 LSLs Addendum and the 2022 CBP PEIR

would be superseded by the increase in SSC contemplated herein as part of the OBMPU RDSEIR.

No other projects were identified within the Project area or vicinity that would contribute directly to cumulative impacts or cumulative demand for local groundwater infrastructure. This does not include individual water infrastructure projects implemented by local water purveyors to supply potable water to customers. Most of the city General Plans for the Chino Basin assume that buildout or near buildout will occur within their jurisdiction by 2040. Thus, substantial general growth in these cities will occur concurrent with the implementation of the OBMPU (2020-2040). Individual water purveyor infrastructure will be implemented as needed in the future as growth occurs in the Chino Basin, but it is not possible to identify future specific projects without speculation. It is assumed that the proponents of such projects will incorporate the impact evaluations in this document as part of their cumulative impact analyses when such specific projects are proposed.

Because the OBMPU addresses comprehensive water management facilities or activities within a portion of the upper Santa Ana River watershed, there may also be other projects within the watershed that will be implemented. The only other such project that is currently defined sufficiently to address under this cumulative impact analysis is the SAR HCP DEIR currently under consideration by the San Bernardino Valley Municipal Water District (Valley District). Where pertinent, the impacts from implementing the HCP on behalf of the upper Santa Ana River watershed will be considered in this document as a possible cumulative impact.

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Exhibit 1



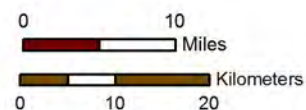
- Chino Basin Adjudicated Boundary
- Major SAWPA Member Agencies
- Santa Ana River Watershed



Produced by:



Author: GAR
Date: 12/16/2019
Name: 1.) Chino in SAR Watershed

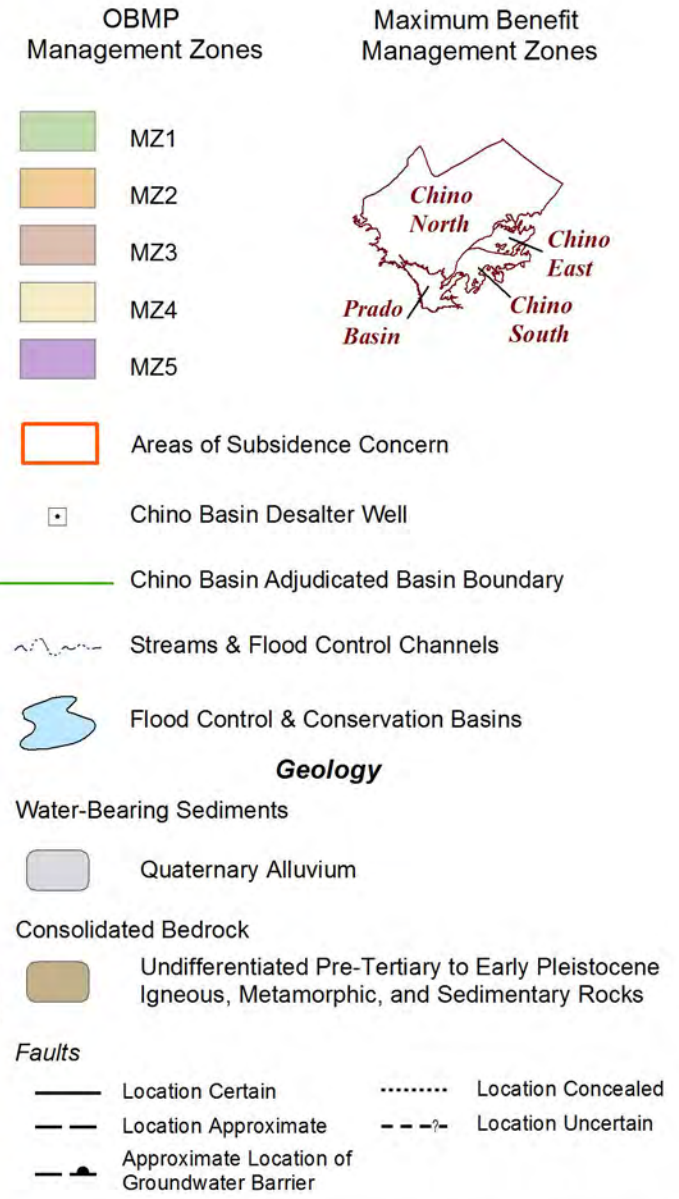
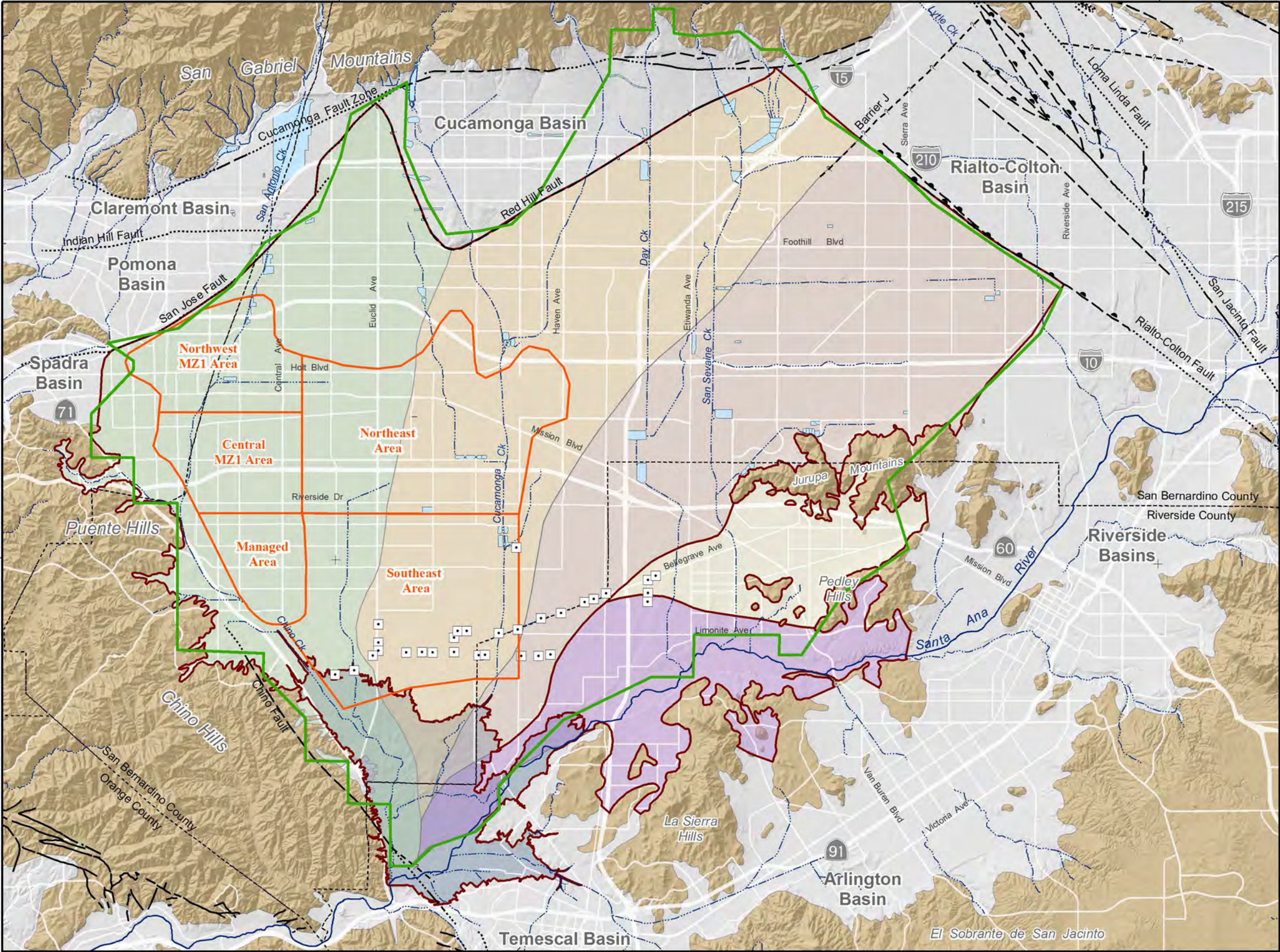


Prepared for:
OBMP 2020 Update
Project Description



**Location of the Chino Basin and
the Santa Ana River Watershed**

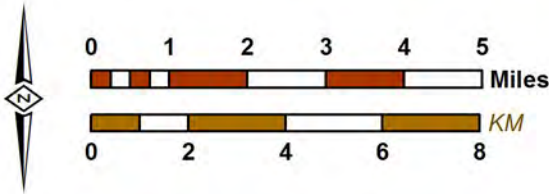
Figure 1-1



Prepared by:



Author: LG
Date: 12/19/2019
Document Name: 2.) Project Location + Bulletin 118



Prepared for:
OBMP 2020 Update
Project Description



Chino Basin
OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern

Figure 1-1

Figure 1 – Drivers and Trends and Their Implications
2020 OBMP Update

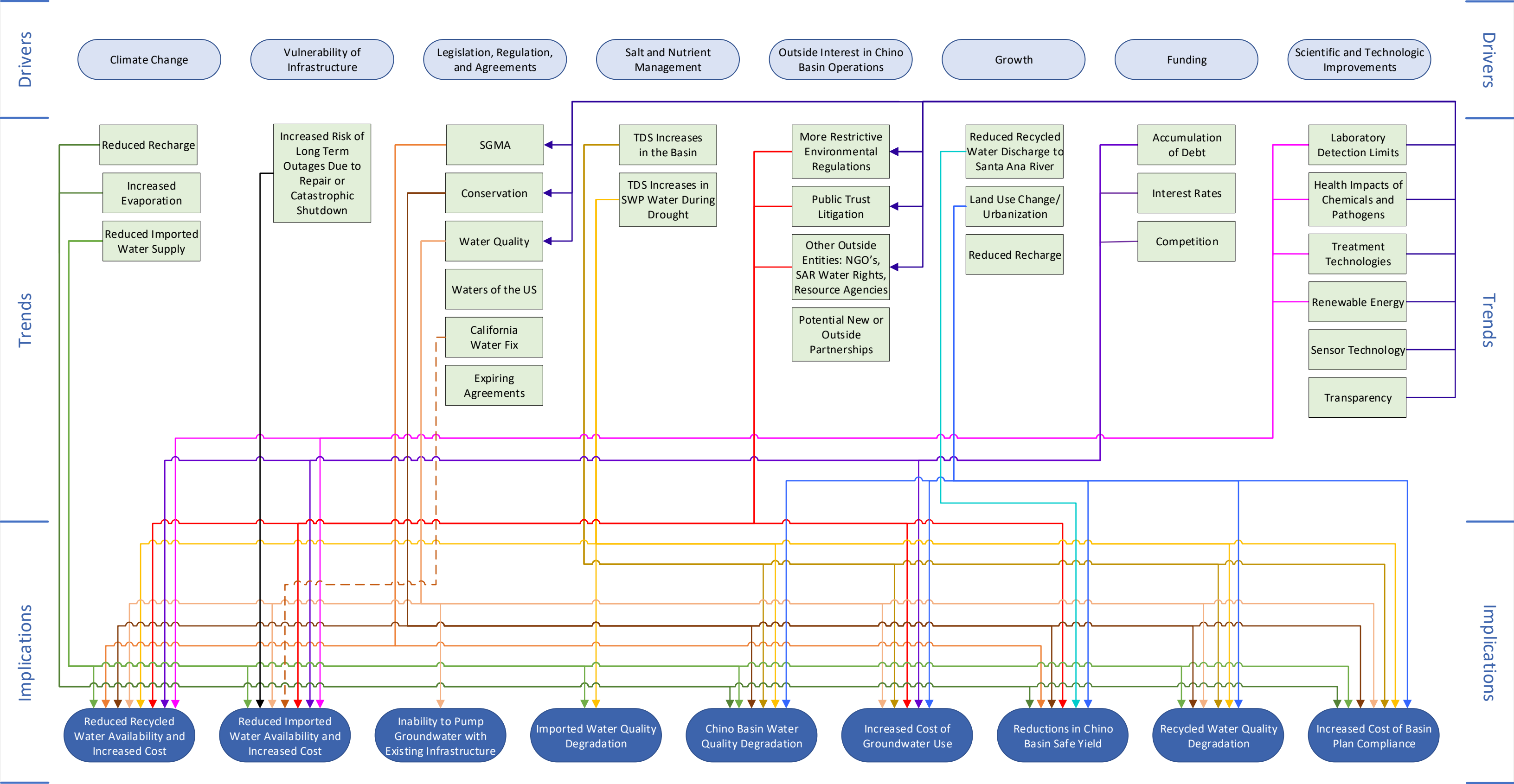


Exhibit 4

Implementation actions for the next 20 years by Program Element

Program Element 1

Watermaster will continue to conduct the required monitoring and reporting programs, including collection of: groundwater production, groundwater level, groundwater quality, ground level, surface water, climate, water supply planning, biological, and well construction/destruction monitoring data.

Perform review and update of Watermaster's regulatory and Court-ordered monitoring and reporting programs and document in a work plan: *OBMP Monitoring and Reporting Work Plan*.

Perform periodic review and update of the *OBMP Monitoring and Reporting Work Plan* (or other guidance documents developed by Watermaster) and modify the monitoring and reporting programs, as appropriate.

Program Element 2

Continue to convene the Recharge Investigations and Projects Committee.

Complete the 2023 Recharge Master Plan Update (RMPU).

Implement recharge projects based on need and available resources.

Update the RMPU no less than every five years (2028, 2033, 2038).

Program Element 4

Implement Watermaster's Subsidence Management Plan, and adapt it as necessary.

Watermaster will arrange for the physical recharge of at least 6,500 afy of Supplemental Water in MZ-1 as an annual average. Watermaster may re-evaluate the minimum annual quantity of Supplemental Water recharge in MZ-1 and may increase this quantity through the term of the Peace Agreement.

Program Element 5

The IEUA will maximize the reuse of its recycled water in the Chino Basin.

The IEUA, the TVMWD, the WMWD, and/or other Party acting as a coordinating agency will establish or expand future recycled water planning efforts to maximize the reuse of all available sources of recycled water.

Watermaster will support the IEUA, the TVMWD, the WMWD, and/or others in their efforts to maximize recycled water reuse to ensure these efforts are integrated with Watermaster's groundwater and salinity management efforts.

The IEUA, the TVMWD, the WMWD, and/or other Party acting as a coordinating agency will establish or expand future integrated water resources planning efforts to address water supply reliability for all Watermaster Parties.

Watermaster will support the IEUA, the TVMWD, the WMWD, and/or others in their efforts to improve water supply reliability to ensure those efforts are integrated with Watermaster's groundwater management efforts.

Implementation actions for the next 20 years by Program Element

Program Element 6

Re-convene the water quality committee and meet periodically to update groundwater quality management priorities.

Develop and implement an initial emerging contaminants monitoring plan.

Prepare a water quality assessment of the Chino Basin to evaluate the need for a *Groundwater Quality Management Plan* and prepare a long-term emerging contaminants monitoring plan.

Continue to support the Parties in identifying funding from outside sources to finance cleanup efforts.

Develop and implement a *Groundwater Quality Management Plan* and periodically update it.

Implement long-term emerging contaminants monitoring plan.

Continue to conduct investigations to assist the parties and/or the Regional Board in accomplishing mutually beneficial objectives as needed.

Implement projects of mutual interest.

Program Element 7

Complete the 2020 update of TDS and nitrate projections to evaluate compliance with maximum benefit salt and nutrient management plan, and, if necessary, based on the outcome, prepare a plan and schedule to implement a salt offset compliance strategy.

Continue to implement the maximum-benefit salt and nutrient management plan pursuant to the Basin Plan.

Starting in 2025 and every five years thereafter, update water quality projections to evaluate compliance with the maximum-benefit salt and nutrient management plan.

Program Element 8/9

Complete and submit to the Court the 2020 Safe Yield Recalculation.

Complete and submit to the Court the 2020 Storage Management Plan (SMP).

Develop a *Storage and Recovery Master Plan* to support the design of optimized storage and recovery programs that are consistent with the 2020 Storage Management Plan and provide the Watermaster with criteria to review, condition, and approve applications in a manner that is consistent with the Judgment and the Peace Agreement.

Assess losses from storage accounts based on the findings of the 2020 Safe Yield Recalculation.

Update the Storage Management Plan in 2025 and every five years thereafter, and when:

- the Safe Yield is recalculated,
- Watermaster determines a review and update is warranted based new information and/or the needs of the parties or the basin, and
- at least five years before the aggregate amount of managed storage by the parties is projected to fall below 340,000 af

Perform safe yield recalculation every 10 years (2030, 2040).

Update the storage loss rate following each recalculation of Safe Yield (2030, 2040) and during periodic updates of the SMP.

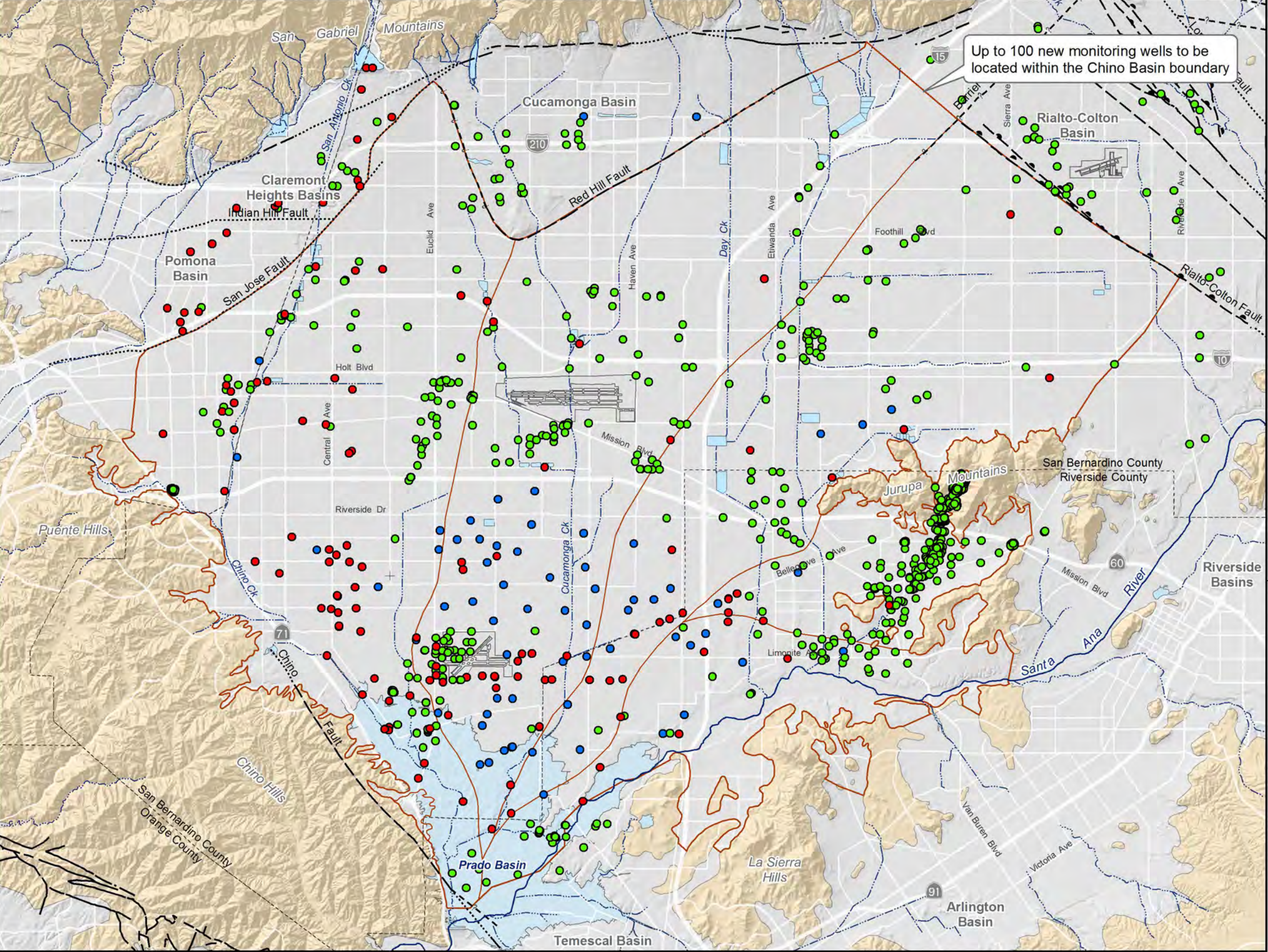
Actions in blue represent actions that are not in the 2000 OBMP ("new" actions).

Exhibit 5

List of facilities to be evaluated in CEQA	PE1	PE2	PE4	PE5	PE6	PE7	PE8/9
New monitoring wells	✓	✓	✓	✓	✓	✓	✓
New surface water and groundwater recharge monitoring facilities	✓	✓					✓
New meteorological monitoring facilities	✓	✓					✓
New meter installation at pumping wells	✓						
New extensometers	✓		✓				✓
New benchmarks	✓		✓				✓
New stormwater diversion, storage, transfer and recharge facilities		✓	✓	✓			✓
CIM storage facilities*		✓	✓	✓			✓
Flood MAR*		✓	✓	✓			✓
Regional conveyance:*		✓	✓	✓			✓
Lower Cucamonga Basin		✓		✓			✓
Mills Wetlands		✓		✓			✓
Riverside Basin		✓		✓			✓
Vulcan Basin *		✓		✓			✓
Confluence Project*		✓		✓			✓
Injection wells*		✓	✓	✓			✓
Treatment (for some sources)*		✓	✓	✓			✓
Restore WFA Agua de Lejos Treatment Plant capacity for in-lieu recharge		✓	✓	✓			✓
MS4 recharge project incentives		✓	✓				✓
Relocate pumping from MZ1 to MZ2/3 and southern portion of the Chino Basin and/or increase recharge in MZ1			✓				✓
New production wells*			✓				✓
Acquire supplemental water supplies*		✓		✓			
Regional conveyance				✓			✓
New dedicated regional conveyance facilities				✓			✓
North-south pipeline*				✓			✓
East-west pipeline*				✓			✓
Incorporate local conveyance facilities into a regional conveyance system*				✓			✓
Maximize recycled water reuse				✓			
Expand system for indirect reuse*				✓			
Advanced water treatment*				✓		✓	
Direct potable use*				✓			
New regional groundwater treatment plants (up to 10 mgd for local use; up to 30 mgd for export)*				✓	✓		✓
Expansion of existing groundwater treatment plants*				✓	✓		✓
Upgrade recycled water treatment plant to desalt effluent*						✓	
Maintain or increase groundwater pumping in Chino Creek Well Field (CCWF) area:							
New production wells in CCWF area*						✓	✓
Acquire wells in CCWF area*						✓	✓
New ASR wells in MZ2/3 north of Highway 60*							✓

*Includes conveyance infrastructure

Exhibit 6



Groundwater-Level Monitoring Program
Wells symbolized by Measurement Frequency

- Measurement by CBWM Staff - Monthly (69 wells)
- Measurement by Transducer - Every 15 Minutes (177 wells)
- Measurement by Owner at Various Frequencies (1,077 wells)



OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

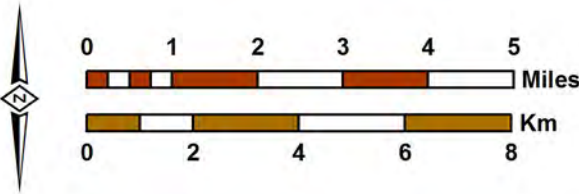
- Location Certain
- Location Approximate
- Location Concealed
- Location Uncertain
- Approximate Location of Groundwater Barrier



Prepared by:



Author: SO
Date: 12/17/2019
File: 6.) Map of GWL.mxd



Prepared for:
OBMP 2020 Update
Scoping Report



Groundwater-Level Monitoring
Well Location and Measurement Frequency
Fiscal Year 2017/18

Exhibit 7

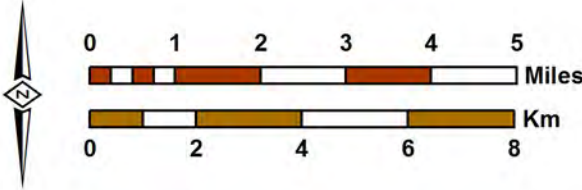
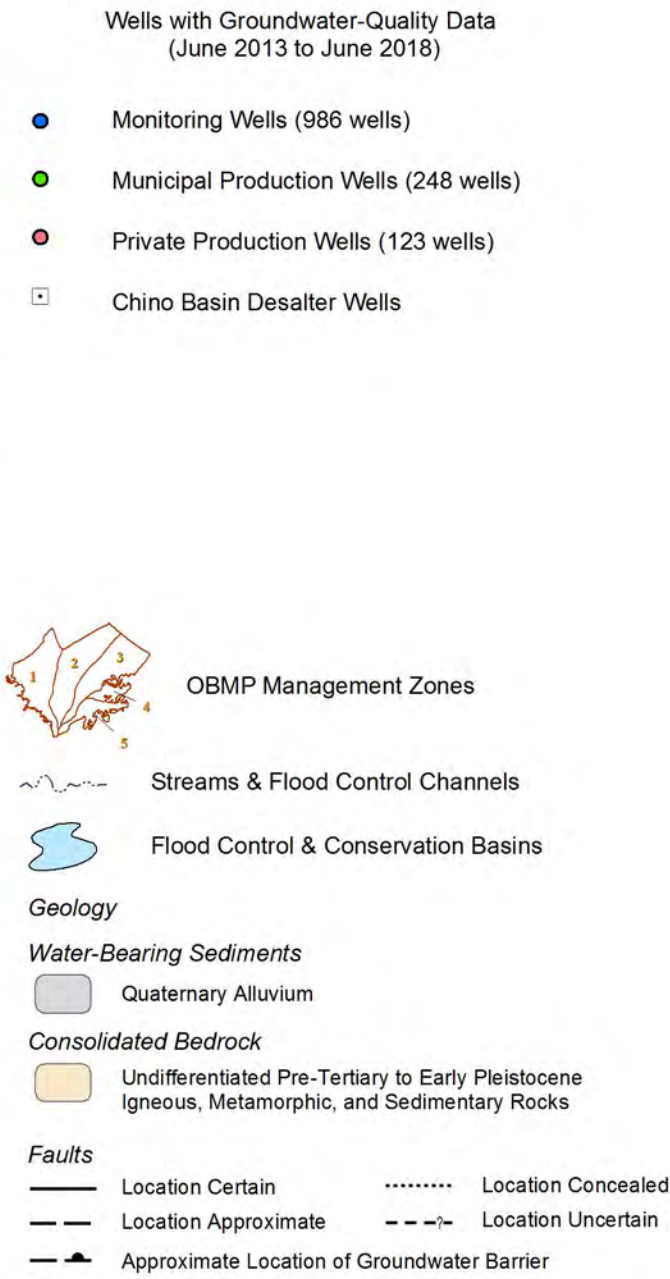
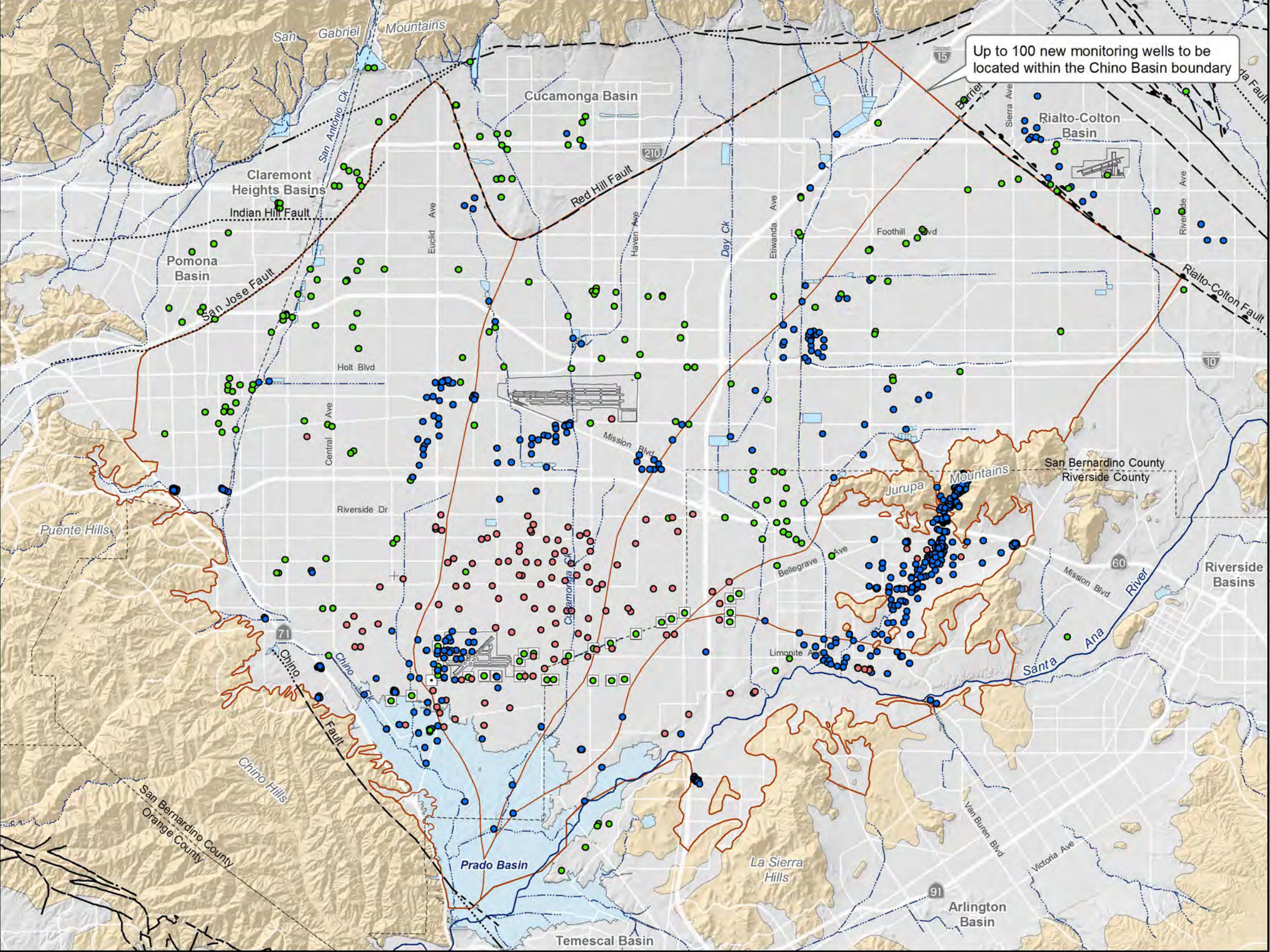
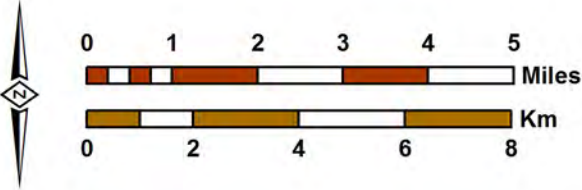
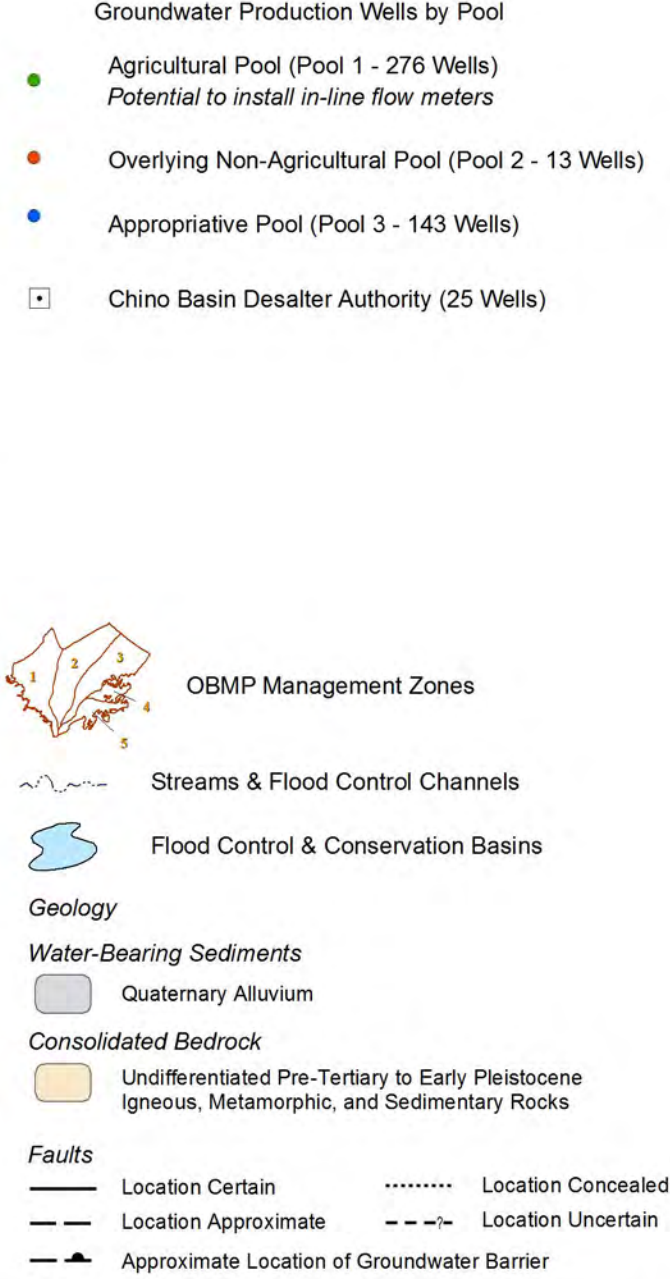
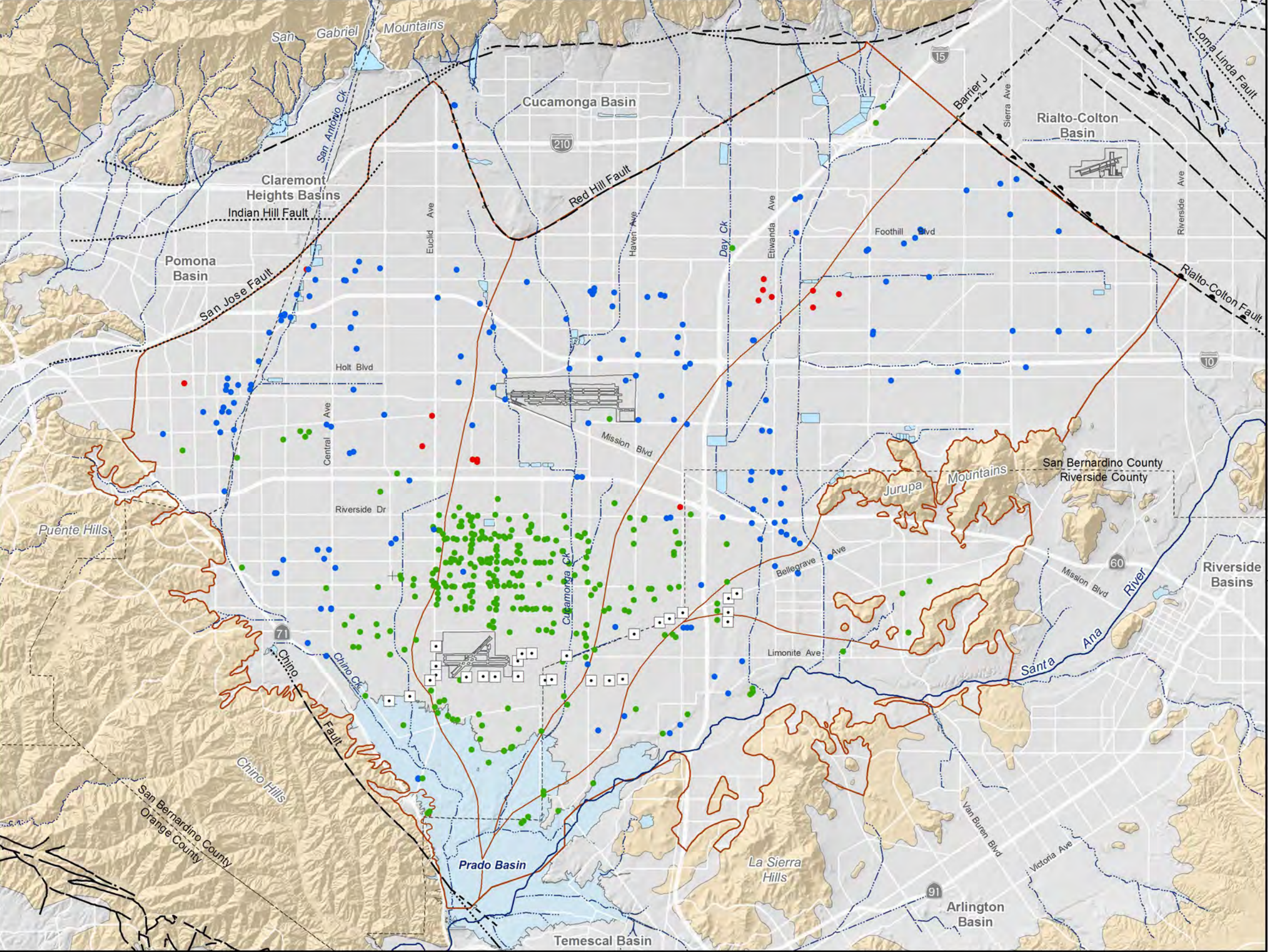


Exhibit 8



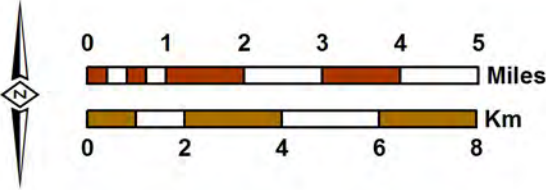
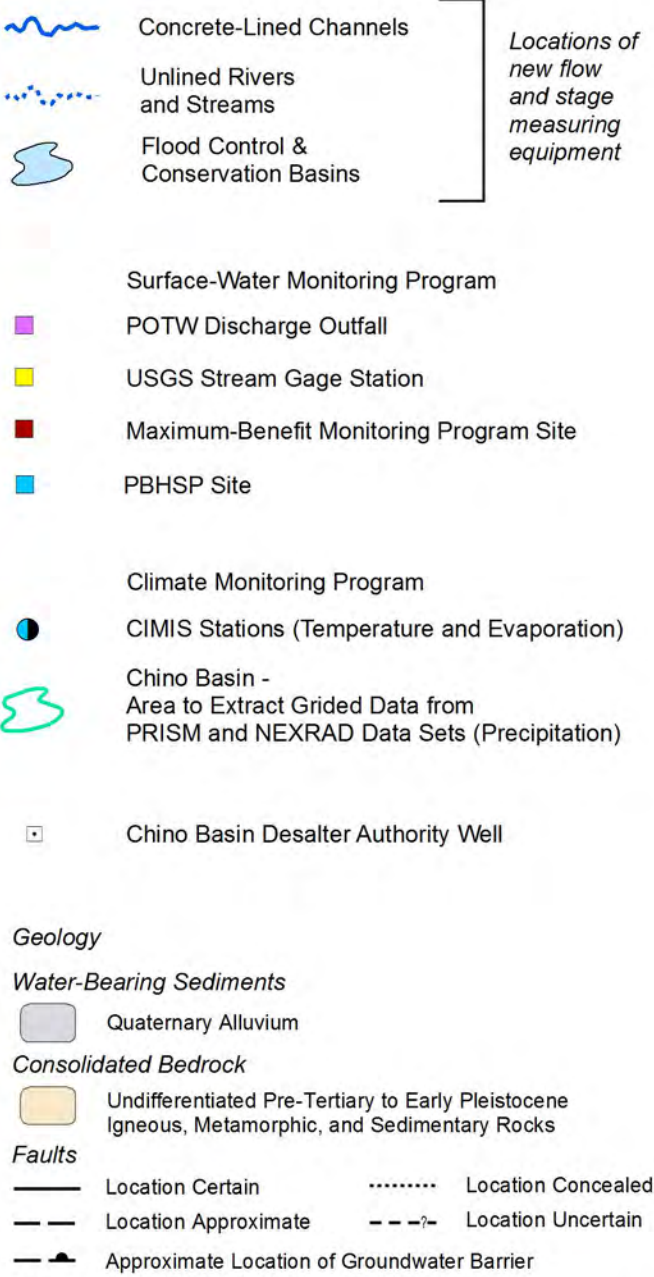
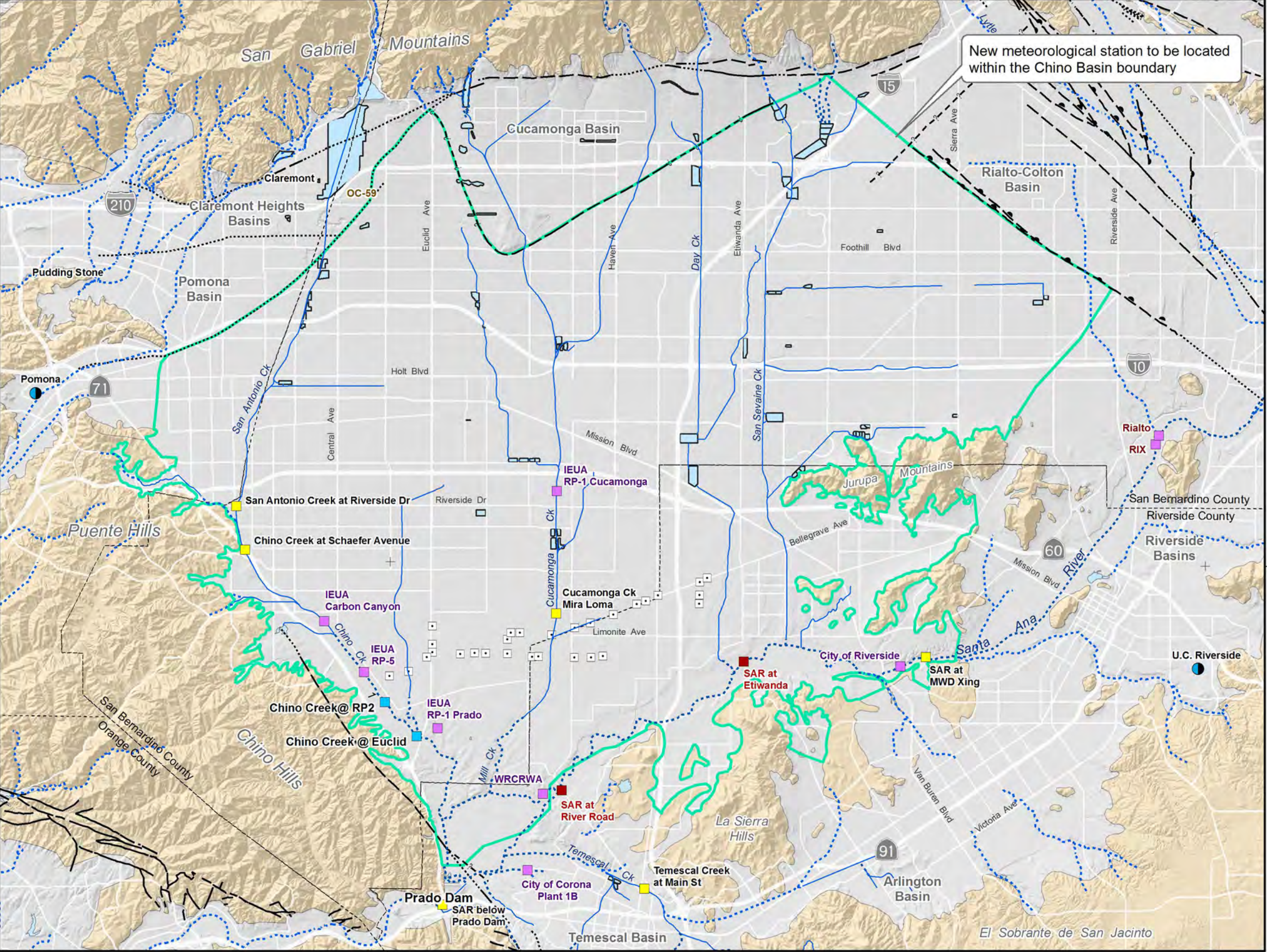
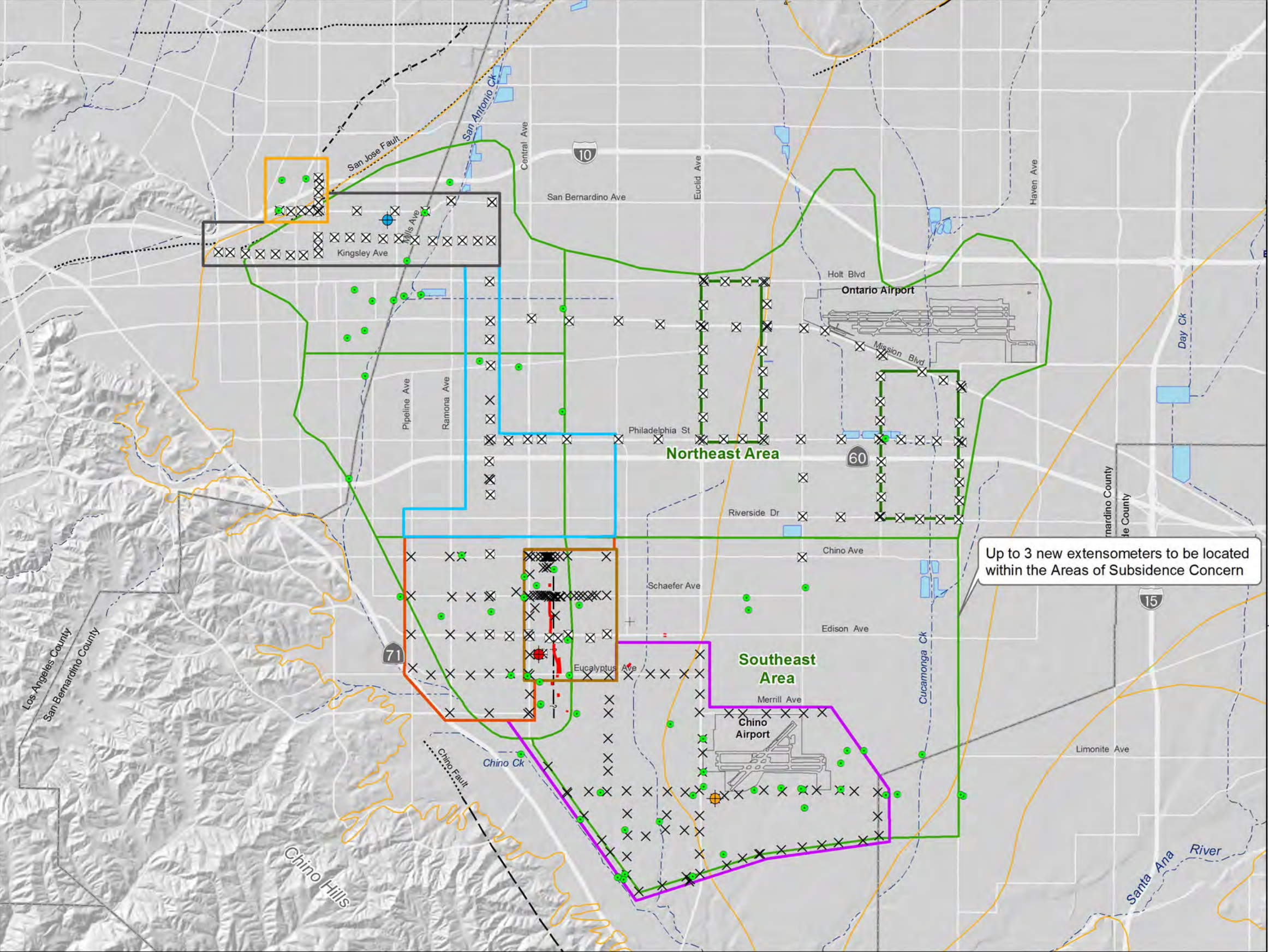


Exhibit 10



Ground-Level Monitoring Network Facilities

- Ayala Park Extensometer
- Chino Creek Extensometer
- Pomona Extensometer
- Well Equipped with Pressure Transducer (2018/19)
- Ground-Level Survey Benchmark
- Ground-Level Survey Benchmark (Measured in April 15, 2019)

Ground-Level Survey Areas

- Managed Area
- Fissure Zone Area
- Central Area
- Northwest Area
- San Jose Fault Zone Area
- Northeast Area
- Southeast Area

Areas of Subsidence Concern

Flood Control and Conservation Basins

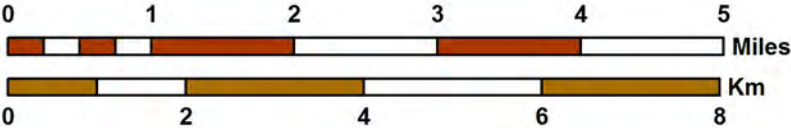
- Fault (solid where accurately located; dashed where approximately located or inferred; dotted where concealed)
- Ground Fissures
- Approximate Location of the Riley Barrier



Prepared by:



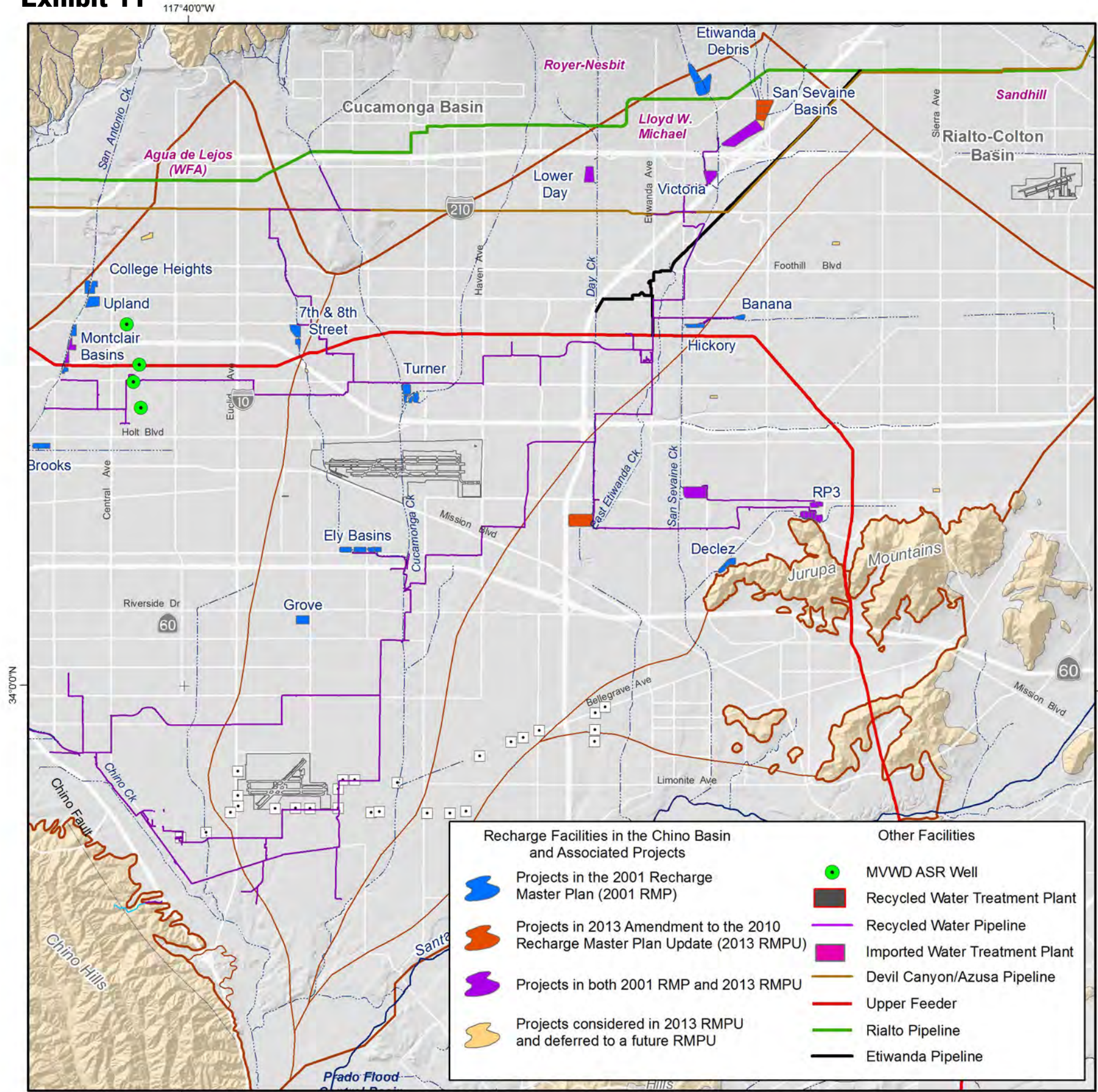
Author: NWS
Date: 12/18/2019
File: 10.) Subsidence Monitoring.mxd



Prepared for:
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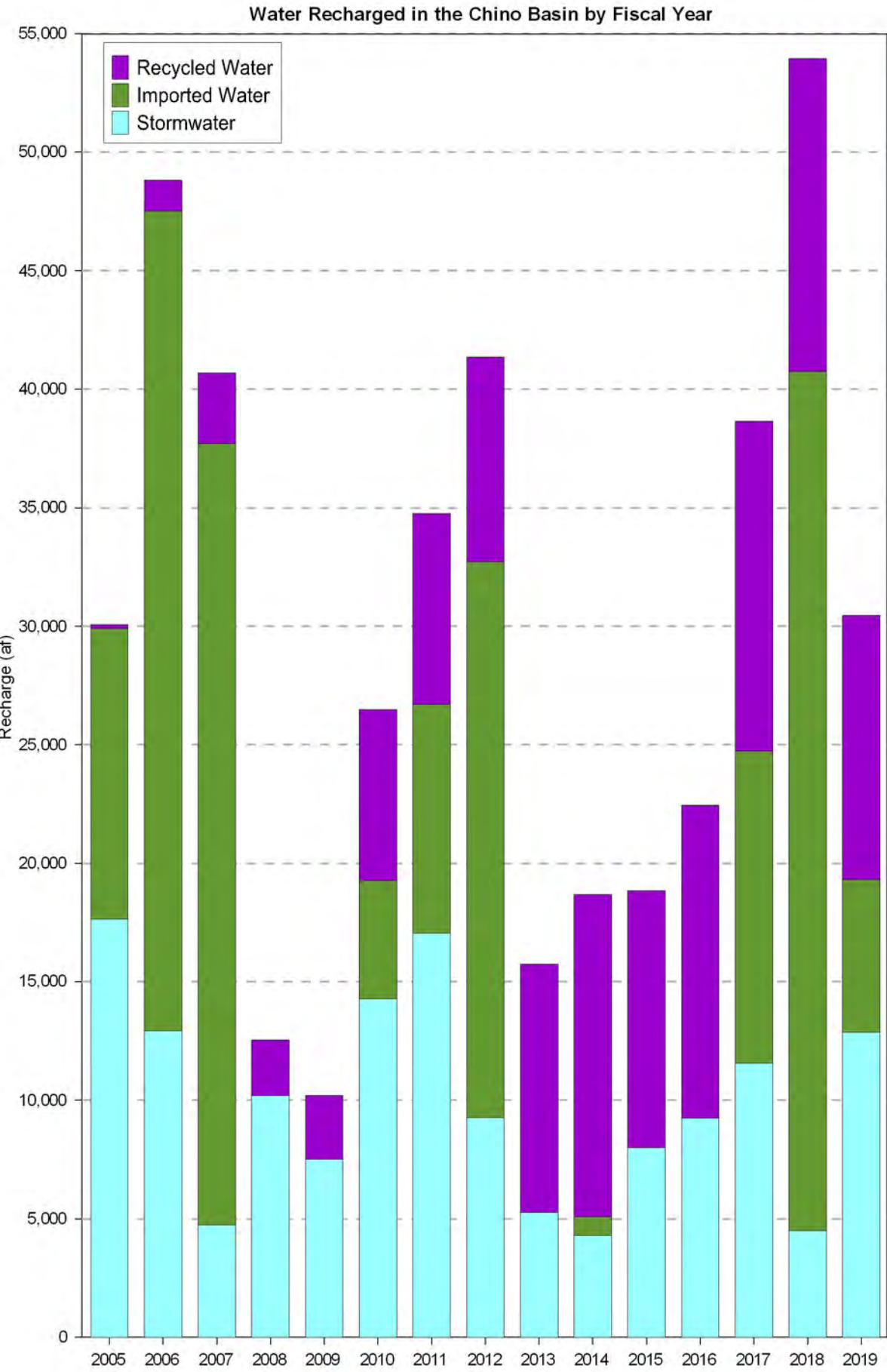
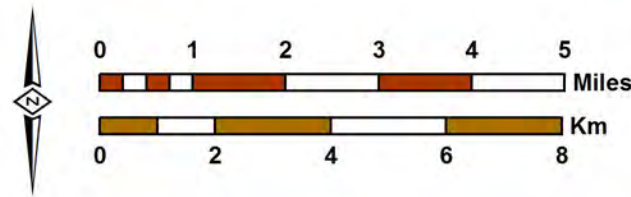
Ground-Level Monitoring Network
Western Chino Basin



Prepared by: 117°40'0"W



Author: CS
Date: 20181129
File: 11.) Recharge Basin + Recharge Chart



Prepared for:
2020 OBMP Update
Project Description



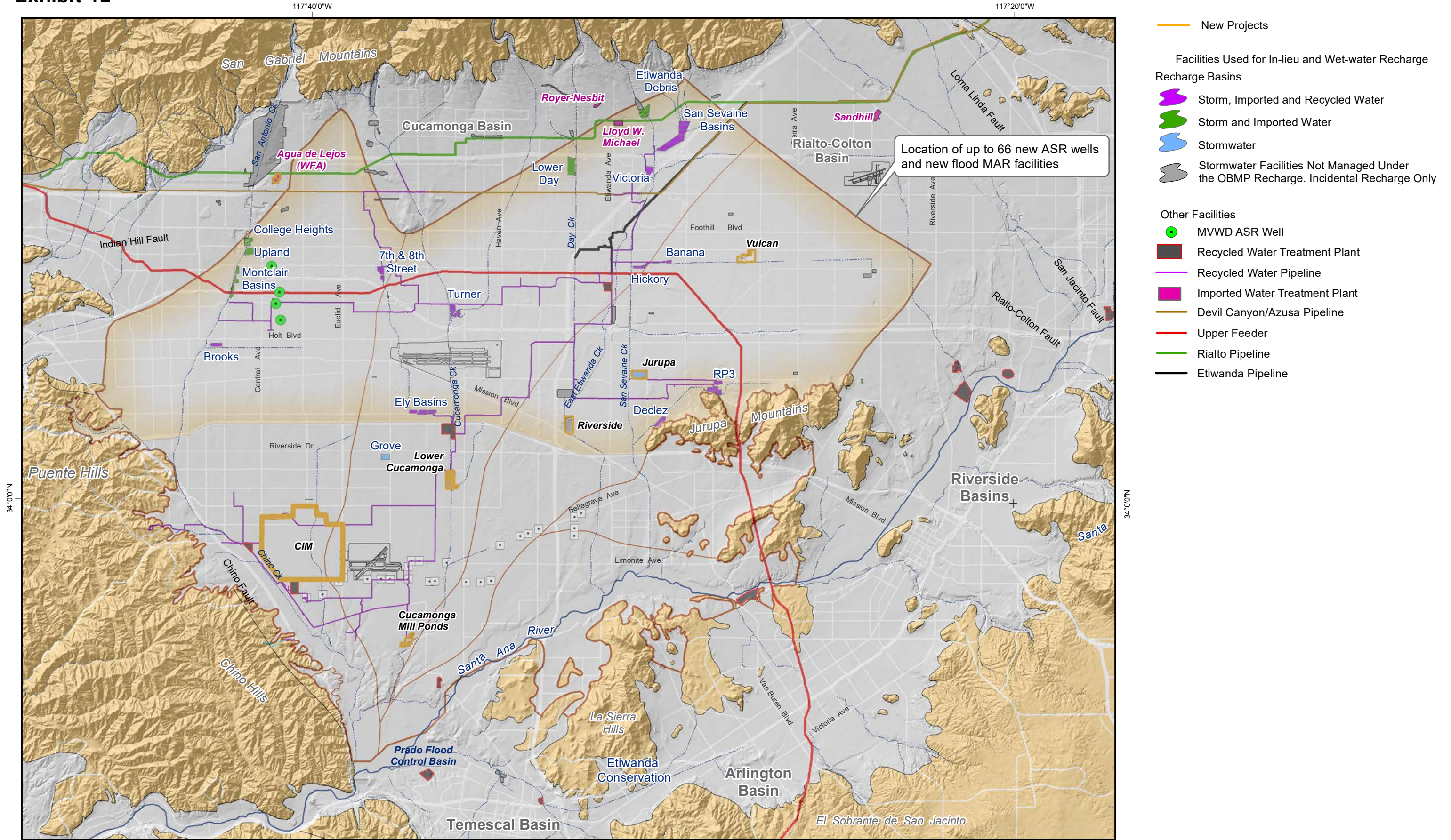
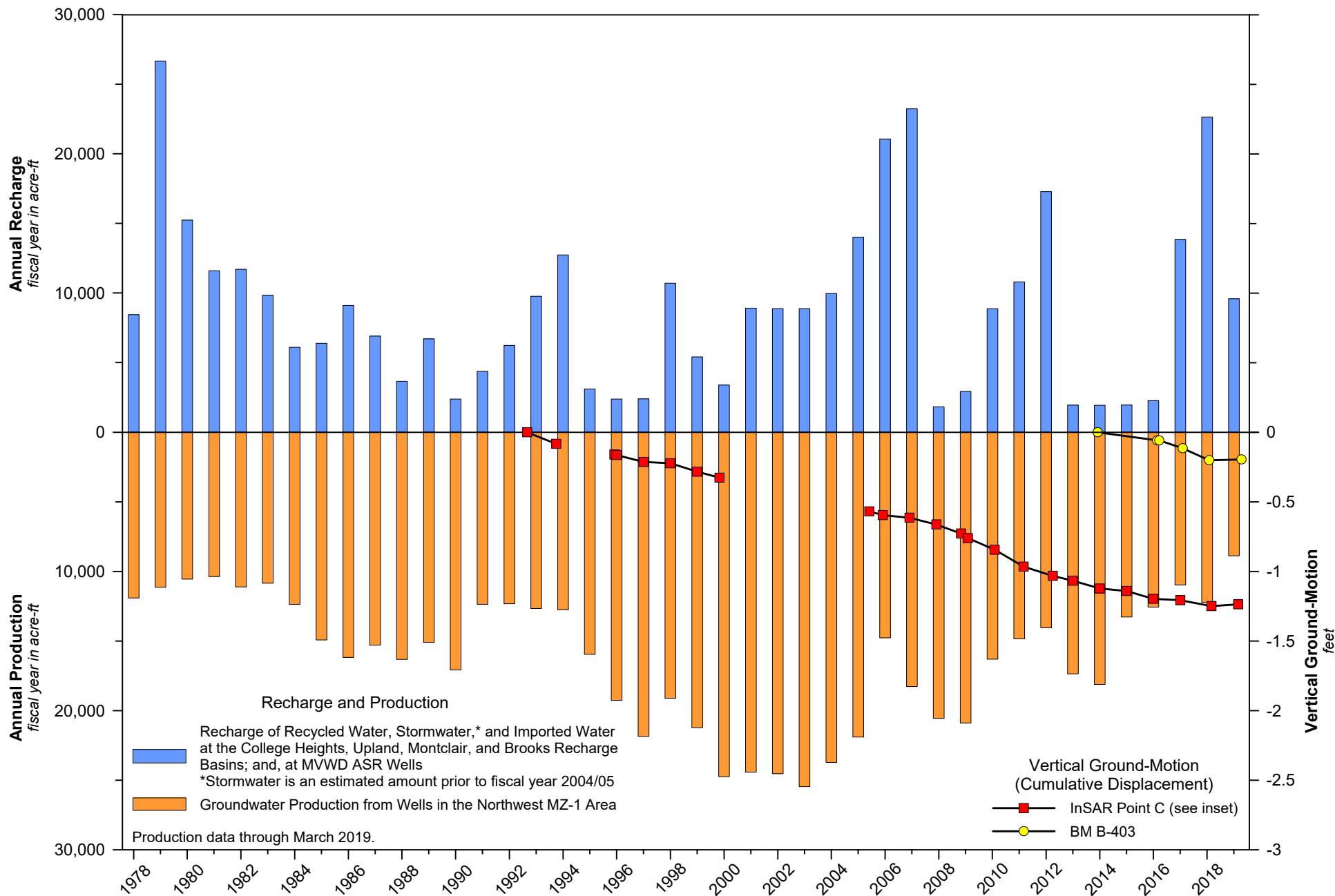
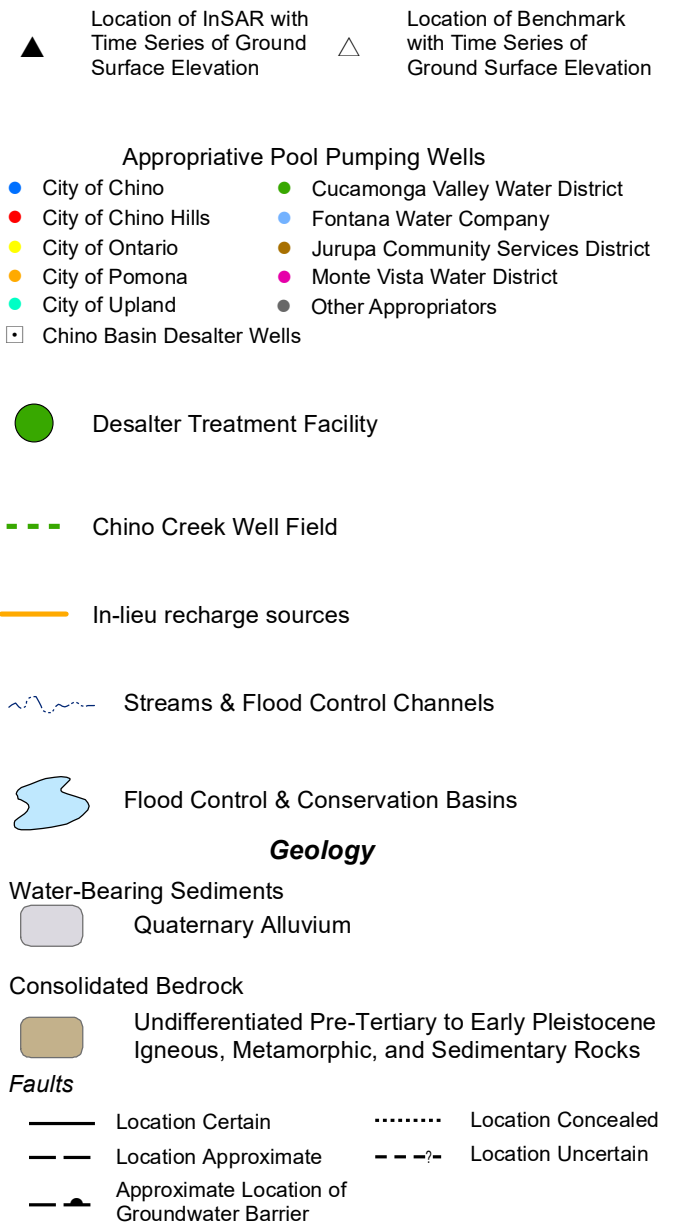
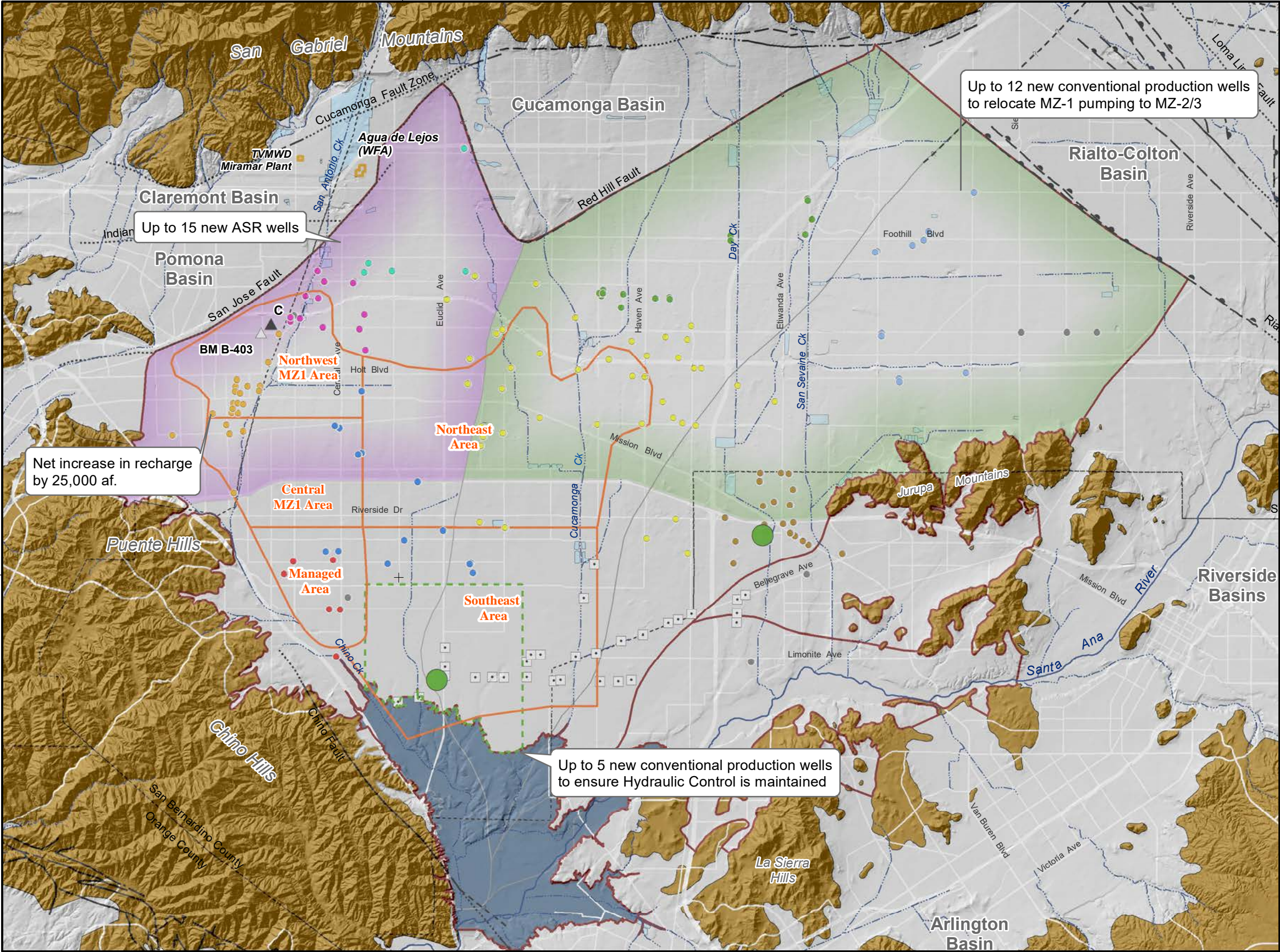


Exhibit 13

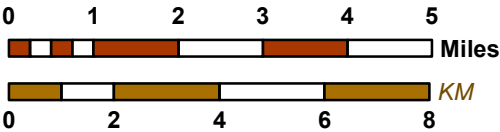




Prepared by:



Author: LG
Date: 12/21/2022
Document Name: 14.) Map of Chino Basin Concerns_new



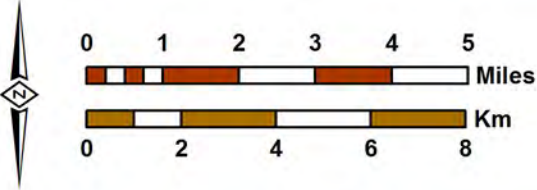
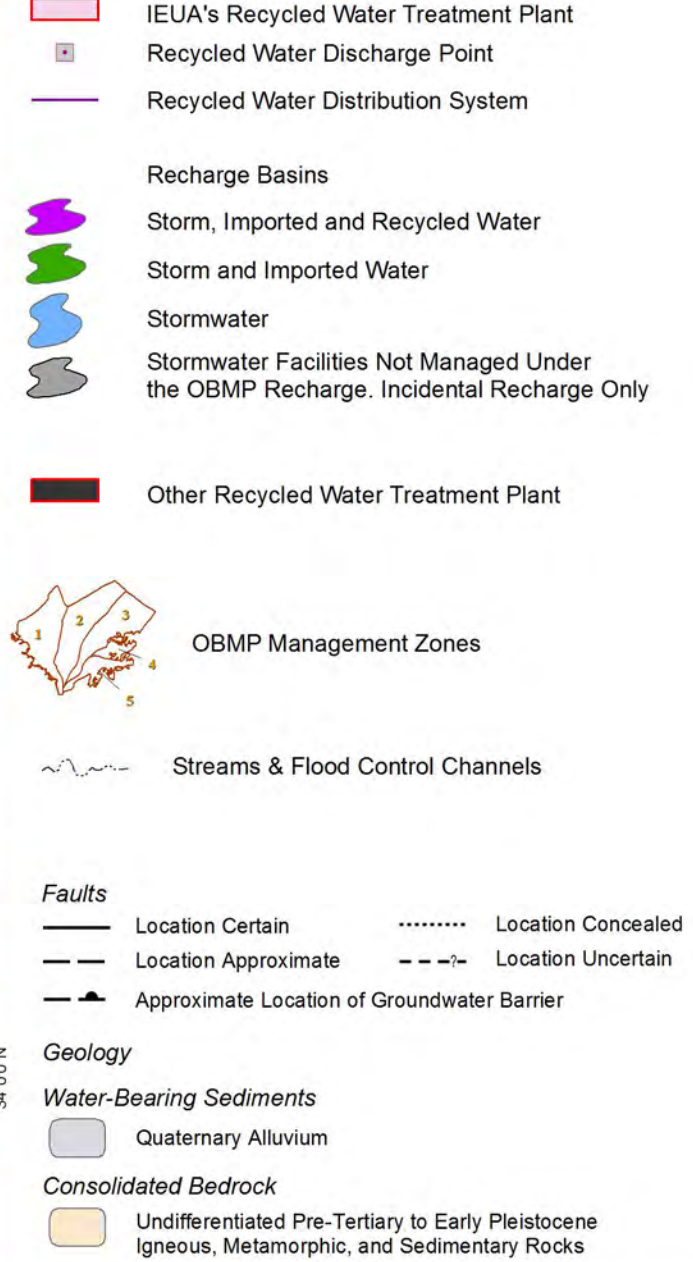
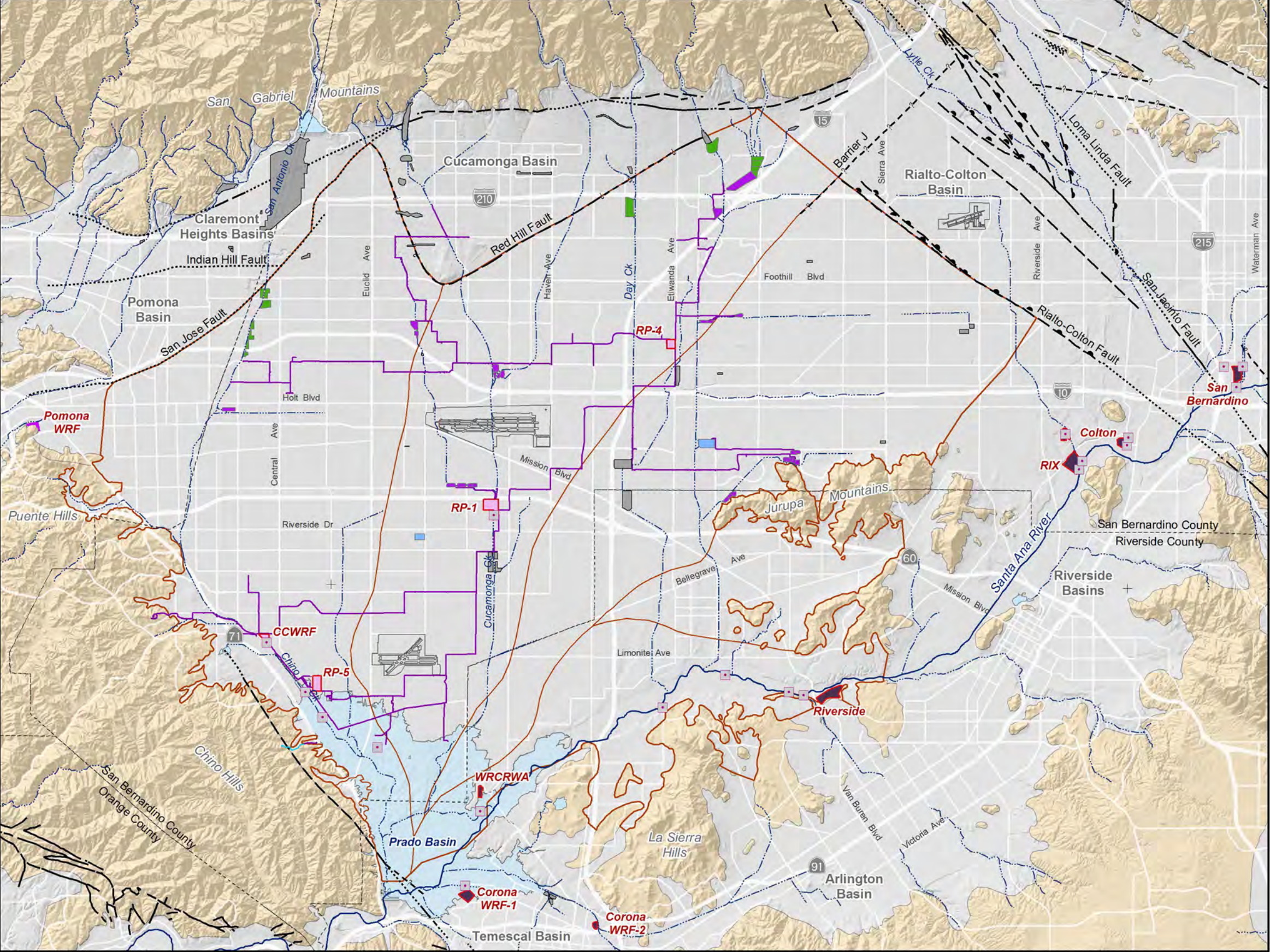
Prepared for:
OBMP 2020 Update
Project Description

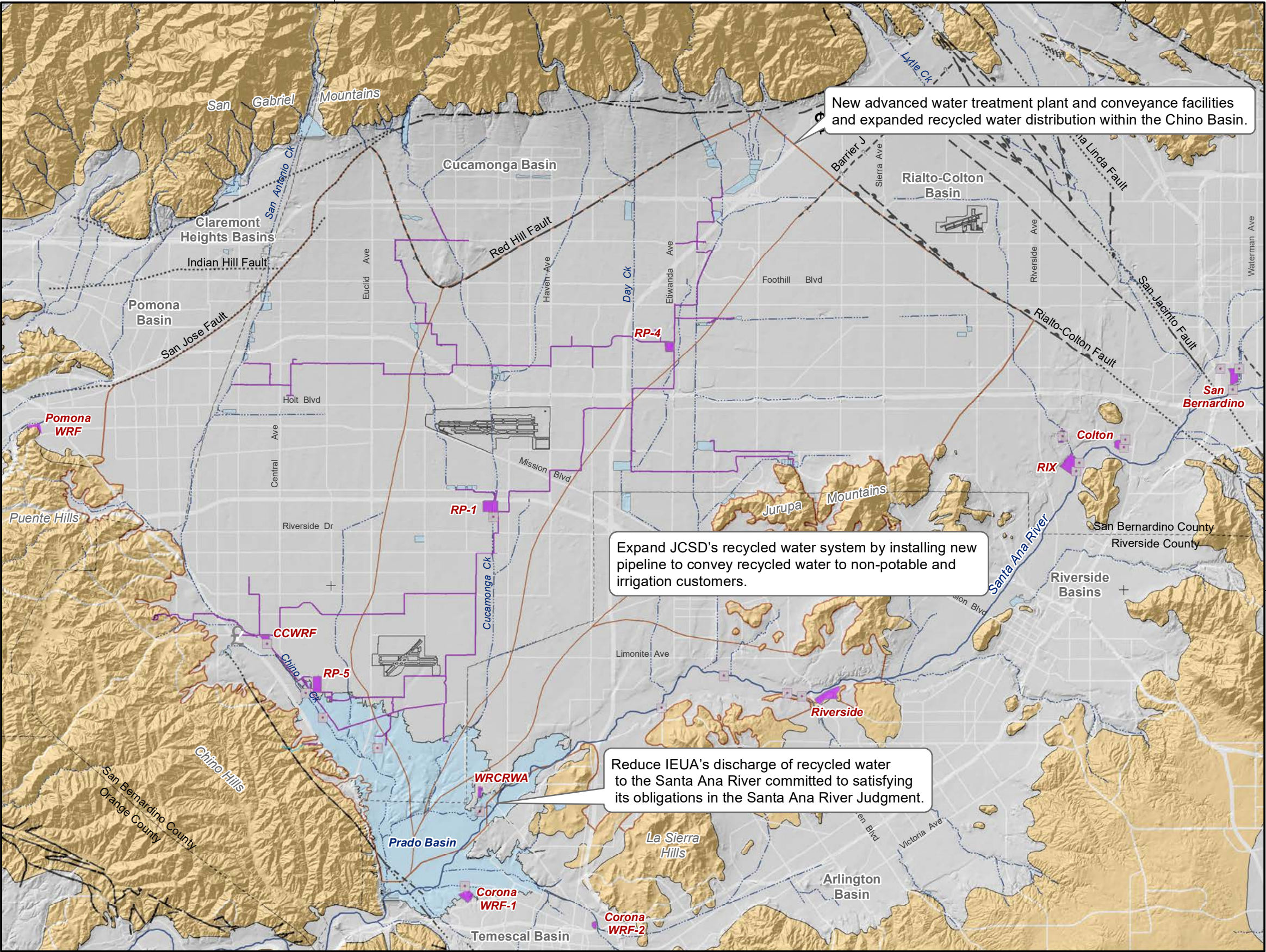


Chino Basin
OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern

Figure 1-1

Exhibit 15





Recycled Water Treatment Plant

Recycled Water Discharge Point

Recycled Water Distribution System

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Faults

Location Certain

Location Concealed

Location Approximate

Location Uncertain

Approximate Location of Groundwater Barrier

Geology

Water-Bearing Sediments

Quaternary Alluvium

Consolidated Bedrock

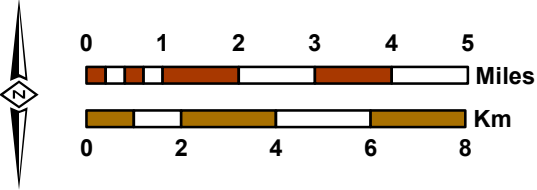
Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks



Prepared by:



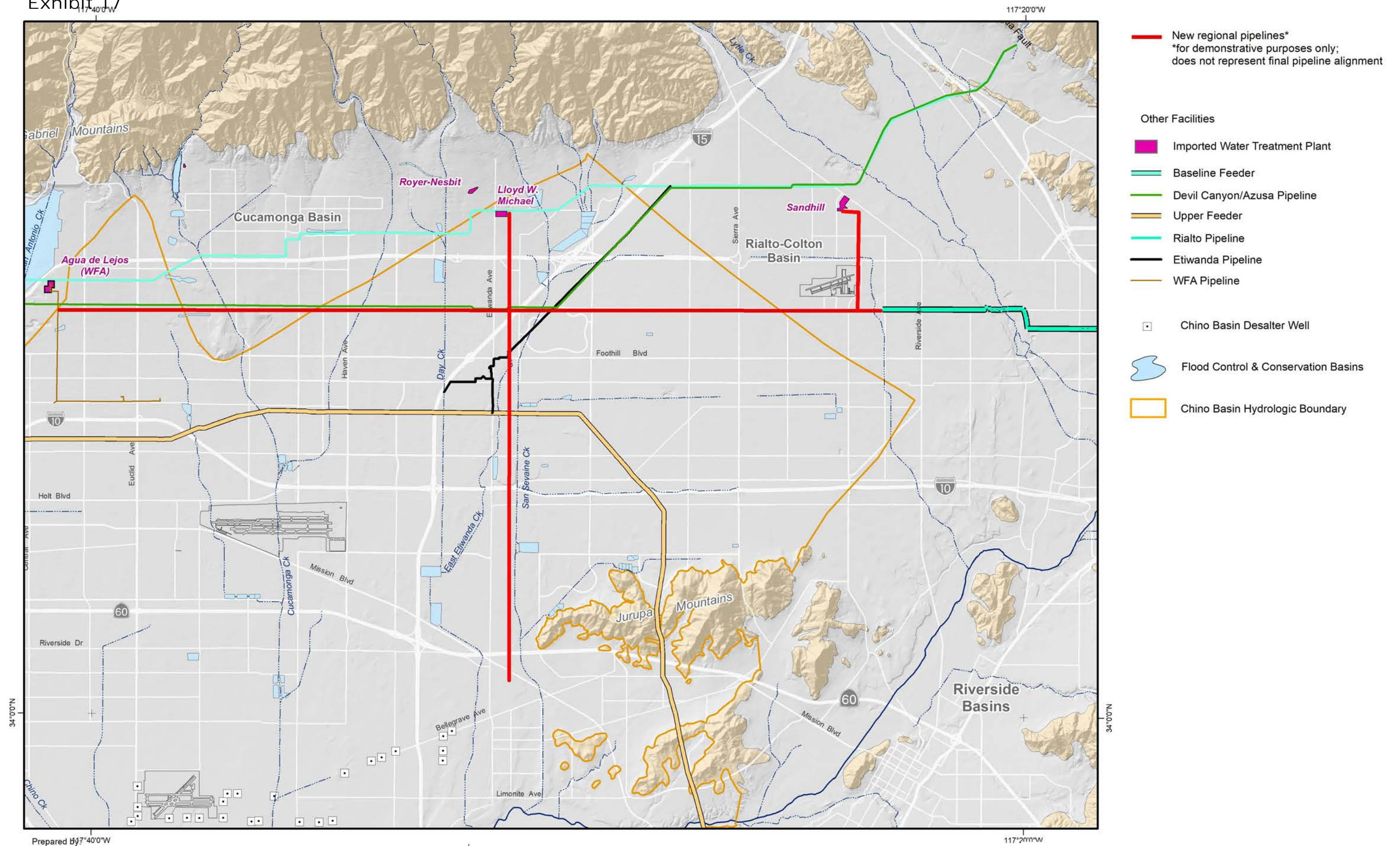
Author: SO
Date: 12/21/2022
File: 16.) New RW Treatment Plants.mxd

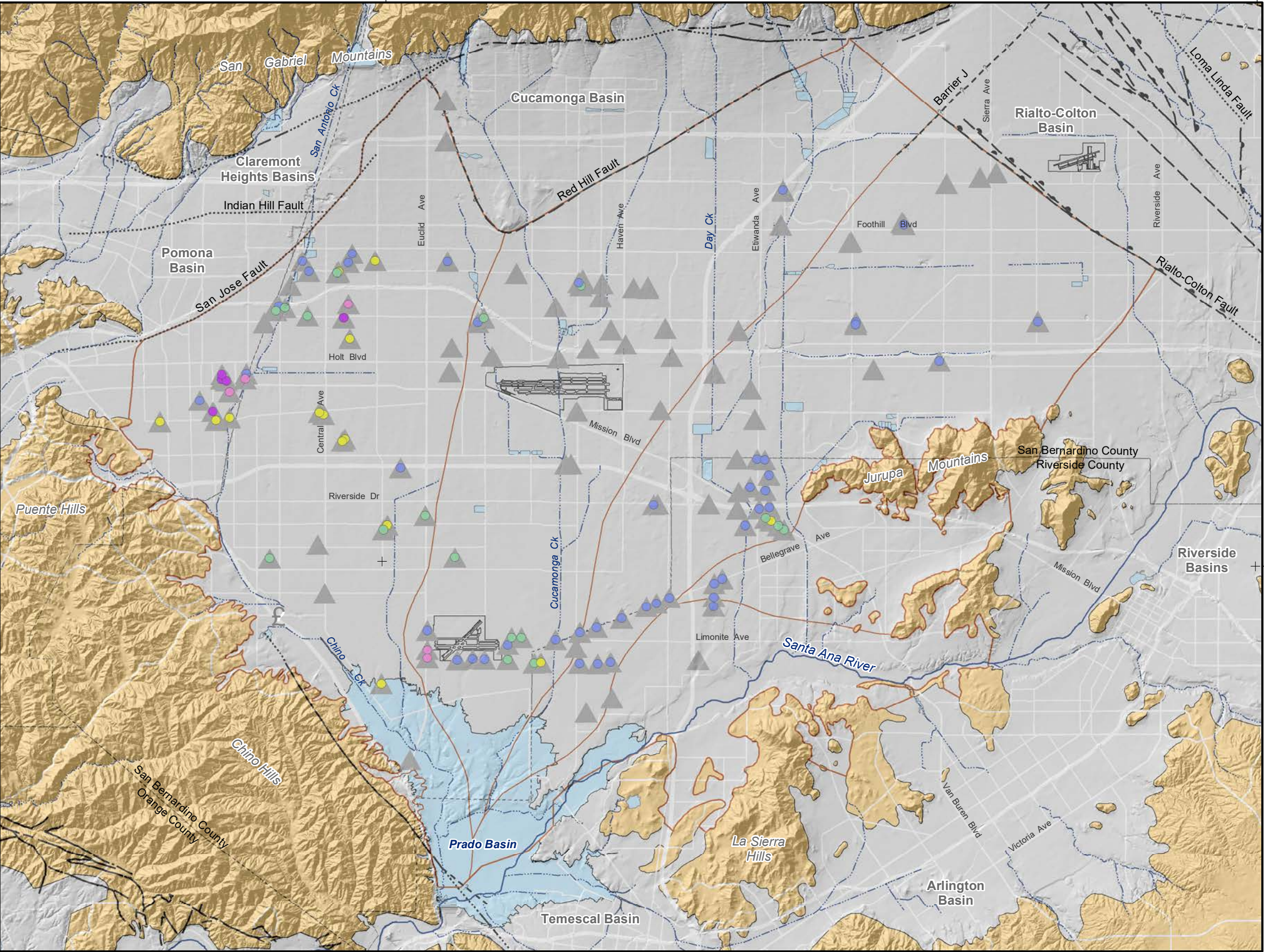


Prepared for:
OBMP 2020 Update
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Recycled Water Treatment Plants
and Discharge Points





▲ Active Municipal Supply Well

Number of Contaminants that Exceed a MCL

- 1 (45 Wells)
- 2 (19 Wells)
- 3 (14 Wells)
- 4 (5 Wells)
- 5 (5 Wells)

Note: Data shown in this map is for raw groundwater and is not representative of the drinking water supplies served in the Chino Basin.



OBMP Management Zones



Streams & Flood Control Channels



Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

□ Quaternary Alluvium

Consolidated Bedrock

□ Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

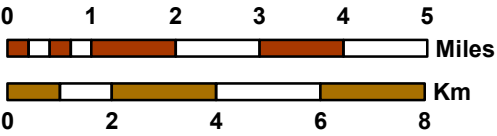
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- Location Concealed
- - - Location Approximate
- - - Location Uncertain
- - - Approximate Location of Groundwater Barrier



Prepared by:



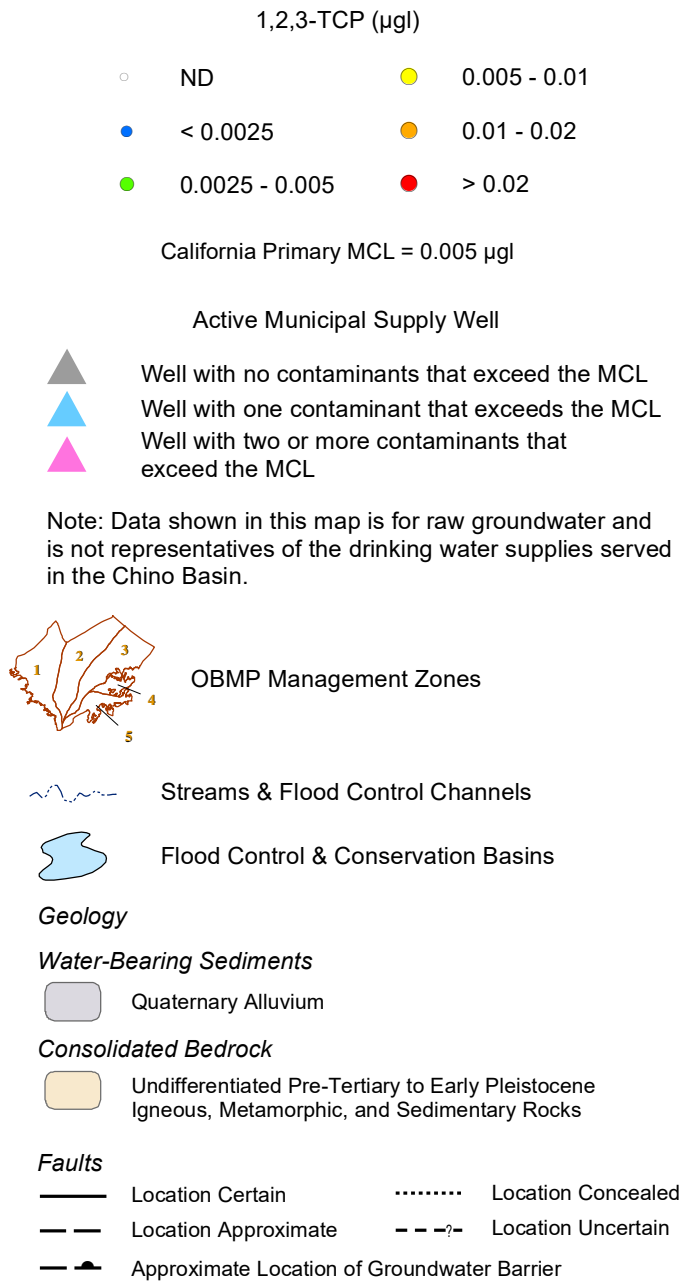
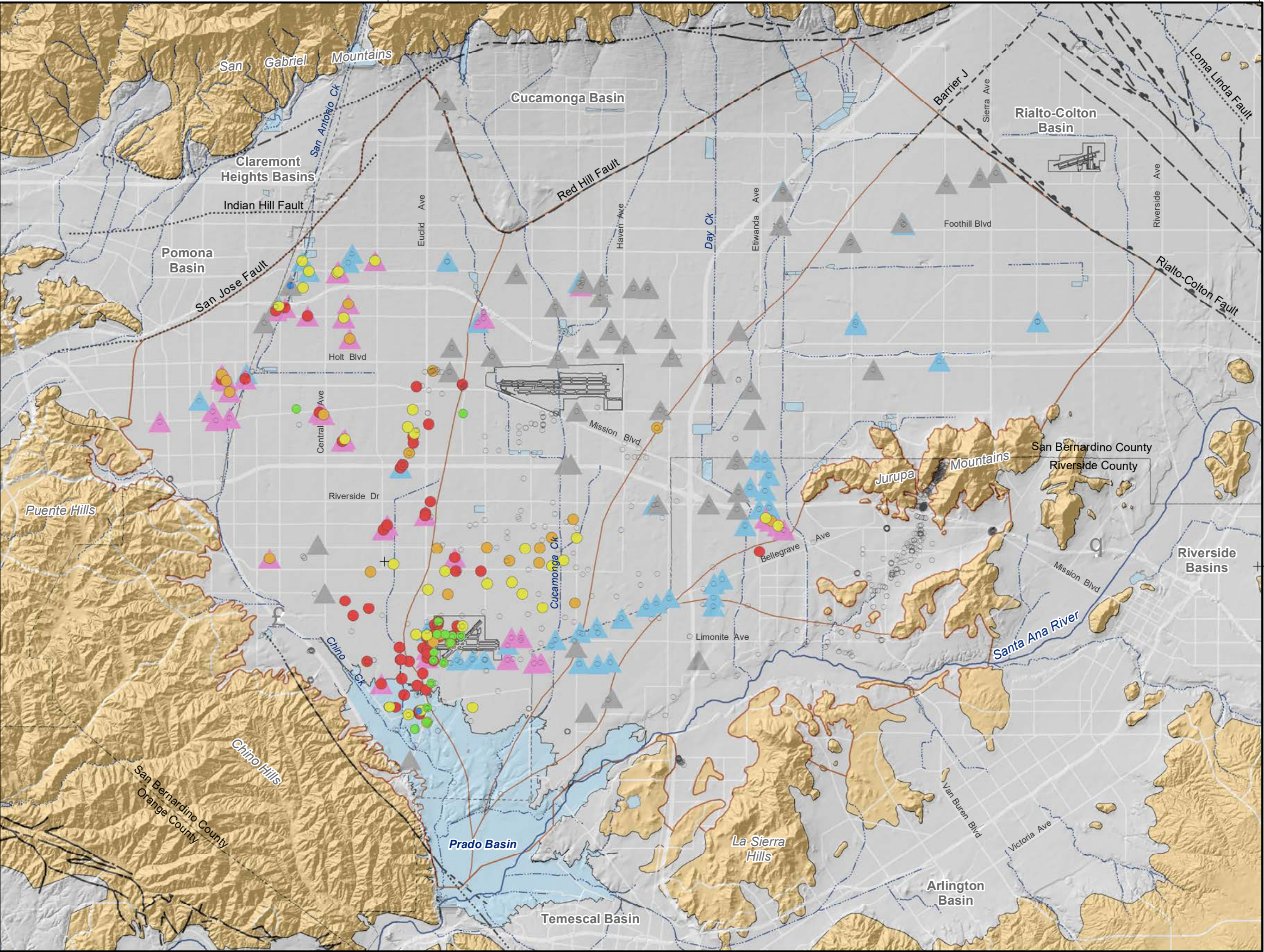
Author: CS
Date: 12/21/2022
File: 18.) Exceedance_Count.mxd



Prepared for:
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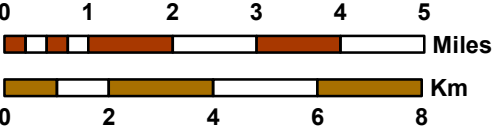
Occurrence of Drinking Water Contaminants in Active Municipal Supply Wells in Chino Basin
2014-2018



Prepared by:



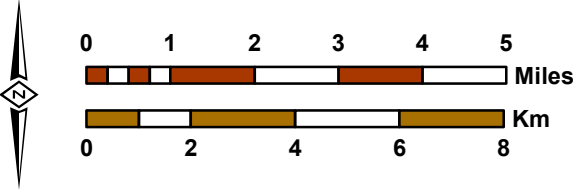
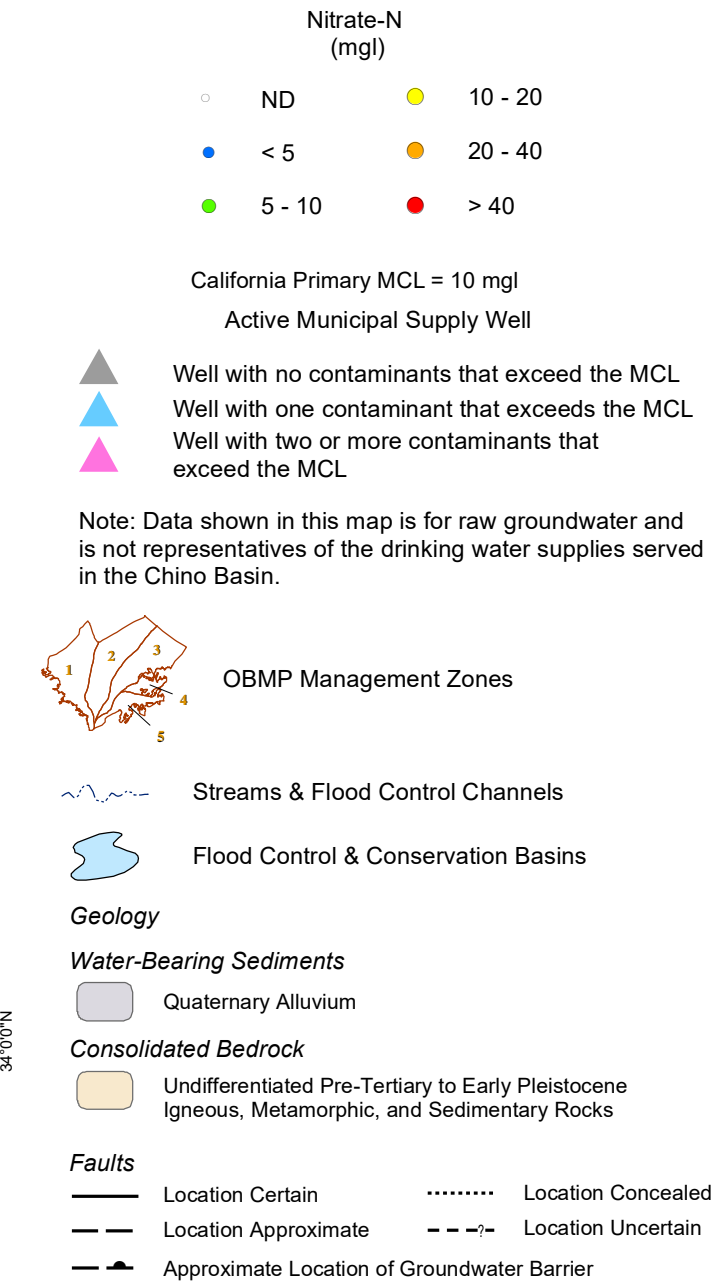
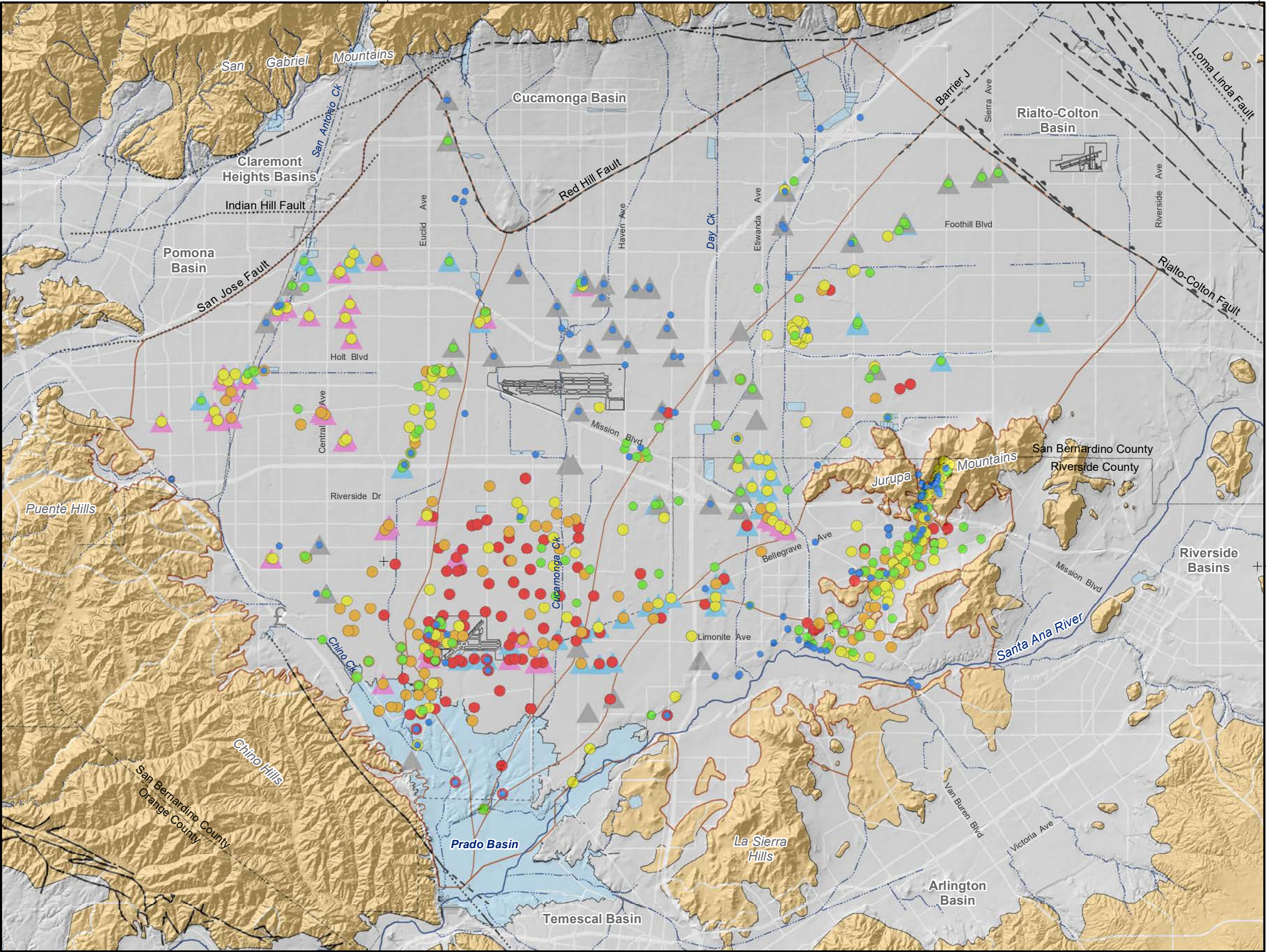
Author: CS
Date: 12/21/2022
File: 19.) 1,2,3-TCP_2014-2018.mxd

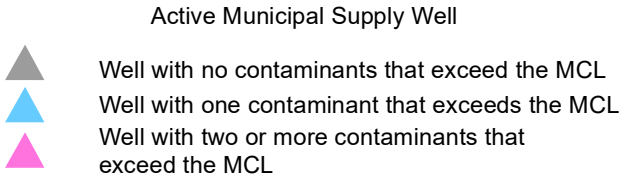
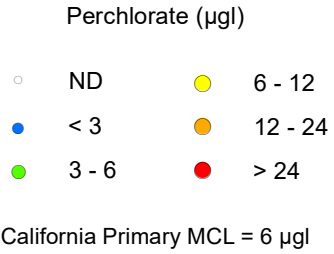
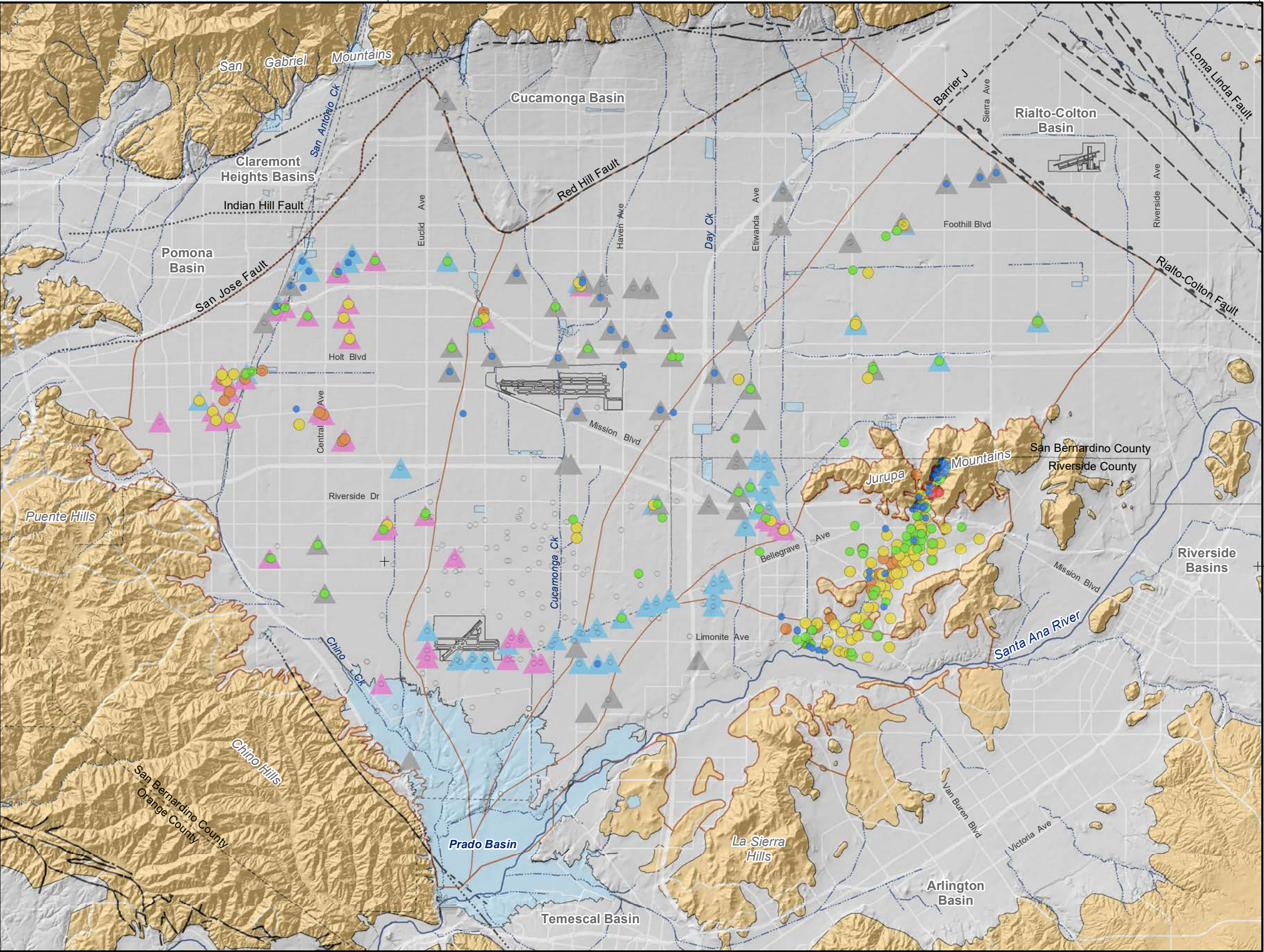


Prepared for:
OBMP 2020 Update
Scoping Report

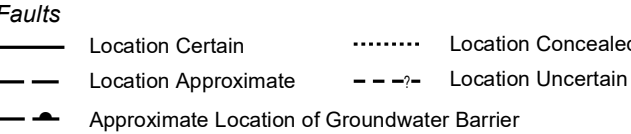
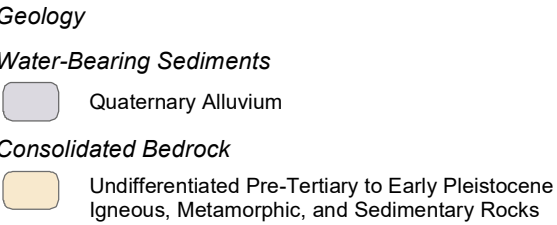
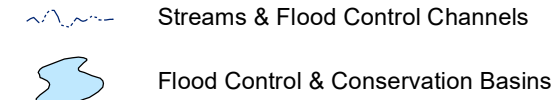


**Maximum 1,2,3-Trichloropropane
(1,2,3-TCP) Concentration**
2014-2018

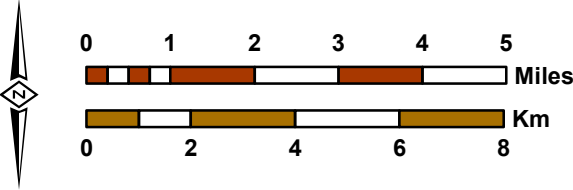




Note: Data shown in this map is for raw groundwater and is not representative of the drinking water supplies served in the Chino Basin.



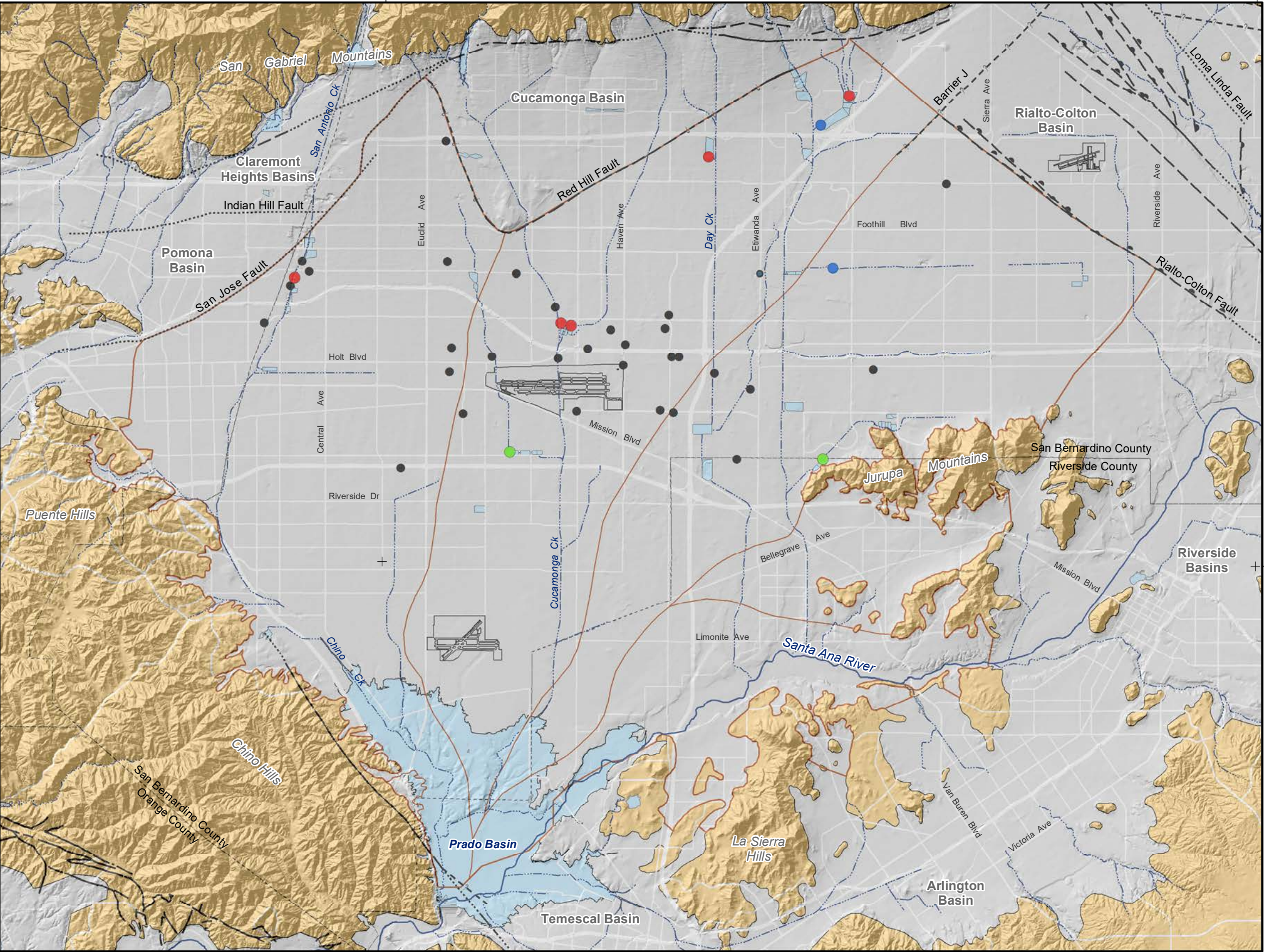
Author: CS
Date: 12/21/2022
File: 21.) CLO4_MCL_2014-2018.mxd



Prepared for:
OBMP 2020 Update
Scoping Report



Maximum Perchlorate Concentration
2014-2018



Occurrence of PFOA and PFOS in Groundwater

- Well not sampled for PFOA or PFOS
- Well sampled for UCMR3 between 2013-2015 using detection limits of 20 and 40 ngl, higher than the current notification levels (NL) of 5.1 for PFOA and 6.5 ngl for PFOS

Occurrence of PFOA and PFOS in Blending Sources for Recycled Water Recharge

- Source non-detect for PFOA and PFOS
- Source with detected concentration below the NLs of 5.1 and/or 6.5 ngl
- Source exceeding the NLs of 5.1 and/or 6.5 ngl
- Active municipal supply well

Note: Data shown in this map is for raw groundwater and is not representatives of the drinking water supplies served in the Chino Basin.

OBMP Management Zones

Streams & Flood Control Channels

Flood Control & Conservation Basins

Geology

Water-Bearing Sediments

- Quaternary Alluvium

Consolidated Bedrock

- Undifferentiated Pre-Tertiary to Early Pleistocene Igneous, Metamorphic, and Sedimentary Rocks

Faults

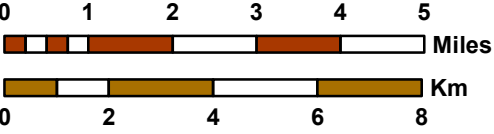
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- Location Concealed
- Location Approximate
- Location Uncertain
- Approximate Location of Groundwater Barrier



Prepared by:



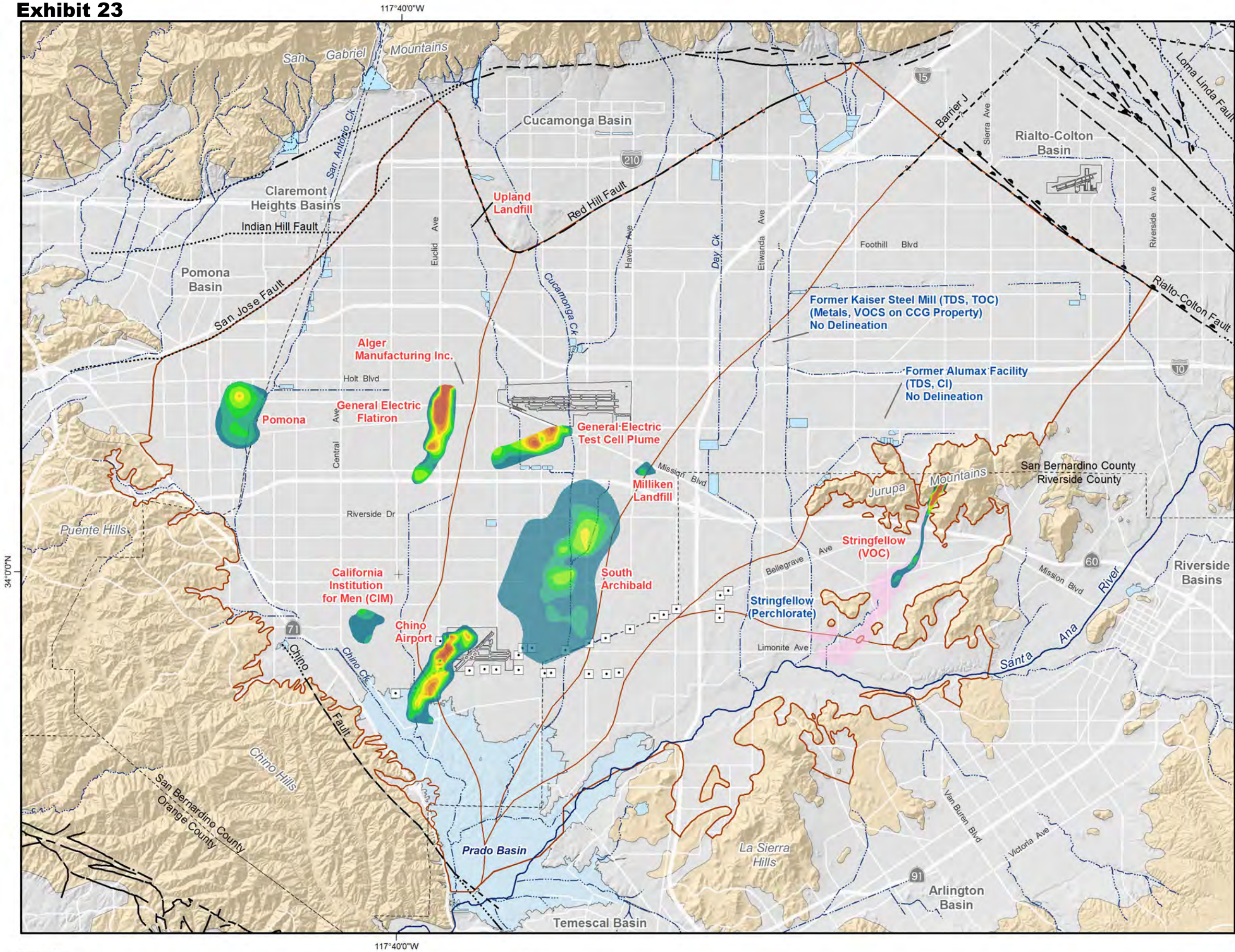
Author: CS
Date: 12/21/2022
File: 22.) PFAS_1998-2019.mxd



Prepared for:
OBMP 2020 Update
Scoping Report



PFOA and PFOS Concentrations
Through March 2019



VOC Concentration (µg/l)

> 0 to ≤ 5
> 5 to ≤ 10
> 10 to ≤ 20
> 20 to ≤ 50
> 50 to ≤ 100
> 100 to ≤ 200
> 200 to ≤ 500
> 500

The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE or PCE, based on the maximum concentration measured at wells over the five-year period of July 2013 to June 2018. The VOC plume illustrations were created with the grid function in Golden Software's Surfer 16 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 16. Interpretations of the plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

VOC Plumes Labeled in Red by Name

Other Plumes - Labeled in Blue by Name and Dominant Contaminant

The plumes characterized by color ramp represent Watermaster's most recent characterization of the primary contaminant of concern. The spatial extent of the VOC contamination was delineated by Watermaster based on the five-year maximum concentrations of the primary contaminant of concern for the period of July 2013 to June 2018. The primary VOC contaminant of concern in all of the plumes is TCE with the exception of the CIM plume, which is PCE. The VOC plumes associated with the Upland Landfill and the Alger Manufacturing Facility are of limited geographical extent at the scale of this map, so only their general locations are identified.

Other point-source contamination plumes in the Chino Basin include the former Kaiser Steel Mill, the former Alumax Facility, and the Stringfellow NPL Site, which are labeled by name and the primary contaminants associated with the sites. The former Kaiser Steel Mill TDS and total organic carbon (TOC) plume has not been delineated since 2008 (WEI, 2008b), and there are no plume delineations for the contamination associated with the former Kaiser Steel Mill CCG Property for metals and VOCs or the former Alumax Facility for TDS and chloride (Cl). The Stringfellow perchlorate plume shown here was delineated in the most recent remediation evaluation report for the site (Kleinfelder, 2018).

Exhibit 24

Exhibit 15

Limitations, Compliance Metrics, and Compliance Actions for the Chino Basin Maximum-Benefit Commitments

Source Waters with Water Quality Limitations in the Chino Basin SNMP	Water Quality Limitation	Compliance Metric	Action Limit	Required Compliance Action when Compliance Metric Exceeds the Action Limit
IEUA Recycled Water (Commitment 6)	TDS: 550 mg/l	The agency-wide, 12-month running-average concentration	When the compliance metric exceeds 545 mg/l for three consecutive months	Submit to the Regional Board for approval a plan and schedule to comply with the water quality limitations within 60 days.
	TIN: 8 mg/l		When the compliance metric exceeds 8 mg/l in any month	
Combined water sources used for managed recharge: storm, imported and recycled waters (Commitment 7)	TDS: 420 mg/l Nitrate: 5 mg/l	The five-year, volume-weighted running-average concentration of all sources of managed recharge	TDS: 420 mg/l Nitrate: 5 mg/l	Prepare a salt offset plan to mitigate salt loading from recharge greater than 420 mg/l. Offsets could include desalting of recycled water or groundwater, or increased recharge of low-TDS waters.
Groundwater (Commitment 9)	TDS: 420 mg/l	The volume-weighted concentration of groundwater in the Chino North GMZ (computed every three years)	TDS: 420 mg/l	Reduce the TDS concentration of IEUA recycled water to comply with the maximum-benefit TDS objective or prepare a salt offset plan to mitigate loading from the use of recycled water than 420 mg/l.
	Nitrate: 5 mg/l		n/a	This action limit was already exceeded when the objective was established. So long as all other maximum benefit commitments are met, no compliance action is required.

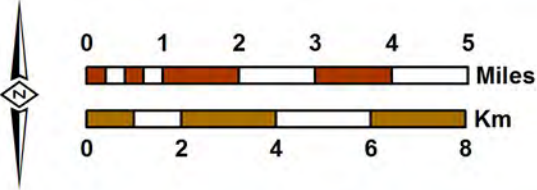
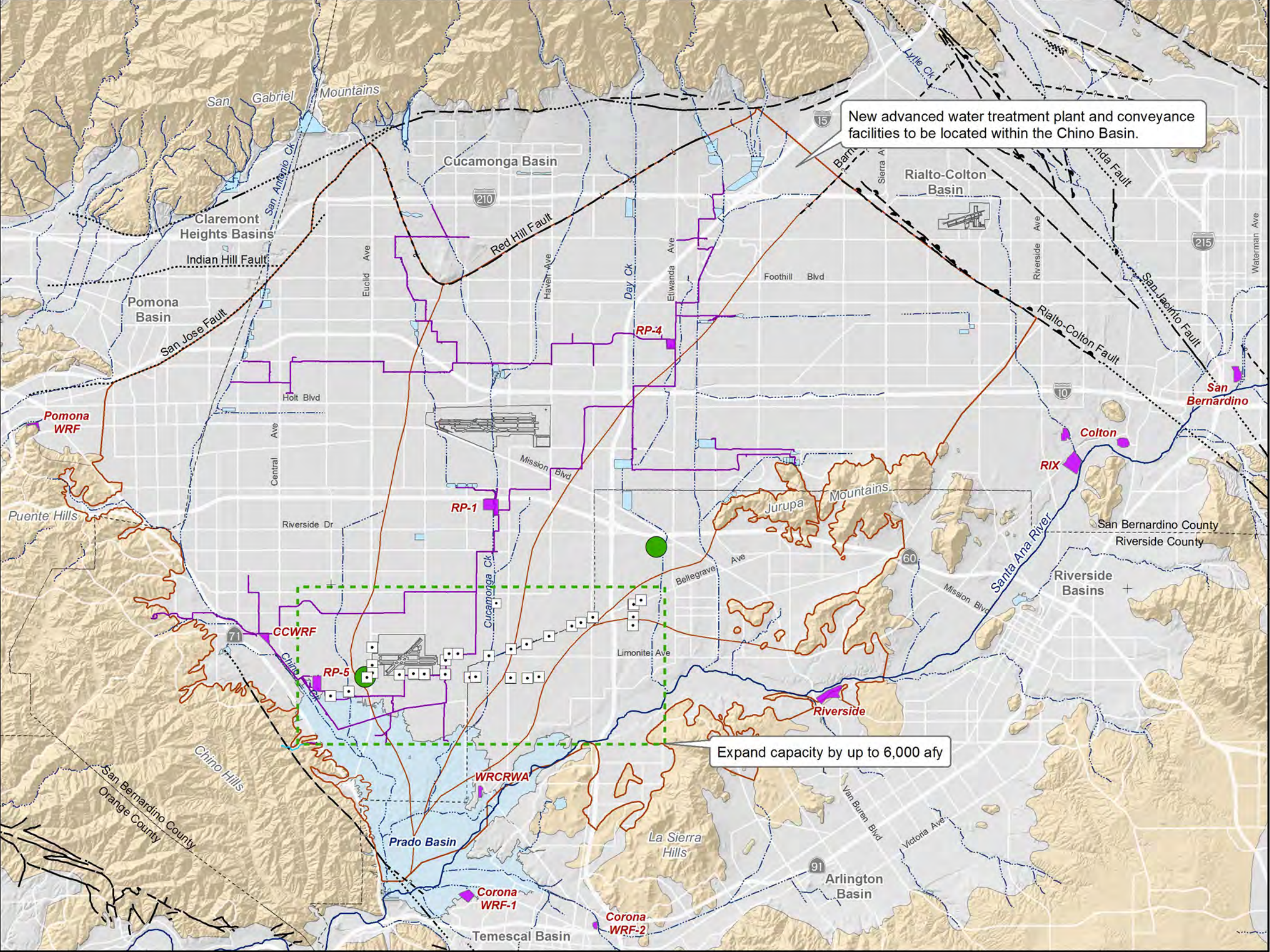


Exhibit 26

Exhibit 16
Ending Balances in Managed Storage in the Chino Basin¹
(af)

Fiscal Year ending June 30	Appropriative Pool				Overlying Non-Agricultural Pool			Total Managed Storage by Parties (8) = (7) + (4)	Dry Year Yield Program Storage (9)	Total Managed Storage (10) = (9) + (8)
	Carryover (1)	Excess Carryover (2)	Local Supplemental Storage (3)	Subtotal (4)	Carryover (5)	Excess Carryover (6)	Subtotal (7)			
2000	28,911	170,342		199,253	6,541	31,031	37,572	236,825	0	236,825
2001	15,940	77,907	92,813	186,660	5,301	32,330	37,631	224,291	0	224,291
2002	13,521	70,103	87,801	171,425	5,285	33,727	39,012	210,437	0	210,437
2003	18,656	71,329	81,180	171,165	6,743	36,850	43,593	214,758	7,738	222,496
2004	21,204	70,503	80,963	172,670	7,177	40,881	48,058	220,728	26,300	247,028
2005	21,289	76,080	88,849	186,218	7,227	45,888	53,115	239,333	38,754	278,087
2006	32,062	56,062	86,170	174,294	7,227	49,178	56,405	230,699	58,653	289,352
2007	34,552	50,895	83,184	168,631	7,084	51,476	58,560	227,191	77,116	304,307
2008	41,626	83,962	81,520	207,108	6,819	45,248	52,067	259,175	74,877	334,052
2009	42,795	101,908	79,890	224,593	6,672	46,600	53,272	277,865	34,494	312,359
2010	41,263	120,897	90,133	252,293	6,934	47,732	54,666	306,959	8,543	315,502
2011	41,412	146,074	98,080	285,566	6,959	49,343	56,302	341,868	0	341,868
2012	42,614	209,981	116,138	368,733	6,914	13,993	20,907	389,640	0	389,640
2013	39,413	225,068	116,378	380,859	7,073	15,473	22,546	403,405	0	403,405
2014	41,708	224,496	123,484	389,688	6,478	12,812	19,290	408,978	0	408,978
2015	40,092	239,517	127,994	407,603	6,823	12,225	19,048	426,651	0	426,651
2016	39,733	248,013	131,522	419,267	7,195	9,949	17,144	436,411	0	436,411
2017	38,340	260,682	143,552	442,575	7,226	8,292	15,519	458,093	6,315	464,408
2018	34,582	254,221	155,018	443,821	7,198	10,775	17,973	461,795	41,380	503,174
2019	38,605	279,033	166,406	484,044	7,227	12,004	19,231	503,275	45,969	549,244

1 -- WEI. (2019). Draft Storage Management Plan.

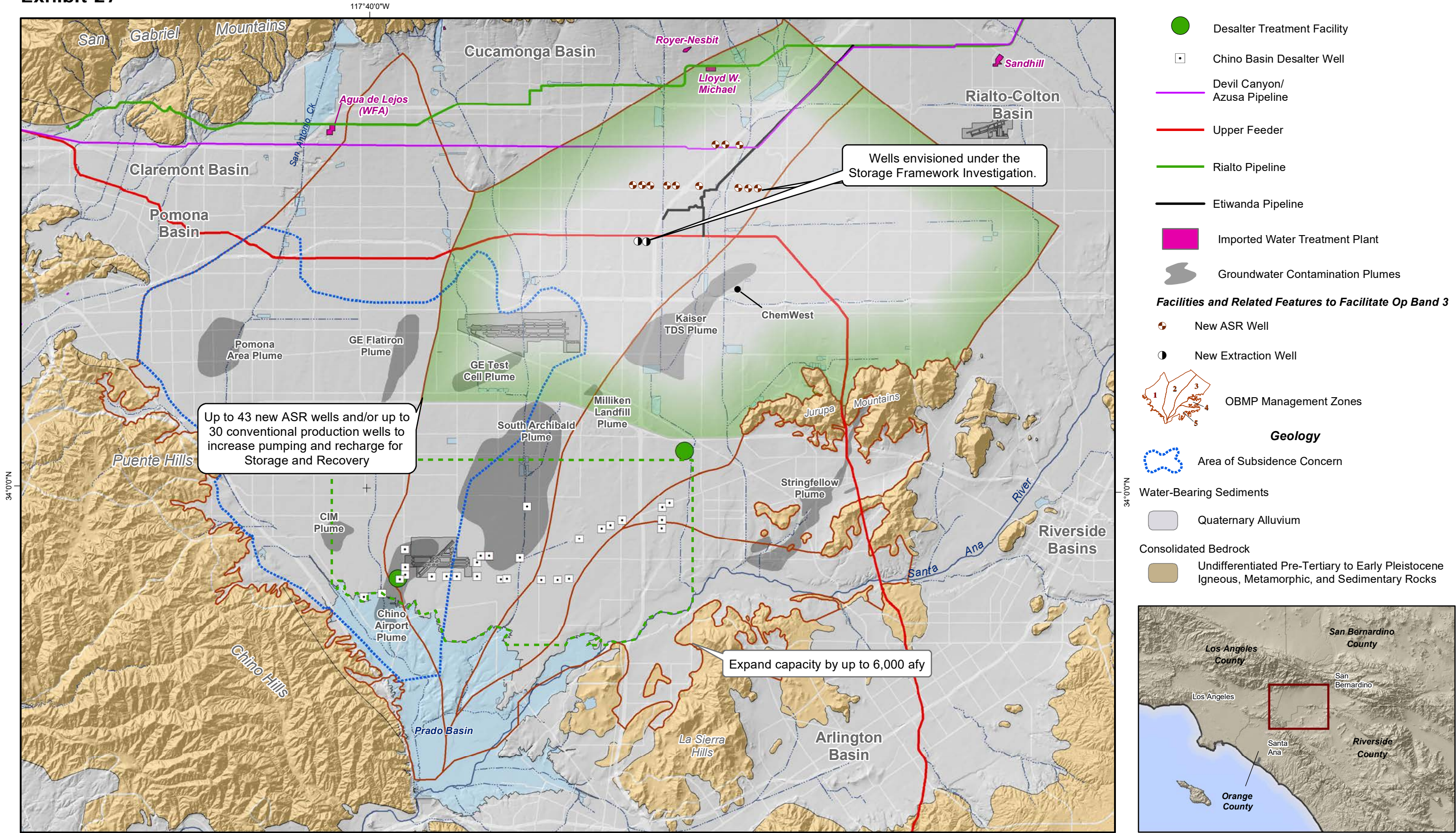
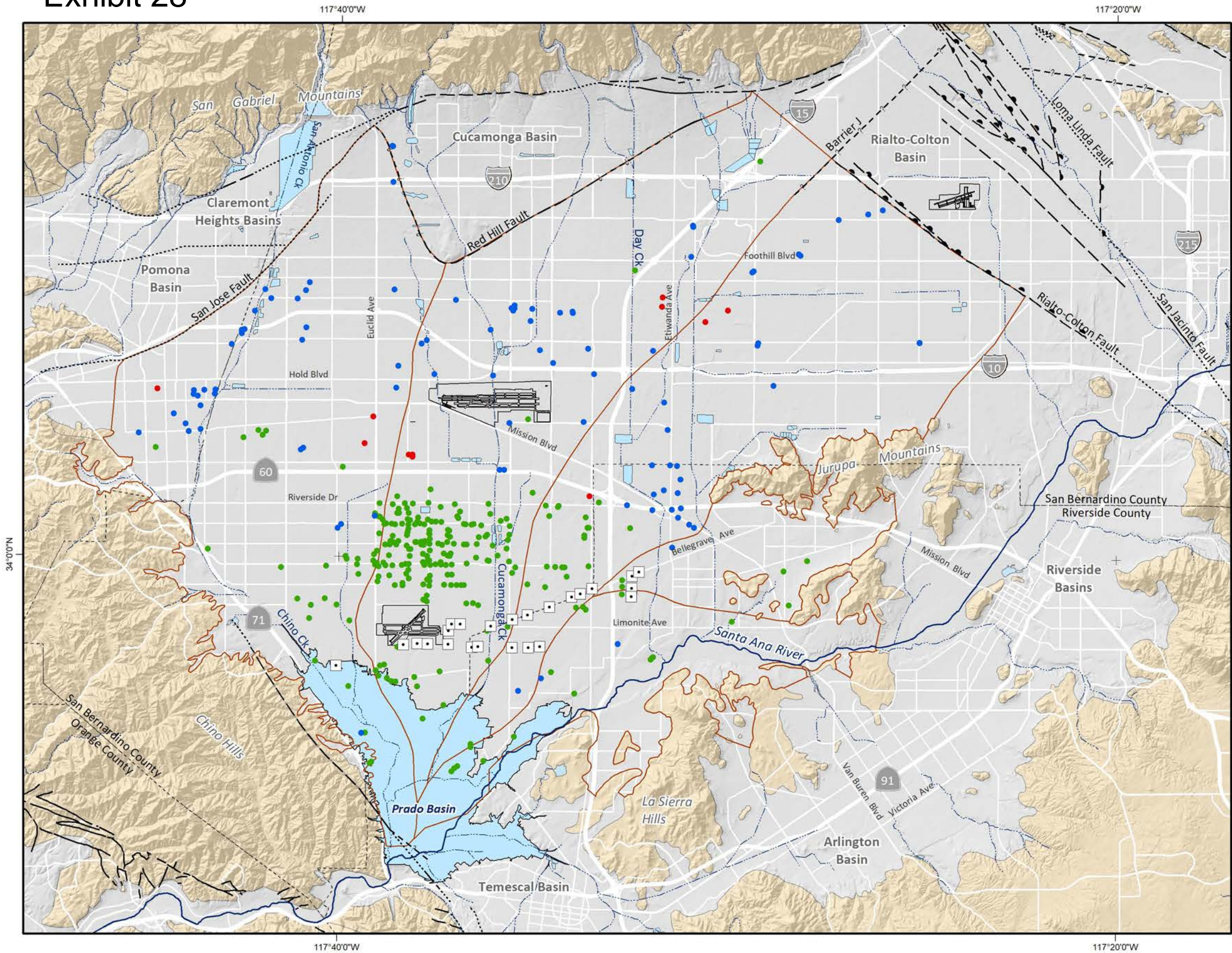


Exhibit 28



- Active Groundwater Production Wells in
Fiscal Year 2019/2020 by Pool
- Agricultural Pool (Pool 1 - 245 Wells)
 - Overlying Non-Agricultural Pool (Pool 2 - 11 Wells)
 - Appropriative Pool (Pool 3 - 96 Wells)
 - Chino Basin Desalter Authority (24 Wells)

Other key map features are described in the legend of
Exhibit 1-1.

During FY 2019/2020, 376 production wells were active
in the Chino Basin. Total production was about 149,000
af and was divided as follows:

- Agricultural Pool:**
15,700 af, 10 percent of total production
- Overlying Non-Agricultural Pool:**
2,300 af, two percent of total production
- Appropriative Pool:**
95,400 af, 64 percent of total production
- Chino Basin Desalters:**
35,600 af, 24 percent of total production

Exhibits 3-2 and 3-3 characterize how production has
changed over time across the Chino Basin.

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Chapter 4 figures are located at the end of each subchapter; not immediately following their reference in text.

4.1 BACKGROUND

The IEUA serves as wholesale imported water distributor for the Chino Basin, provides industrial/municipal wastewater collection and treatment and other related utility services for the western portion of the Santa Ana River watershed in the southwestern-most portion of San Bernardino County. The IEUA, in coordination with the Watermaster has prepared a RDSEIR to evaluate the potential significant environmental impacts that may result from implementation of the OBMPU by the Watermaster.

As previously discussed in **Chapter 3, Project Description**, Watermaster developed the OBMP but is not considered a public agency and therefore, does not conduct CEQA environmental review. Therefore, the IEUA serves as the Lead Agency for purposes of complying with the CEQA. Actual implementation of the OBMPU activities—outlined in **Chapter 3, Project Description**—may be carried out by the Watermaster or any of its Parties/Stakeholders in the Chino Basin through the planning period, 2020 through 2040. The Watermaster and Parties/Stakeholders of the OBMPU and regulatory agencies that will function as CEQA Responsible Agencies may be able to rely upon this CEQA document for future actions taken in support of the proposed Program or an individual project described in this environmental document. In some instances, further environmental review may be required, which will be determined on a project-by-project basis.

This chapter of the RDSEIR provides the detailed information used to forecast the type and significance of potential environmental impacts that implementation of the proposed Project and related actions could cause if the Project is implemented as described in **Chapter 3, Project Description**.

In the following subchapters, eight environmental topics will be evaluated. Of the 21 environmental topics identified in Appendix G of the CEQA Guidelines, only eight topics will be evaluated in this RDSEIR: Air Quality, Biological Resources, Cultural Resources, Energy, Greenhouse Gas, Hydrology and Water Quality, Tribal Cultural Resources, and Utilities and Service Systems. The other environmental topics are discussed in the Initial Study (See Appendix 8.2).

The environmental impact analysis section for each environmental topic is arranged in the following manner:

- a. An introduction that summarizes the specific issues of concern for each subchapter, as identified in the NOP scoping process;
- b. A summary of the current or existing environmental setting for each physical resource or human infrastructure system is presented as the baseline from which impacts will be forecast;
- c. Based on stated assumptions and identified criteria or thresholds of significance, the potential direct and indirect impacts of the proposed Project are forecast and the significance of impacts is assessed without applying any mitigation; recommended measures that can be implemented to substantially lessen potential environmental impacts are identified, and their effectiveness in reducing impacts to less than significant levels is described; and, potential cumulative environmental impacts are assessed under each environmental topic, where applicable; and,

- d. Significant and unavoidable environmental impacts and any significant impacts that may be caused by implementing mitigation measures are addressed.

To provide the reviewer with a criterion or set of criteria with which to evaluate the significance of potential environmental impacts, this document provides issue-specific criteria, i.e., thresholds of significance, for each topic considered in this RDSEIR. These criteria are either standard thresholds, established by law or policy (such as ambient air quality standards or thresholds of significance established by the South Coast Air Quality Management District), or project-specific evaluation thresholds used specifically for this Project. After comparing the forecasted physical changes in the environment that may be caused by implementing the proposed Project with the issue-specific significance threshold criterion or criteria, a conclusion is reached on whether the proposed Project has the potential to cause a significant environmental impact for the issue being evaluated.

Where appropriate and feasible, measures to reduce potential significant environmental impacts are identified and described in this section of the RDSEIR. Over the past several years, mitigation has evolved in scope and complexity. As environmental issues are addressed in a progressive and adaptive manner, previous measures developed to mitigate project-specific impacts are eventually integrated into local, regional, State and federal statutes, rules and regulations, such as the Uniform Building Code or Water Quality Management Plans. Mitigation measures that are incorporated into statutes or rules and regulations become mandatory requirements (not discretionary) and they no longer need to be identified as discretionary mitigation measures applicable to the Project, although they are often referenced to demonstrate that identified environmental impacts can and will be mitigated.

To the extent feasible, this document utilizes conservative (worst case) assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them. The many technical studies that were prepared for this document are incorporated into this chapter by summarizing the technical information to ensure technical accuracy. The Optimum Basin Management Program Update Notice of Preparation (NOP) was distributed to the public and through the State Clearinghouse on February 10, 2020. The publication of the NOP established the date for all baseline information contained in this document. The various technical studies prepared in support of this RDSEIR were all compiled and completed concurrent with or after the baseline date of February 10, 2020 and all analysis in this RDSEIR was compiled subsequent to this date.

These technical studies themselves are compiled in a separate volume of the RDSEIR (Volume 2). The information used and analyses performed to make impact forecasts are provided in depth in this separate volume to allow reviewers to follow a chain of logic for each impact conclusion and to allow the reader to reach independent conclusions regarding the significance of the potential impacts described in the following subchapters.

As discussed in Chapter 2, this RDSEIR is being recirculated because significant new information, as defined in CEQA Guidelines Section 15088.5, has been added to the RDSEIR since the publication of the DSEIR, including but not limited to changes to the project description, changes to the Chino Basin Safe Yield, as approved by the Court, the safe storage capacity modification analyzed in the 2020 LSLS Addendum, and revision to the Watermaster groundwater model (the 2020 CVM). Furthermore, there are new significant impacts to Air Quality as a result of exceeding the SCAQMD threshold for NO_x identified under this RDSEIR.

4.2 AIR QUALITY

4.2.1 Introduction

The *Air Quality Impact Analysis Optimum Basin Management Program Update, Chino Basin, California* dated April 24, 2023 was prepared by Gerrick Environmental to evaluate the potential impacts to air quality associated with construction and operation of the facilities proposed as part of the OBMPU. A copy of the Air Quality Impact Analysis (AQIA) is provided as Appendix 2a of Volume 2 of this RDSEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.¹

The analysis contained in the 2000 OBMP PEIR, while still applicable, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated for construction related air quality emissions, and significant and unavoidable for operational emissions. Not only have regulations evolved, but the technology to assess the emissions generated by the types of facilities proposed under the OBMPU has progressed since the 2000 OBMP PEIR was certified. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations.

The OBMPU is anticipated to be implemented over a planning horizon of 20 years, 2020 - 2040. The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities supporting the 9 Program Elements that make up the OBMPU. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Project Category 4: Desalters and Water Treatment Facilities.

A detailed description of the construction and operational activities associated with implementation of the OBMPU is included in the **Chapter 3, Project Description** of this RDSEIR.

The issues pertaining to Air Quality will be discussed below as set forth in the following framework:

- 4.2.1 Introduction
- 4.2.2 Air Quality Setting
- 4.2.3 Regulatory Setting
- 4.2.4 Thresholds of Significance
- 4.2.5 Environmental Impact Analysis
- 4.2.6 Avoidance, Minimization and Mitigation Measures
- 4.2.7 Cumulative Impacts
- 4.2.8 Unavoidable Significant Impacts

¹ A previous air quality impact analysis was prepared for the Project, reflecting the 2020 Project Description for the OBMPU. Much of the regulatory setting, air quality setting, and background data found in this report is relevant to this Recirculated RDSEIR and some text from this report has been abstracted in this Subchapter. This report can be found at the following link: https://files.ceganet.opr.ca.gov/259133-3/attachment/UN4edlmlEwwGdBpoFUkdUjm69bVTqBr1tgPpm7_20HPQd6ESpjHvjUkYsl0OiyAGhNC16A6wBajEKMBV0 (accessed 08/04/23)

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No comments were received at the scoping meeting or during the NOP Comment Period that pertain to Air Quality.

4.2.2 Air Quality Setting

4.2.2.1 South Coast Air Basin

The Program area is located in the South Coast Air Basin (SCAB) within the jurisdiction of South Coast Air Quality Management District (SCAQMD). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and State air quality standards. The Program area is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward to the Palo Verde Valley.

4.2.2.2 Regional Climate and Wind Patterns

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest

month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO₂) to sulfates (SO₄) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

Winds across the Program area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storm fronts moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NOX) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Thus, winter is a period of high levels of primary pollutants along the coastline.

The distinctive climate of the Program area and the SCAB is determined by its terrain and geographical location. The SCAB is located on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

4.2.2.3 Criteria Pollutants

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible exposure levels. Criteria pollutants, their typical sources, and health effects are identified below:

**Table 4.2-1
CRITERIA POLLUTANTS**

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O ₃), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O ₂) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O ₂ transport and competing with O ₂ to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O ₂ supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O ₂ deficiency) as seen at high altitudes.

Criteria Pollutant	Description	Sources	Health Effects
SO ₂	SO ₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO ₂ oxidizes in the atmosphere, it forms SO ₄ . Collectively, these pollutants are referred to as sulfur oxides (SO _x).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO ₂ can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO ₂ . In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO ₂ . Animal studies suggest that despite SO ₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO ₂ levels. In these studies, efforts to separate the effects of SO ₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO _x	NO _x consist of nitric oxide (NO), nitrogen dioxide (NO ₂) and nitrous oxide (N ₂ O) and are formed when nitrogen (N ₂) combines with O ₂ . Their lifespan in the atmosphere ranges from one to seven days for NO, to 170 years for N ₂ O. NO _x is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO ₂ is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO ₂ is the most abundant in the atmosphere. As ambient concentrations of NO ₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO ₂ than those indicated by regional monitoring station.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO ₂ at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO ₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO ₂ considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune

Criteria Pollutant	Description	Sources	Health Effects
			functions. The severity of lung tissue damage associated with high levels of O ₃ exposure increases when animals are exposed to a combination of O ₃ and NO ₂ .
O ₃	O ₃ is a highly reactive and unstable gas that is formed when VOCs and NO _x , both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O ₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO _x react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O ₃ effects. Short-term exposure (lasting for a few hours) to O ₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O ₃ levels are associated with increased school absences. In recent years, a correlation between elevated ambient O ₃ levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O ₃ levels. O ₃ exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O ₃ may be more toxic than exposure to O ₃ alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM ₁₀ : A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduced visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it	Sources of PM ₁₀ include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO _x , SO _x , organics). Incomplete combustion of any fuel.	A consistent correlation between elevated ambient fine particulate matter (PM ₁₀ and PM _{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality,

Criteria Pollutant	Description	Sources	Health Effects
	<p>should be noted that PM₁₀ is considered a criteria air pollutant.</p> <p>PM_{2.5}: A similar air pollutant to PM₁₀ consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO₄ formed from SO₂ released from power plants and industrial facilities and nitrates that are formed from NO_x released from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM_{2.5} is a criteria air pollutant.</p>	<p>PM_{2.5} comes from fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_x, SO_x, organics).</p>	<p>reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.</p> <p>The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}.</p>
VOC	<p>VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O₃ to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.</p>	<p>Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.</p>	<p>Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.</p>
ROG	<p>Similar to VOC, ROG are also precursors in forming O₃ and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_x react in the presence of sunlight. ROG are a criteria pollutant since they are a precursor to O₃, which is a criteria pollutant. The terms ROG</p>	<p>Sources similar to VOCs.</p>	<p>Health effects similar to VOCs.</p>

Criteria Pollutant	Description	Sources	Health Effects
	and VOC (see previous) interchangeably.		
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Program does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Program is not anticipated to generate a quantifiable amount of Pb emissions.	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerve.	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

Source: South Coast Air Quality Management District, 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*.

4.2.2.4 Existing Air Quality

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in **Table 4.2-2**.

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the State and federal standards. At the time of this AQIA, the most recent State and federal standards were updated by the California Air Resources Board (CARB) on May ,4 2016, and are presented in **Table 4.2-2**. The air quality in a region is considered to be in attainment by the State if the measured ambient air pollutant levels for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, PM₁₀, and PM_{2.5} are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area.

**Table 4.2-2
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM₁₀)⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		–		
Fine Particulate Matter (PM_{2.5})⁹	24 Hour	–	–	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15.0 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–	–	
Nitrogen Dioxide (NO₂)¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO₂)¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Lead 8 ^{12,13}	30-Day Average	1.5 µg/m ³	Atomic Absorption	—	—	—
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: CARB 5/4/16

Footnotes:

- California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM₁₀, PM_{2.5}, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above 150 µg/m³, is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- On December 14, 2012, the national PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 j.tg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

4.2.2.5 Regional Air Quality

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O₃, particulate matter (PM₁₀ and PM_{2.5}), NO₂, and SO₂ which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the SCAB. On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See **Table 4.2-3** for attainment designations of the SCAB.

**Table 4.2-3
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB**

Criteria Pollutant	State Designation	Federal Designation
O ₃ – 1-hour standard	Nonattainment	--
O ₃ – 8-hour standard	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb ²	Attainment	Unclassifiable/Attainment

Note: See Appendix 2b, Volume 2 to this RDSEIR for a detailed map of State/National Area Designations within the SCAB

"-" = The national 1-hour O₃ standard was revoked effective June 15, 2005

4.2.2.6 Baseline Air Quality

The Project locale is primarily San Bernardino County but also extends slightly into Los Angeles County and Riverside County. Because the area is so large, centralized monitoring stations were used to infer generalized existing levels of air quality. Ambient air quality measurements conducted by the SCAQMD at the Upland monitoring station were used for regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide, PM₁₀, and nitrogen oxides. The Ontario monitoring station near Route 60 was selected for PM_{2.5}. **Table 4.2-4** provides a 4-year summary of the monitoring data for the major air pollutants compiled from these air monitoring stations. From these data the following conclusions can be drawn:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour State standard was violated on an average of 12 percent of all days in the last four years in the Project locale. The federal 8-hour standard has exceeded an average of 14 percent of all days within the same period and the State 8-hour standard has exceeded approximately 21 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. PM₁₀ levels have exceeded the State 24-hour standard on slightly less than four percent of all measurement days. The three times less stringent federal 24 hour-standard has not been exceeded once in the last four years.

² The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

3. A substantial fraction of PM₁₀ is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM_{2.5}). Both the frequency of violations of particulate standards, as well as high percentage of PM_{2.5}, are air quality concerns in the Project area. However, PM_{2.5} readings have infrequently exceeded the federal 24-hour PM_{2.5} ambient standard which has occurred on less than two percent of the measured days.
4. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the Project site because background levels throughout western San Bernardino County, never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO_x or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 4.2-4
PROJECT AREA AIR QUALITY MONITORING SUMMARY – 2018-2021
(DAYS STANDARDS WERE EXCEEDED AND MAXIMUM OBSERVED LEVELS)

Pollutant/Standard	2018	2019	2020	2021
Ozone				
1-Hour > 0.09 ppm (S)	25	31	82	42
8-Hour > 0.07 ppm (S)	52	52	114	81
8- Hour > 0.075 ppm (F)	32	34	87	50
Max. 1-Hour Conc. (ppm)	0.133	0.131	0.158	0.124
Max. 8-Hour Conc. (ppm)	0.111	0.107	0.123	0.100
Carbon Monoxide				
1-Hour > 20. ppm (S)	0	0	0	0
8-Hour > 9. ppm (S, F)	0	0	0	0
Max 8-Hour Conc. (ppm)	1.2	1.1	1.1	1.1
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.06	0.06	0.06	0.06
Respirable Particulates (PM-10)				
24-Hour > 50 µg/m ³ (S)	14/322	7/306	12/305	16/358
24-Hour > 150 µg/m ³ (F)	0/322	0/306	0/305	0/358
Max. 24-Hr. Conc. (µg/m ³)	73.	125.	63.	123.
Fine Particulates (PM-2.5) ¹				
24-Hour > 35 µg/m ³ (F)	5/357	5/364	4/356	13/362
Max. 24-Hr. Conc. (µg/m ³)	47.9	41.3	53.1	65.4

S=State Standard

F=Federal Standard

Source: South Coast AQMD

Upland Monitoring Station (5175) ,¹ Ontario Monitoring (near CA-60) Station for PM-2.5

4.2.3 Regulatory Setting

4.2.3.1 Federal Regulations

The EPA is responsible for setting and enforcing the NAAQS for O₃, CO, NO_x, SO₂, PM₁₀, and Pb. The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Program area include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O₃ and to adopt a NAAQS for PM_{2.5}. **Table 4.2-4** (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x. NO_x is a collective term that includes all forms of NO_x which are emitted as byproducts of the combustion process.

4.2.3.2 California Regulations

4.2.3.2.1 CARB

The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain State ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, it establishes standards for SO₄, visibility, hydrogen sulfide (H₂S), and vinyl chloride (C₂H₃Cl). However, at this time, H₂S and C₂H₃Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS.

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROG_s, NO_x, CO and PM₁₀. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

4.2.3.2.2 Title 24 Energy Efficiency Standards and California Green Building Standards

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went into effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that became effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided they establish a minimum 65% diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and became effective on January 1, 2020.

The 2019 Title 24 standards will result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State. For example, the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less

energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will use about 53% less energy than homes built under the 2016 standards. Nonresidential buildings (such as the OBMPU) will use approximately 30% less energy due to lighting upgrade requirements.

Because the OBMPU facilities will be constructed after January 1, 2020, the 2019 CALGreen standards are applicable to the OBMPU facilities and require, among other items:

- Short-term bicycle parking. If a new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles (5.106.5.2).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1).
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day (5.303.1.1 and 5.303.1.2).
- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

4.2.3.3 Regional and Local Regulations

4.2.3.3.1 2022 Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2022 AQMP, was adopted by the SCAQMD Governing Board on December 2, 2022. The 2022 AQMP was developed to address the requirements for meeting the 2015 8-hour O₃ standard. The 2022 AQMP builds upon measures already in place from previous AQMPs. It also includes a variety of additional strategies such as regulation, accelerated deployment of available cleaner technologies (e.g., zero emissions technologies, when cost-effective and feasible, and low NO_x technologies in other applications), best management practices, co-benefits from existing programs (e.g., climate and energy efficiency), incentives, and other FCAA measures to achieve the 2015 8-hour ozone standard. The 2022 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories. The 2022 AQMP requires CARB's adoption before submittal for the U.S. EPA's final approval, which is expected to occur sometime in 2023.

This analysis relies on the 2022 AQMP and incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2016 AQMP, including the approval of the new federal eight-hour ozone standard of 0.070 ppm that was finalized in 2015.

4.2.3.3.2 South Coast Air Quality Management District Rules and Regulations

To implement the AQMP, the SCAQMD develops and implements rules and regulations for emissions that may be generated by various uses and activities. The rules and regulations detail pollution-reduction measures that must be implemented during construction and operation of projects. Rules and regulations relevant to the Project include the following:

- Rule 203 (Permit to Operate): This rule requires that a permit to operate be obtained before operation or use any equipment that may cause the issuance of air contaminants. It would apply to portable generators used during construction.
- Rule 401 (Visible Emissions): This rule prohibits the discharge of visible air pollutant emissions from various sources as determined by shade and opacity criteria based on the Ringelmann Chart.

- Rule 402 (Nuisance): This rule prohibits the discharge of quantities of air contaminants or other material that causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- Rule 403 (Fugitive Dust Control): This rule includes various requirements to prevent, reduce, and mitigate the amount of particulate matter entrained in the ambient air from man-made fugitive dust sources.
- Rule 1113 (Architectural Coatings): This rule establishes VOC content limits for a variety of architectural coatings, including 50 grams per liter for flat and non-flat coatings.

4.2.3.3.4 General Plans

Although local actions have important implications for air quality, regulation of air quality occurs primarily at the federal, State, and regional levels. Local General Plans typically include several policies related to air quality that are directed at participating in regional collaboration with the applicable air district, achieving attainment of NAAQS and CAAQS, implementing the use of the applicable air district's thresholds of significance for CEQA analysis, and ensuring project-level compliance with applicable air district rules.

4.2.4 Thresholds of Significance

The OBMPU has been evaluated to determine if it will violate an air quality standard, contribute to an existing or projected air quality violation, or determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS and CAAQS. Additionally, the OBMPU has been evaluated to determine consistency with the applicable AQMP, exposure of sensitive receptors to substantial pollutant concentrations, and the impacts of odors. The significance of these potential impacts is described in the following section.

The criteria used to determine the significance of potential Program-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

- a) Conflict with or obstruct implementation of the applicable air quality plan?
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- c) Expose sensitive receptors to substantial pollutant concentrations?
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at **Table 4.2-5**. The SCAQMD's CEQA Air Quality Significance Thresholds (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

**Table 4.2-5
MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS**

Pollutant	Construction Regional Thresholds	Operational Regional Thresholds
NO _x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
PM _{2.5}	55 lbs/day	55 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

4.2.4.1 Primary Pollutants

Air quality impacts generally occur on two scales of motion: 1) near an individual source of emissions, or 2) a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM₁₀, an aggressive dust control program is required to control fugitive dust during construction.

4.2.4.2 Secondary Pollutants

Many pollutants require time to transform from a more benign chemical form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified number of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed the emission thresholds outlined in **Table 4.2-5** are recommended by the SCAQMD to be considered significant under the CEQA Guidelines.

4.2.4.3 CalEEMod

Facilities proposed as part of the OBMPU as a whole affect air quality through construction-source and operational-source emissions.

In June of 2021 the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and California air districts, released this version of California Emissions

Estimator Model (CalEEMod) Version 2020.40.0.³ The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation. Accordingly, the Version 2020.40.0 of CalEEMod has been used for the Project to determine its construction and operational air quality emissions. CalEEMod Computer Model Outputs from the model runs are provided in the Appendix within the AQIA, Appendix 2a, Volume 2 of this document.

4.2.5 Environmental Impact Analysis

4.2.5.1 a) Conflict with or obstruct implementation of the applicable air quality plan?

The Program area is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what used to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as State and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet State and federal ambient air quality standards.

Currently, several of these State and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the State and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the Final 2022 AQMP.⁴ The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, State, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the CAA requirements. The Program's consistency with the AQMP will be determined using the 2016 AQMP as discussed below.

To assist lead agencies to evaluate significance criteria 4.2.5.1 a), SCAQMD has developed a CEQA Air Quality Handbook (1993). Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the CEQA Air Quality Handbook, and it identifies two indicators of consistency with this significance criteria. The first indicator of inconsistency is whether the Project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the

³ CalEEMod Version 2020.40.0 was utilized in support of this analysis as it was the approved version at the time the emissions were estimated. CalEEMod Version 2022, the most current version of CalEEMod was, at the time the Air Quality Impact Analysis was modeled, in draft form. The two models ultimately return emissions forecasts for development projects, but the new model utilizes different methodologies to achieve the end emissions forecast.

⁴ SCAQMD, 2022. SCAQMD 2022 AQMP. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=16> (accessed 07/11/23)

interim emissions reductions specified in the AQMP. The second indicator of inconsistency is whether the Project would exceed the assumptions in the AQMP based on the years of Project build-out phase. A positive result in either criterion would result in a conclusion that the Project is inconsistent with the AQMP.

These indicators are discussed below.

Consistency Criterion No. 1

The proposed OBMPU would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

In order to address the first criterion, an air quality modeling analysis that identifies the Project's impact on air quality needs to be performed. For the Project to be found consistent, the analysis will need to demonstrate that the Project's emissions will not increase the frequency or the severity of existing violations, or contribute to a new violation at the Project.

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. The OBMPU would not exceed the applicable Localized Significance Thresholds (LSTs) for construction activity. The LST on-site emissions were measured utilizing the screening level acreage applicable to the project type, as shown in **Table 4.2-10** through **4.2-12**. The thresholds shown in **Table 4.2-10** are therefore determined (pounds per day) and compared to emissions data in **Tables 4.2-11** (construction emissions without Tier 4 engines) and **Tables 4.2-12** (construction emissions with Tier 4 engines). Although multiple pipelines or well drilling might be in progress on a single day, only one pipeline or well would be adjacent to an individual receptor. As shown in **Tables 4.2-11**, emissions would not exceed regional thresholds. Therefore, adjacent sensitive receptors would not be subjected to substantial pollutant concentrations. The estimated maximum daily construction emissions without mitigation are summarized on **Table 4.2-8**. Detailed construction model outputs are presented in the Appendix to the AQIA.

Under the assumed scenarios, however, emissions resulting from the Program construction would exceed criteria pollutant thresholds established by the SCAQMD for emissions of NO_x. This exceedance is discussed in more detail in threshold b below. Therefore, the proposed OBMPU would conflict with the AQMP according to this criterion and the Program would conflict with the AQMP .

Consistency Criterion No. 2

The proposed OBMPU would not exceed the assumptions in the AQMP.

SCAQMD's CEQA Air Quality Handbook (1993)⁵ states that consistency with the AQMP assumptions is determined by performing an analysis of the project with the assumptions in the AQMP. The handbooks also identifies the types of projects and assumptions each type should be compared with in Table 12-2. *Key Assumptions*. However, none of the land use types presented in Table 12-2. *Key Assumptions* correlate to the proposed OBMPU. As such, the growth projections from local general plans adopted by cities and counties is used to measure compliance with the AQMP.

⁵ SCAQMD, 1993. CEQA Air Quality Handbook. https://www.dtsc-ssfl.com/files/lib_ceqa/ref_draft_peir/Chap4_2-AirQuality/SCAQMD_1993_-_CEQA_Handbook.pdf (accessed 09/11/23)

The 2022 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities and counties in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in Chino Basin area General Plans (the Chino Basin includes the following incorporated cities: cities of Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland; and, includes limited areas of unincorporated Riverside and San Bernardino Counties) is considered to be consistent with the AQMP.

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, and instead a function of development scope and maximum area of disturbance. Irrespective of the Program site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. Therefore, construction of the OBMPU facilities would not result in any land use conflicts, and would therefore be consistent with Criterion 2.

Operational Impacts – Consistency Criterion 2

As discussed under issue (b), Subchapter XII, Land Use and Planning, in the Initial Study provided as Subchapter 8.2, per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. The Project would help support water supply needs of future development within local cities and counties as envisioned in the applicable General Plans. However, without the implementation of mitigation, land use conflicts could occur, and consistency with this criterion would not be achieved.

Thus, the OBMPU would not consistent with the second criterion, as operation of future facilities could conflict with the implementation of any General Plan.

Conclusion

The OBMPU would not be consistent with either the first or the second criterion, and therefore would conflict with the AQMP.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

AQ-1: ***Tier 4 Equipment. All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.***

LU-1: ***Land Use Consistency. Following selection of sites for future OBMPU facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.***

Based on the preceding analysis, because the OBMPU would exceed regional significance thresholds for NO_x, the proposed OBMPU would have a potential to result in or cause NAAQS or CAAQS violations, even with the implementation of Mitigation Measure **AQ-1**, which would require use of Tier 4 equipment to minimize construction related NO_x emissions to the greatest extent feasible.

The OBMPU does not propose a land use development but rather involves water and wastewater infrastructure facilities within the Chino Basin. With the implementation of Mitigation Measure **LU-1** to ensure land use conflicts are minimized upon implementation of the OBMPU, the Project would not conflict with any land use plan. Given that, the OBMPU and future facilities thereof would not conflict with the implementation of any General Plan. Thus, the OBMPU would be consistent with the second criterion, as both construction and operation of future facilities would not conflict with the implementation of any General Plan.

The OBMPU is therefore considered to not be consistent with the AQMP as a result of conflicts with Consistency Criterion 1, and therefore the Project would have a significant and unavoidable potential to conflict with or obstruct implementation of the applicable air quality plan.

Level of Significance After Mitigation: Significant and Unavoidable

4.2.5.2 b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard?

As previously stated, the OBMPU consists of the construction and operation of the following facilities, and this significance threshold is analyzed for both anticipated construction and operations of OBMPU facilities:

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage.

The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

CONSTRUCTION EMISSIONS

Because few details are known at this time regarding the timing of construction of specific individual facilities, it is assumed that construction of any OBMPU facilities may occur simultaneously. As a conservative measure, and in order to identify the maximum daily emissions, the AQIA assumes that the OBMPU could result in the construction of the specific Project facilities simultaneously on a per year basis, as shown in **Table 4.2-6**. The "Per Year" column represents the number of a given facility that could be installed in one year, with these assumptions reflecting a reasonable "worst case" assumption for each given facility. The "Per Day" column represents the number of a given facility that could be constructed on the worst-case day of the given facilities' construction activity on a given day within the parameters of the number of facilities that could occur within the "worst case" year. The "Total to be Constructed" column is indicative of the total number of each facility type that is proposed to be developed under the OBMPU, and as described under **Subsection 3.5, Summary of All Facilities**, in **Chapter 3, Project Description**.

**Table 4.2-6
CONSTRUCTION SCENARIO MODELED**

	Per day	Per Year	Total to be Constructed
Project Category 1			
ASR and Monitoring Wells	2	32	207
In Line Flow Meter	1	110	400
Extensometer	1	1	3
Well Destruction	1	2	5
Project Category 2			
Pipelines (LF)	2	100,000	620,000
Booster Pump Stations	2	5	18
Water Storage Reservoirs	1	3	14
Project Category 3			
Storage Basins with Haul	1	2	4
Storage Basin Modification	1	1	2
Project Category 4			
Upgrade Existing WTP	1	1	1
Advanced Water Purification Facility	1	1	1
Groundwater Treatment at Well Sites	1	5	20
New Regional Groundwater Treatment Facility	1	1	4
Improve Existing Groundwater Treatment Facilities	1	1	1

Note that the Construction Scenario that is presented in **Table 4.2-6** reflects a reasonable assumption for a “worst case” year under the OBMPU. It is assumed that this “worst case” year would not occur for multiple years, but given the opportunities to utilize this RDSEIR for future grant funding opportunities, and the level of detailed analysis presented herein, it is expected that the Parties may construct a larger number of facilities in the first few years following the possible certification of this RDSEIR, with fewer numbers of each Project type anticipated to be implemented over the 20 year horizon of the implementation of the OBMPU.

Emissions modeling was performed for each of the 14 elements as a single entity. This allows for easy manipulation to accommodate modifications regarding the numbers or builds per year or per day. This is important since construction emissions thresholds from the South Coast Air Quality Air District are a daily maximum. Modeling the number of builds for each of the 14 elements per year is likewise significant since GHG emissions are measured by the maximum annual emissions.

Precise programming for the entire future construction schedule for a project of this magnitude is not possible at this time. Therefore, assumptions were made based on available information regarding both the number of activities overlapping on an individual day and occurring in a calendar year. These assumptions are very conservative. However, as stated, modifications regarding the number of builds are easily accomplished by modeling a single build for each activity and then multiplying by the appropriate number of builds per day or per year. This approach allows for future schedule modifications to be easily incorporated.

Construction Activities

During construction activities associated with individual projects, emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5} will likely be released through the burning of fossil fuel in construction equipment, grading fugitive dust, asphalt paving, and the application of architectural coatings during painting activity.

Estimated construction emissions were modeled using CalEEMod2020.4.0. Construction was assumed to begin in the year 2024. As diesel equipment progressively becomes cleaner due to phasing out of older equipment and procurement of newer equipment with improved emissions technology, a start date in the future would demonstrate lower pollutant emissions. Therefore, assuming construction begins in 2024 represents a worst-case scenario. **Table 4.2-7** summarizes the equipment fleets and durations modeled for each construction activity.

**Table 4.2-7
MODELED CONSTRUCTION EQUIPMENT AND DURATIONS**

1: Well Development and Monitoring Devices

ASR and Monitoring Wells 0.5 acres	
Well Drilling 20 days 24/7	1 drill rig
	1 pump
	10 workers
Well Equipping	1 crane
	1 generator
	1 welder
	1 forklift
	10 workers
	1 concrete delivery per day
	1 vendor delivery per day

Well Monitoring Device Installation*	
1 day	40 mile round trip per device

*flow meters and transducer data loggers

Extensometer Installation	
Installation 7 days	1 truck mounted crane*
	5 workers

*used to lower into the well casing

Well Destruction 0.5 acres	
Demolition 6 weeks	1 crane
	1 loader/backhoe
	1 mixer
	1 concrete pump
	5 workers
	2 vendor trips per day

Project Category 2: Conveyance Facilities and Ancillary Facilities

Pipeline Installation <1 acre per day	
Demo Roadway and Trench 5 weeks	1 excavator
	1 backhoe
	1 concrete saw
	6 signal boards
	14-person crew
	10 haul trips
Install Pipeline 15 weeks	1 crane
	2 forklifts
	2 loader/backhoes
	6 signal boards
	14-person crew
	1 daily vendor delivery
Backfill and Pave 5 weeks	1 compactor
	1 paver
	1 roller
	2 loader/backhoes
	6 signal boards
	14-person crew

Booster Pump Station 1 acre per day	
Grading 5 days	1 excavator
	2 loader/backhoes backhoe
	6 signal boards
	5-person crew
Construction 4 months	1 crane
	2 forklifts
	2 loader/backhoes
	2 welders
	5-person crew
	6 vendor deliveries

Project Category 2 Continued

Water Storage Reservoirs 5 acres per day	
Grading 10 days	1 excavator
	2 dozers
	1 loader/backhoe
	1 scraper
	12-person crew
Foundation 25 days	1 crane
	1 forklift
	1 loader/backhoe
	12-person crew
	2 vendor deliveries
Construction 5 months	1 crane
	1 forklift
	1 loader/backhoe
	4 welders
	1 stress tower
	1 aerial lift
	12-person crew
	6 vendor deliveries

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands

New Storage Basins/Flood Facilities 5 acres/day	
Grading and Soil Haul 4 months	2 excavators
	2 dozers
	2 scrapers
	2 crawler tractors
	2 loader/backhoes
	20-person crew
	100 dump trips/day 30 miles rt
	10 delivery trucks/day
Compacting/Top Soil 4 months	1 roller
	2 tampers
	2 loader/backhoes
	20-person crew

Storage Basin Modifications	
Grading 3 months	1 dozer
	1 grader
	1 excavator
	1 water truck
	1 loader/backhoe
	6-person crew
Compacting/Top Soil 4 months	6 delivery trucks/day
	1 roller
	2 tampers
	2 loader/backhoes
	6-person crew

Project Category 4: Desalters and Water Treatment Facilities

Upgrade Existing Recycled WTP	
Upgrade 12 months	1 crane
	1 loader
	1 forklift
	15-person crew
	10 delivery trucks/day

Advanced Water Purification Facility 10 acres/day	
Grading and Soil Haul 2 months	1 grader
	1 dozer
	1 scraper
	2 loader/backhoes
	15-person crew
Construction and Equipping 16 months	2 cranes
	3 forklifts
	4 welders
	1 aerial lift
	2 loader/backhoes
	15-person crew
	10 delivery trucks/day

Project Category 4 continued

Groundwater Treatment at Well Sites 1 acre/day	
Grading 1 month	1 dozer
	2 loader/backhoes
	5-person crew
Construction and Equipping 2 months	1 crane
	2 forklifts
	2 welders
	5-person crew
	10 delivery trucks/day

New Regional Groundwater Treatment 2-acres	
Demo/Grading 2 months	2 excavators
	1 dozer
	2 loader/backhoes
	10-person crew
Construction and Equipping 16 months	1 crane
	1 concrete pump
	1 mixer
	2 forklifts
	2 welders
	2 loader/backhoes
	10-person crew
	10 delivery trucks/day

Improve Existing Groundwater Treatment Facilities existing footprint	
Upgrade 4 months	1 crane
	1 loader
	1 forklift
	10-person crew
	10 delivery trucks/day

*all crews modeled with 40 miles of round trip travel

Regional Construction Emissions Impact Summary

Utilizing the equipment fleet and durations from **Table 4.2-7**, the daily unmitigated construction emissions are modeled in CalEEMod and are summarized in **Table 4.2-8**. As discussed, the exact sequencing of each construction component is unknown. To calculate daily maximums it was very conservatively assumed that each of the 14 construction activities could occur on the same calendar day. Furthermore, because two pipeline crews are anticipated to be operating at the same time, emissions for pipelines were doubled. Similarly, there are 32 new wells planned each year, which makes for an increased probability that two wells could be drilled or equipped simultaneously (but at different locations). Therefore, the emissions for well drilling were also calculated assuming that two wells could be drilled on the given “worst day” of construction to determine whether the proposed Program would exceed regional significance thresholds for NO_x and other criteria emissions. The daily total for each pollutant is then compared to the corresponding SCAQMD daily threshold.

Impacts Without Mitigation

The estimated maximum daily construction emissions without mitigation are summarized on **Table 4.2-8**. Detailed construction model outputs are presented in the Appendix to the AQIA. Under the assumed scenarios, emissions resulting from the Program construction would exceed criteria pollutant thresholds established by the SCAQMD for emissions of NO_x. Thus, construction-related impacts under significance threshold 4.2.5.2 b) would be significant for NO_x.

Table 4.2-8
UNMITIGATED CONSTRUCTION ACTIVITY EMISSIONS 2024 MAXIMAL DAILY EMISSIONS (LBS/DAY)

Construction Activity		Builds/ Day	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
1.0	Well Development and Monitoring Devices							
1.1	Drill/Equipment ASR and Monitoring Wells	2	3.2	27.2	35.4	0.2	1.4	1.0
1.2	Install In-Line Flow Meters	1	0.0	0.2	0.4	0.0	0.0	0.0
1.3	Install Extensometer	1	0.2	1.8	1.3	0.0	0.2	0.1
1.4	Well Destruction	1	0.5	4.5	5.0	0.0	0.3	0.2
2.0	Conveyance Facilities and Ancillary Facilities							
2.1	Pipeline Installation	2	2.0	16.2	21.6	0.1	1.4	0.8
2.2	Booster Pump Station Construction	2	1.8	21.0	20.2	0.0	6.4	3.4
2.3	Water Storage Reservoir Construction	1	2.0	18.9	14.7	0.0	4.1	2.1
3.0	Storage Basins, Recharge Facilities, and Storage Bands							
3.1	Storage Basins Construction with Haul	1	4.1	53.2	33.4	0.2	8.3	3.8
3.2	Storage Basin Modification	1	1.0	10.5	8.1	0.0	0.4	0.2
4.0	Desalters and Water Treatment Facilities							
4.1	Upgrade Existing WTP	1	0.4	4.4	4.2	0.0	1.0	0.4
4.2	Advanced Purification Treatment Facility Construction	1	3.3	33.8	21.3	0.1	5.6	2.9
4.3	Groundwater Treatment at Well Sites Construction	1	0.8	7.9	6.7	0.0	2.1	1.1
4.4	New Regional Groundwater Treatment Construction	1	1.3	12.2	13.7	0	2.8	1.5
4.5	Improve Existing Groundwater Treatment Facilities	1	0.5	4.1	4.9	0	0.4	0.2
Total All Activities*		17	21.1	215.9	190.9	0.6	34.4	17.7
SCAQMD Threshold			75	100	550	150	150	55
Exceeds Threshold			NO	YES	NO	NO	NO	NO

Assumes watering at least 3 times per day

*Total includes emissions for every activity but reflects emission for two wells and two pipeline teams

Construction Emissions Conclusion

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

The 2000 OBMP PEIR considered the following mitigation measures to minimize construction impacts. However, construction emissions were determined to be less than significant without the need for added mitigation. Regardless, the following mitigation measures constitute the ongoing construction measures implemented for facilities that have been or may be considered under the 2000 OBMP. These mitigation measures would: minimize construction related dust emission impacts during high wind events (2000 OBMP PEIR Mitigation Measure **4.6-2**); minimize construction related dust emission impacts from lack of soil stabilization (2000 OBMP PEIR Mitigation Measure **4.6-3**); reduce dust emissions through shortening the length of time bare soils are exposed during construction (2000 OBMP PEIR Mitigation Measure **4.6-4**); and minimize dust emissions resulting from soil migration during construction (2000 OBMP PEIR Mitigation Measure **4.6-5**).

- 4.6-2** *Suspend all grading and excavation operations when wind speeds exceed 25 mph.*
- 4.6-3** *Apply non-toxic chemical soil stabilizers according to manufacturer's specifications to inactive construction areas (previously graded areas inactive for 10 days or more).*
- 4.6-4** *Replace ground cover or pave disturbed areas immediately after construction is completed in the affected area.*
- 4.6-5** *Sweep streets once a day and when soil material is observed on traveled roadways.*

2000 OBMP PEIR Mitigation Measure **4.6-1** has been modified to include further fugitive dust minimization mechanisms through the implementation of Mitigation Measure **AQ-2**, described below.

Additional mitigation measures must be considered under this OBMPU RDSEIR as the emissions modeled in **Table 4.2-8**, above, exceed thresholds for NO_x. **Table 4.2-9** summarizes emissions with application of Mitigation Measure **AQ-1**. Mitigation Measure **AQ-1** would require that all construction equipment greater than 100 horsepower comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent. This measure would reduce NO_x emissions to the greatest extent feasible. Detailed construction model outputs are presented in the Appendix to the AQIA.

Table 4.2-9
MITIGATED CONSTRUCTION ACTIVITY EMISSIONS 2024 MAXIMAL DAILY EMISSIONS (LBS/DAY)

Construction Activity		Builds/ Day	ROG	NO _x	CO	SO ₂	PM-10	PM-2.5
1.0	Well Development and Monitoring Devices							
1.1	Drill/Equipment ASR and Monitoring Wells	2	1.2	7.6	35.4	0.2	1.4	1.2
1.2	Install In-Line Flow Meters	1	0.0	0.2	0.4	0.0	0.0	0.0
1.3	Install Extensometer	1	0.1	0.2	1.7	0.0	0.2	0.1
1.4	Well Destruction	1	0.4	2.8	5.4	0.0	0.2	0.2
2.0	Conveyance Facilities and Ancillary Facilities							
2.1	Pipeline Installation	2	1.8	13.2	22.6	0.0	1.4	0.8
2.2	Booster Pump Station Construction	2	1.8	13.8	20.2	0.0	6.4	3.4
2.3	Water Storage Reservoir Construction	1	1.0	7.2	16.9	0.0	4.1	1.1
3.0	Storage Basins, Recharge Facilities, and Storage Bands							
3.1	Storage Basins Construction with Haul	1	1.4	21.0	39.3	0.2	8.3	3.8
3.2	Storage Basin Modification	1	0.4	4.2	10.8	0.0	0.4	0.2
4.0	Desalters and Water Treatment Facilities							
4.1	Upgrade Existing WTP	1	0.3	2.8	4.6	0.0	0.9	0.3
4.2	Advanced Purification Treatment Facility Construction	1	1.7	12.7	26.5	0.1	5.6	2.9
4.3	Groundwater Treatment at Well Sites Construction	1	0.6	3.9	7.2	0.0	2.1	1.1
4.4	New Regional Groundwater Treatment Construction	1	1.1	8.8	15.5	0.0	2.8	1.5
4.5	Improve Existing Groundwater Treatment Facilities	1	0.3	2.5	5.3	0.0	0.4	0.2
Total All Activities*		17	12.2	100.9	212.6	0.5	34.2	16.8
SCAQMD Threshold			75	100	550	150	150	55
Exceeds Threshold			NO	YES	NO	NO	NO	NO

Assumes watering at least 3 times per day

*Total includes emissions for every activity but reflects emission for two wells and two pipeline teams

Mitigation Measure **AQ-1** is recommended to reduce the severity of the impacts to the greatest extent feasible. As discussed above, there is a potential for the implementation of a significant number and type of OBMPU facilities to be constructed on the given “worst day” of construction such that NO_x emissions could be considered significant, and unavoidable. **Table 4.2-9** summarizes emissions with application of Mitigation Measure **AQ-1**. As shown, all emissions, excluding NO_x, will meet the SCAQMD thresholds if every activity were to overlap on a single day. Given the large gap between the OBMPU construction emissions and the SCAQMD significance thresholds for all other criteria pollutants (no pollutant exceeds more than about 36.7% of the given SCAQMD threshold), it is not anticipated that the OBMPU would exceed the SCAQMD significance thresholds for ROG, CO, SO₂, PM₁₀, or PM_{2.5}. Therefore, construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air and proximity of residential uses, which would be accomplished through Mitigation Measure **AQ-2**. Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended, and shall be enforced through Mitigation Measure **AQ-3**.

To reduce NO_x emissions to the greatest extent feasible, Mitigation Measure **AQ-1** is recommended. However, even after implementation of Mitigation Measure **AQ-1**, the modeled construction scenario would not fall below significance thresholds for construction-source emissions of NO_x. Furthermore, given that the Watermaster does not dictate the timing, or the specific agency that may choose to install a given facility proposed as part of the OBMPU, it is not possible to predict the number and type of facilities that would be installed by Watermaster Stakeholders on the given “worst case” day of construction. The modeling scenario above was crafted utilizing reasonable assumptions for what a “worst case” day of construction could look like under the proposed OBMPU, but Watermaster cannot feasibly enforce a limit on the construction of new facilities under the OBMPU to prevent, for instance, one additional well drilling activity to occur on a given day within the Basin under the proposed Project. Under the construction scenario modeled above, construction would result in an exceedance of NO_x on the given “worst day” of construction, and therefore even with the implementation of stringent mitigation intended to reduce NO_x, impacts would be significant and unavoidable.

While the Watermaster has some jurisdiction over facilities implemented in the Basin, for instance, Storage and Recovery Projects (such as ASR wells, Recharge Basins, etc.) are required to submit Storage and Recovery Applications to the Watermaster to be reviewed in the context of the state of the Basin and the impacts a given facility might have on hydraulic control. However, while the Watermaster has the ability to review and ultimately approved Storage and Recovery Applications, including enforcing mitigation actions on the Applicant (Stakeholder of the Basin), the Watermaster cannot feasibly set parameters around other OBMPU Program facilities such that the timing, number, and type of facilities could be limited, as each of the Stakeholders of the Basin that would utilize this OBMPU RDSEIR to ultimately implement individual facilities, have Lead Agency authority, and individual authority to implement projects on an as needed basis. Thus, Watermaster does not have the authority to limit the timing, number, and type of every facility proposed under the OBMPU. However, Watermaster Stakeholders wishing to avoid this significant impact as part of construction of future OBMPU facilities could determine whether, for example, any other Stakeholder wells are being drilled during the period of time a given project is being considered for construction, and if no other wells are being drilled, then a significant NO_x emissions impact could be avoided.

OBMPU Mitigation Measures:

AQ-1: **Tier 4 Equipment.** *All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.*

Mitigation Measure **AQ-2** has been modified from the 2000 OBMP PEIR (measure 4.6-1). The modifications, as described above, enable more broad fugitive dust minimization mechanisms than that which were identified in 2000 OBMP PEIR Mitigation Measure **4.6-1**.

AQ-2: **Fugitive Dust Control**

- *Apply soil stabilizers or moisten inactive areas.*
- *Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).*
- *Cover all stock piles with tarps at the end of each day or as needed.*
- *Provide water spray during loading and unloading of earthen materials.*
- *Minimize in-out traffic from construction zone*
- *Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard*
- *Sweep streets daily if visible soil material is carried out from the construction site*

AQ-3: **Exhaust Emissions Control**

- *Utilize well-tuned off-road construction equipment.*
- *Establish a preference for contractors using Tier 3 or better rated heavy equipment.*
- *Enforce 5-minute idling limits for both on-road trucks and off-road equipment*

Level of Significance After Mitigation: Significant and Unavoidable

OPERATIONAL EMISSIONS

Operational emissions are analyzed at a general level, rather than through generation of specific operational emissions calculations as with construction emissions, above. While construction emissions can be estimated utilizing basic assumptions that apply to the whole of the types of OBMPU facilities that are being proposed, operational emissions cannot be estimated utilizing these same assumptions for the following reasons: (1) For certain types of facilities that are being proposed as part of the OBMPU, the IEUA and Watermaster have not collected sufficient data to predict operational energy demands, as such, for facilities such as ASR wells, the energy required is dependent on several factors (how deep the well is drilled, the type of equipment required to operate the well, where the water is delivered to/from, etc.), that cannot be known until project-level design has been completed; (2) The exact design, type and size of facilities that are considered appurtenances—such as booster pump stations, reservoirs, etc.—defined under Project Category 2: Conveyance Facilities and Related Infrastructure, have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (3) The exact scope and type of new groundwater treatment facilities, and regional groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (4) the proposed upgrades to the Chino Desalters, to the WFA Agua de Lejos Treatment Plant, and to existing groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (5) and finally, until a specific project is proposed at the design level, it is not known what source of energy will be utilized to operate said facility, which renders determining the energy-related operational emissions a speculative matter given that energy is anticipated to be increasingly generated by alternative sources over the planning

horizon for the OBMPU. As such, the OBMPU proposes a vast range of facilities, the project-level design for which has not yet been defined such that previous data gathered by the Watermaster, IEUA, and Stakeholders could be utilized to generate a Program-specific operational emissions calculation.

Long-term air quality impacts occur from mobile source emissions generated from project-related traffic and from stationary source emissions generated from natural gas. For ongoing operations, mobile emissions would be generated by the motor vehicles traveling to and from the Program areas during on-going monitoring and maintenance. However, the proposed OBMPU facilities would generate a nominal number of traffic trips (assumed to be less than 50 round trips per day) for periodic maintenance and inspections and would not result in any substantive new long-term emissions sources. Motor vehicle emissions for periodic maintenance would not result in substantive new long-term emissions source due to the minimal number of trips per day that would result from full operation of the OBMPU facilities, particularly given that a majority of the facilities would not be manned (due to use of SCADA monitoring systems), and therefore would not generate daily trips.

Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. As the OBMPU involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements, heating and consumer products would only be used for those facilities, such as the AWPf and Regional Groundwater Treatment Facilities, with offices and operational employee areas incorporated into the proposed use. Stationary energy emissions would result from energy consumption associated with the proposed OBMPU facilities. Due to the variety of electricity sources (including solar and wind energy) and the disparate locations of energy generation, it is not possible to identify specific emissions associated with electricity use within the SCAB. There is no direct nexus between consumption and the type of power source or the air basin where the source is located. Operational air pollution emissions from electrical generation are therefore not attributable on a project-specific basis.

However, as described in the GHG Assessment prepared by Urban Crossroads and provided as Appendix 7, Volume 2, while the proposed Project's operational energy demands cannot be quantified for the reasons set forth above, they can be qualitatively discussed and analyzed by comparing the embedded energy intensity of the water that would be supplied to the Basin by the facilities proposed under the OBMPU with other potential water sources, such as importing water from the California State Water Project or the Colorado River.

Numerous studies have analyzed the intersection of energy and water, including a recent study, "The Future of California's Water-Energy Climate Nexus" (Sept. 9, 2021) (Water-Energy Nexus Report), prepared by the nonprofit organization Next 10.⁶

The Water-Energy Nexus Report aimed to update prior estimates of water-related energy and GHG emissions in California and builds on numerous prior studies, such as work prepared for the California Public Utilities Commission, California Energy Commission, and others. The Water-Energy Nexus Report developed an assessment of the energy and GHG footprint related to water use in California in hopes of identifying opportunities associated with reducing water-related energy use and in turn, GHG emissions.

⁶ Next 10, September 2021. The Future of California Water-Energy Nexus https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

Based on the energy intensity shown in Table 4 of the Water-Energy Nexus Report (**Table 4.6-5** of Subchapter 4.6), reliance on local sources of water is significantly less energy intensive than relying on imported water from either the State Water Project (3,280 kWh/af) or the Colorado River (2,115 kWh/af). Even the most energy-intensive local source—recycled (indirect potable) treatment plus recycled water conveyance ($1,218 + 364 = 1,582$ kWh/af)⁷—by far the most energy-intensive local water source—is 25% less energy intensive than Colorado River water and more than 50% less than State Water Project water. Other sources of local supply included in the proposed Project, such as groundwater pumping (647 kWh/af), are 70% to 80% less energy intensive than imported water.

Qualitatively, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project. When applied to air quality emissions, as stated above, air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. However, the energy demands offset on a regional basis from storing water in the Basin, rather than importing water to meet demand, would minimize air emissions attributable to energy sources on a more regional or statewide level.

OBMPU facilities may include the use of an emergency diesel generator, allowing the pump station to run on backup power in case of emergency. If a backup generator is installed, the implementing agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and State ambient air quality standards in the SCAB. Emergency generators are stationary sources that operate and generate air emissions only when power is needed and electricity is not available. Such units do not generate air emissions daily, and would comply with SCAQMD permits for operating such equipment, and as such are not considered a predictable annual emission source. Through obtaining a permit to operate the backup generators for any given OBMPU facility, future stationary source emissions would be minimized to a level of less than significant.

Operational Emissions Conclusion

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

The OBMPU operations are not anticipated to result in a cumulatively considerable net increase of any criteria pollutant for which the Program region is non-attainment. Electrical generation of power will be used for pumping. Electrical consumption has no single uniquely related air pollution emissions source because power is supplied to and drawn from a regional grid. Electrical power is generated regionally by a combination of non-combustion (nuclear, hydroelectric, solar, wind, geothermal, etc.) and fossil fuel combustion sources. There is no direct nexus between consumption and the type of power source or the air basin where the source is located.

There will be minimal ongoing maintenance associated with the maintenance of mechanical equipment. There will also be operational activity associated with periodic desilting or vegetation removal, but the frequency and intensity of such actions is purely conjectural. Furthermore, backup

⁷ To get an accurate understanding of the energy intensity of recycled water sources, one must add the energy required for recycled water generation to conveyance.

generators would be used only in emergency situations and for routine testing and maintenance purposes and would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. As Project operations would not be anticipated to exceed SCAQMD thresholds, the Project would not violate an air quality standard or contribute to an existing violation. Therefore, Project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

Level of Significance After Mitigation: Less Than Significant

4.2.5.3 c) Expose sensitive receptors to substantial pollutant concentrations?

Construction-Source Localized Emissions

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed Project, the only source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital, or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x); carbon monoxide (CO); and particulate matter (PM₁₀ and PM_{2.5}). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LSTs only include emissions that occur at the construction site, not regional emissions. In other words, worker commuting, vendor deliveries, and truck on-road haul miles are not considered; only diesel emissions originating at a specific site are reflected in this analysis to represent the immediate vulnerability of adjacent sensitive receptors.

LST screening tables are available for 25-, 50-, 100-, 200- and 500-meter source-receptor distances. Because the exact location for many activities under the proposed OBMPU is not finalized, to be conservative, for this analysis, the most stringent standards for a 25-meter distance were selected for use though it is likely that many locations may have a greater setback.

Screening level concentration data is currently published for 1-, 2- and 5-acre sites. LSTs for one acre are the most stringent of all the thresholds since all construction activity is consolidated into a small area rather than dispersed over a larger area. Some of the construction activities for this Project would be less than one-acre. For example, well drilling or flow meter installation were assumed to require less than one acre disturbance. But since the lowest LST threshold is for one acre, one-acre thresholds were used. Likewise, a number of activities involve renovation of an existing facility for which there is no grading or disturbance area so that the most stringent thresholds for a one-acre site were also applied.

Alternatively, some activities such as Storage Basin Construction and the Purification Treatment Construction were modeled with an acreage greater than 5, but because 5 acres is the largest site size for which thresholds are available, that threshold was used.

The thresholds shown in **Table 4.2-10** are therefore determined (pounds per day) and compared to emissions data in **Tables 4.2-11** (construction emissions without Tier 4 engines) and **Tables 4.2-12** (construction emissions with Tier 4 engines).

Table 4.2-10
LST THRESHOLDS FROM LOOK UP TABLES

LST Thresholds San Bernardino Valley	CO	NO_x	PM₁₀	PM_{2.5}
1.0 acres/25 meters	863	118	5	4
2.0 acres/25 meters	1,232	170	6	5
5.0 acres/25 meters	2,193	270	16	9

Table 4.2-11
LST ON-SITE EMISSIONS WITHOUT NO_x MITIGATION

Acreage	Construction Activity	CO	NO_x	PM₁₀	PM_{2.5}	Exceed LST Thresholds?
Project Category 1: Well Development and Monitoring Devices						
1	Drill/Equipment ASR and Monitoring Wells	18	14	1	1	NO
1	Install In-Line Flow Meters	1	1	1	1	NO
1	Install Extensometer	1	1	1	1	NO
1	Well Destruction	5	5	1	1	NO
Project Category 2: Conveyance Facilities and Ancillary Facilities						
1	Pipeline Installation	11	8	1	1	NO
1	Booster Pump Station Construction	10	11	3	2	NO
5	Water Storage Reservoir Construction	15	19	4	2	NO
Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands						
5	Storage Basins Construction with Haul	28	38	5	3	NO
1	Storage Basin Modification	7	9	1	1	NO
Project Category 4: Desalters and Water Treatment Facilities						
1	Upgrade Existing WTP	4	4	1	1	NO
5	Advanced Purification Treatment Facility Construction	21	34	6	3	NO
1	Groundwater Treatment at Well Sites Construction	7	8	2	1	NO
2	New Regional Groundwater Treatment Construction	14	12	3	2	NO
1	Improve Existing Groundwater Treatment Facilities	5	4	1	1	NO

**Table 4.2-12
LST ON-SITE EMISSIONS WITH NO_x MITIGATION**

Acreage	Construction Activity	CO	NO _x	PM ₁₀	PM _{2.5}	Exceed LST Thresholds?
Project Category 1: Well Development and Monitoring Devices						
1	Drill/Equipment ASR and Monitoring Wells	18	4	1	1	NO
1	Install In-Line Flow Meters	1	1	1	1	NO
1	Install Extensometer	1	1	1	1	NO
1	Well Destruction	5	3	1	1	NO
Project Category 2: Conveyance Facilities and Ancillary Facilities						
1	Pipeline Installation	11	7	1	1	NO
1	Booster Pump Station Construction	11	7	3	2	NO
5	Water Storage Reservoir Construction	17	7	4	2	NO
Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands						
5	Storage Basins Construction with Haul	33	5	5	3	NO
1	Storage Basin Modification	8	3	1	1	NO
Project Category 4: Desalters and Water Treatment Facilities						
1	Upgrade Existing WTP	5	3	1	1	NO
5	Advanced Purification Treatment Facility Construction	27	13	6	3	NO
1	Groundwater Treatment at Well Sites Construction	7	4	2	1	NO
2	New Regional Groundwater Treatment Construction	16	9	3	2	NO
1	Improve Existing Groundwater Treatment Facilities	5	3	1	1	NO

Although multiple pipelines or well drilling might be in progress on a single day, only one pipeline or well would be adjacent to an individual receptor. As shown, even without implementation of mitigation to incorporate Tier 4 engines, NO_x emissions would not exceed regional thresholds. Both the unmitigated and mitigated emissions would be below the applicable LSTs. Therefore, adjacent sensitive receptors would not be subjected to substantial pollutant concentrations and impacts would be less than significant.

Operational-Source Localized Emissions

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). The facilities proposed under the OBMPU would generate a nominal number of traffic trips (about 50 operational round trips per day) in the context of on-going maintenance resulting in a negligible amount of new mobile source emissions. Additionally, all pumps associated with the OBMPU are assumed to be electrically powered and would not directly generate air emissions. However, individual OBMPU facilities may require the use of an emergency diesel generator, allowing pump stations to run on backup power in case of emergency. If backup generators would be installed, the implementing agency would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and State ambient air quality standards in the SCAB. Upon compliance with SCAQMD permitting procedures, localized emissions from any potential diesel generator would not result in substantial pollutant concentrations capable of exceeding operational LST thresholds. Therefore, OBMPU

operations would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

CO “Hot Spot” Analysis

As discussed below, the proposed OBMPU would not result in potentially adverse CO concentrations or “hot spots.” Further, detailed modeling of Program-specific CO “hot spots” is not needed to reach this conclusion. An adverse CO concentration, known as a “hot spot,” would occur if an exceedance of the State one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 SCAQMD Air Quality Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment, as previously noted in **Table 4.2-3**. Also, CO concentrations in the Program vicinity have steadily declined. To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO “hot spot” analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This “hot spot” analysis did not predict any violation of CO standards, as shown on **Table 4.2-13**.

Table 4.2-13
CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations

Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak CO concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared. Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to

increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact.

Traffic volumes generating the CO concentrations for the “hot spot” analysis, shown on **Table 4.2-14**. The busiest intersection evaluated was Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vph. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).⁸ At buildout of the Project, the highest daily traffic volumes generated at the roadways within the vicinity of the Project are expected to generate less than the highest daily traffic volumes generated at the busiest intersection in the CO “hot spot” analysis. As such, the Project would not likely exceed the most stringent 1-hour CO standard. Thus, the impact would be less than significant.

**Table 4.2-14
TRAFFIC VOLUMES**

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

Sensitive Receptors Conclusion

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures:

Implementation of Mitigation Measures **AQ-1** and **AQ-2** would further minimize Construction-Source LST impacts.

The potential impact of Program-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction. Upon compliance with SCAQMD permitting procedures, localized emissions from any potential diesel generator would not result in substantial pollutant concentrations capable of exceeding operational LST thresholds. Further Project traffic would not create or result in a CO “hotspot.”

⁸ Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project construction or operations and the impact would be less than significant.

Level of Significance After Mitigation: Less Than Significant

4.2.5.4 d) Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The potential for the Program to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

SCAQMD Rule 402 Nuisance, prohibits discharge from any source whatsoever of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety or any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. This rule covers generation of odors. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. Under the right meteorological conditions, some odors may still be offensive several miles from the source.⁹

Implementation of the proposed OBMPU would have the potential to generate odorous emissions during construction activities. Construction activities are not typically sources of nuisance odors, although construction could result in minor amounts of odorous emissions associated with diesel exhaust, paving or evaporation of VOCs from architectural coatings. These smells are largely due to the presence of sulfur and the creation of hydrocarbons during combustion. As shown in **Table 4.2-8** and **Table 4.2-9** under question 4.2.5.2 b), above, construction would not result in significant emissions of sulfur oxides. Furthermore, construction would be temporary, and equipment would not be located at a single location throughout the construction period. Odorous hydrocarbons tend to dissipate quickly and would only affect receptors in the immediate vicinity, rather than a substantial number of people at any given time. Therefore, construction activities would not result in other emissions, such as odors, adversely affecting a substantial number of people, and impacts would be less than significant.

Operation of individual projects implemented under the proposed OBMPU, including the AWPf, pump stations, wells, wellhead treatment, pipelines, turnouts, and reservoir, would not result in odor impacts because none of these components include odor-generating components. Source water

⁹ CARB, 2005. CARB Air Quality and Land Use Handbook: A Community Health Perspective
<http://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf> (accessed 05/30/23).

from the wastewater treatment process that would feed the AWPf would be at least secondary effluent, if not tertiary effluent, suitable for reuse, and product water from the AWPf would be advance treated recycled water suitable for groundwater replenishment. Given the enclosed systems within which the secondary/tertiary recycled water would be treated, and that the product water would be purified water, the potential for odor at this facility is negligible.

Odors Conclusion

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

The OBMPU operations are not anticipated to result in other emissions, such as odors, adversely affecting a substantial number of people, and therefore impacts under this issue would be less than significant.

Level of Significance After Mitigation: Less Than Significant

4.2.6 Avoidance, Minimization and Mitigation Measures

4.2.6.1 2000 OBMPU PEIR Mitigation Measures

Project construction activities require mitigation to minimize construction-related impacts. As such, implementation of the following mitigation measures, including BACMs and Rules restated herein for emphasis, can reduce potentially significant construction-related air quality impacts to a less than significant level or to the extent feasible.

All of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Air Quality) to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR include Mitigation Measures **4.6-2 through 4.6-5**, while the text for 2000 OBMP PEIR Mitigation Measure **4.6-1** has been modified and updated, as identified in the text provided under **4.2.5, Potential Impacts**, above.

2000 OBMP PEIR Mitigation Measure **4.6-1** has been modified to include further fugitive dust minimization mechanisms, thereby further minimizing fugitive dust impacts. Therefore, 2000 OBMP PEIR Mitigation Measure **4.6-1** is no longer applicable.

4.2.6.2 Applicable Project Mitigation Measures

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the implementing agencies shall ensure such language is incorporated prior to issuance of any development permits. SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). It should be noted that these Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. As such, credit for Rule 403 and Rule 1113 has been taken.

The following mitigation measures from the 2000 OBMP PEIR have been abstracted and are repeated below for reference:

- 4.6-2** *Suspend all grading and excavation operations when wind speeds exceed 25 mph.*
- 4.6-3** *Apply non-toxic chemical soil stabilizers according to manufacturers' specifications to inactive construction areas (previously graded areas inactive for 10 days or more).*
- 4.6-4** *Replace ground cover or pave disturbed areas immediately after construction is completed in the affected area.*
- 4.6-5** *Sweep streets once a day and when soil material is observed on traveled roadways.*

The following mitigation measures are specific to this OBMPU RDSEIR:

AQ-1: **Tier 4 Equipment.** *All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.*

AQ-2: **Fugitive Dust Control**

- *Apply soil stabilizers or moisten inactive areas.*
- *Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).*
- *Cover all stock piles with tarps at the end of each day or as needed.*
- *Provide water spray during loading and unloading of earthen materials.*
- *Minimize in-out traffic from construction zone*
- *Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard*
- *Sweep streets daily if visible soil material is carried out from the construction site*

AQ-3: **Exhaust Emissions Control**

- *Utilize well-tuned off-road construction equipment.*
- *Establish a preference for contractors using Tier 3 or better rated heavy equipment.*
- *Enforce 5-minute idling limits for both on-road trucks and off-road equipment*

4.2.7 Cumulative Impacts

As previously shown in **Table 4.2-3**, the CAAQS designate the Program area as nonattainment for O₃, PM₁₀, and PM_{2.5} while the NAAQS designates the Program area as nonattainment for O₃ and PM_{2.5}.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*. In this report the AQMD clearly states (Page D-3):

"...the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

Therefore, this analysis assumes that individual projects that would not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. Thus, such projects would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. Therefore, Program construction-source emissions would be considered cumulatively significant.

The Program- and facility-specific evaluation of emissions presented in the preceding analysis demonstrates that OBMPU facility construction-source air pollutant emissions could result in exceedances of regional thresholds for NO_x.

The geographic scope for the analysis of cumulative impacts relative to sensitive receptors is the Chino Basin because sensitive receptors (e.g., residences, schools, and hospitals) are interspersed throughout the area where the proposed OBMPU facilities would be located. Cumulative growth in the Project area would have the potential to result in carbon monoxide hotspots and emissions of diesel particulate matter. However, emissions from OBMPU construction and operation, including emissions of carbon monoxide and PM_{2.5}, would be below significance thresholds that are designed to protect the health of sensitive receptors. Furthermore, the overall net vehicle trips associated with the OBMPU would be negligible. Therefore, the OBMPU would not result in a cumulatively considerable air quality impact on sensitive receptors.

The geographic scope for the analysis of cumulative impacts relative to odorous emissions is the area immediately surrounding the odor source. Objectionable odors are not cumulative in nature because the air emissions that cause the odors disperse rapidly beyond the odor source, making the odor less detectable. Cumulative projects as well as the OBMPU would be required to comply with SCAQMD Rule 402 (Nuisance). Therefore, the OBMPU, in combination with other cumulative projects, would not result in a significant cumulative impact associated with odorous emissions.

As Program construction-source emissions would be considered cumulatively significant, the proposed Project could result in a cumulatively considerable air quality impact.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

All of the mitigation measures identified in the analysis under **Subsection 4.2.7**, above, would be required to minimize cumulative impacts to the maximum extent feasible. However, even with the implementation of mitigation to minimize NO_x emissions during construction (**MM AQ-1**), the SCAQMD emissions thresholds would be exceeded. As such, the determination in the preceding analysis would stand. As Program construction-source emissions would be considered cumulatively significant, the proposed Project could result in a cumulatively considerable air quality impact.

Level of Significance After Mitigation: Significant and Unavoidable

4.2.8 Unavoidable Significant Impacts

The programmatic evaluation of emissions presented in the preceding analysis demonstrates that, after implementation of the recommended mitigation measures, neither construction nor operation of the proposed OBMPU would result in exceedance of thresholds for a most criteria pollutants (ROG, CO, SO₂, PM₁₀, or PM_{2.5}). Furthermore, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project. When applied to air quality emissions, as stated above, air pollution emissions from electrical generation are therefore not attributable on a project-specific basis. However, the offset in energy use on a regional basis from storing water in the Basin, rather than importing water to meet demand, would minimize air emissions attributable to energy sources on a more regional or statewide level. Mitigation Measure **AQ-1** is recommended to reduce the severity of the NO_x construction-generated emissions impacts to the greatest extent feasible. As discussed previously, there is a potential for the implementation of a significant number and type of OBMPU facilities to be constructed on the given “worst day” of construction such that NO_x emissions could be considered both significant and unavoidable at a project-specific and cumulative level. As a result of the potential for exceeding the NO_x emissions threshold, the Program would not be consistent with the AQMP, and therefore would result in a significant and unavoidable impact thereof. The air quality impact for Program-related LST impacts and odor impacts are considered to be less than significant; and, sensitive receptors would not be subject to a significant air quality impact during Program construction or operations. Therefore, a significant and unavoidable impact to air quality will result from implementing the proposed Program.

4.3 BIOLOGICAL RESOURCES

4.3.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of biological resources from implementation of the OBMPU. The thresholds analyzed in this Subchapter are derived from Appendix G of the CEQA Guidelines, which identifies the issues that examine whether the proposed Project would have a substantial adverse effect upon biological resources at the proposed project sites that are part of the OBMPU as well as a substantial effect upon any biological resources adjacent to those proposed project sites, or otherwise indirectly resulting in impacts to biological resources as a result of a implementation of a combination of OBMPU projects or a singular project implemented under the OBMPU.

The analysis contained in the 2000 OBMP PEIR, while still applicable in ways described herein, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated. Since the 2000 OBMPU PEIR, regulations changed, and the occurrences of plant and wildlife species and availability of quality habitat to support special status species within the Chino Basin have changed. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations. This explains why the impact analysis herein concludes that the OBMPU would result in both cumulatively significant and Project-specific significant and unavoidable impacts to biological resources.

The Notice of Preparation determined that all of these issue areas would be analyzed in the RDSEIR. These issues will be discussed below as set forth in the following framework:

- 4.3.1 Introduction
- 4.3.2 Environmental Setting: Biological and Physical Conditions of the Chino Basin
- 4.3.3 Regional Special Status Species and Habitats of Concern
- 4.3.4 Regulatory Setting
- 4.3.5 Thresholds of Significance
- 4.3.6 Potential Impacts
- 4.3.7 Avoidance, Minimization and Mitigation Measures
- 4.3.8 Cumulative Impact
- 4.3.9 Unavoidable Adverse Impacts

The following references were used in preparing this Subchapter of the RDSEIR:

- Tom Dodson & Associates, *2000 Program Environmental Impact Report, Optimum Basin Management Program*, July 2000.
- Jacobs Engineering Group, *Program Biological Resources Report, Optimum Basin Management Program Update for the Chino Basin Watermaster and Inland Empire Utilities Agency*, May 15, 2023 (provided as Appendix 3a, Volume 2 of this RDSEIR)
- Jacobs Engineering Group, *Program Biological Resources Report, Optimum Basin Management Program Update for the Chino Basin Watermaster and Inland Empire Utilities Agency*, March 15, 2020 (provided as Appendix 3b, Volume 2 of this RDSEIR)
- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report*, May 2021
- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan*, May 2021
- IEUA Chino Basin Program Final PEIR

- San Bernardino County, 2007. General Plan Biological Resources Report. (SCH No. 2005101038)
- San Bernardino County, 2020. San Bernardino Countywide Plan. <https://countywideplan.com/> (accessed 05/15/23)
- San Bernardino County, 2020. San Bernardino Countywide Plan Environmental Impact Report. <http://countywideplan.com/eir/> (accessed 05/15/23) (SCH No. 2017101033)

Two comments specific to this topic were received in response to the Notice of Preparation. NOP Comment Letters can be found in **Subchapter 8.1**.

Comment Letter #2 from Orange County Water District (OCWD) (dated 3/6/20) states:

- OCWD has statutory authority over and extensive activities within Prado Basin.
- The distribution of riparian vegetation and wetlands in the Prado Basin relies on rising groundwater or groundwater seepage as a Groundwater Dependent Ecosystem.
- The OBMPU EIR should evaluate potential effects that the proposed Project might have on the Groundwater Dependent Ecosystem in Prado Basin.
- The OBMPU EIR should assess how the proposed projects would change or effect surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River.
- The OBMPU EIR should assess how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would affect Santa Ana River flows reaching Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the habitat conservation plan.

*Response: With no specific water diversion projects proposed as part of the OBMPU RDSEIR beyond those that have been analyzed in former environmental impact reports—such as the CBP certified PEIR and the Draft Santa Ana River Habitat Conservation Plan EIR (SAR HCP DEIR)—it would be speculative to identify specific impacts to the riparian vegetation and wetlands in the Prado Basin. However, Mitigation Measure **BIO-17** requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects, but this does not preclude a determination of insignificance, particularly if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. In addition, Mitigation Measure **BIO-17** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects.*

- The OBMPU EIR should assess the effects that OBMPU related changes in groundwater levels will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should assess how changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin, and the effects these changes will have on sensitive riparian vegetation and riparian habitats.

- The OBMPU EIR should evaluate potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species that might occur to the proposed OBMPU Projects.

Response: The Prado Basin Habitat Sustainability Committee is tasked with obtaining and analyzing this information. Impacts from the OBMPU implementation and future activities thereof will be monitored to adapt to future conditions within the Chino Basin. As such, the following contingency measures will be implemented as part of the OBMPU to monitor and adapt to future environmental conditions in the Chino Basin which, with unknowns associated with climate change, may require future adaptations in management of the whole watershed's recycled water resources.

- 1. The IEUA will continue to support the preparation of the Prado Basin Habitat Sustainability Program (PBHSP) in cooperation with the Chino Basin Watermaster and Upper Santa Ana River Watershed Stakeholders. This would continue the monitoring and mitigation efforts intended to protect Prado habitat and the species that the Prado habitat supports.*
- 2. Continue to support the Upper Santa Ana River Habitat Conservation Plan (HCP), via input and refinement of the Plan itself, both its programs and the forum that it will establish to focus on adaptive management to protect sensitive species in the Upper Watershed. This will ensure that species and habitats protected by the cumulative efforts put forth by the HCP continue to be carried forth.*
- 3. Consider which forum to use (SAWPA, PBHSP, HCP implementation/management group, or a new group) to most effectively manage the whole Santa Ana River Watershed water resources in an effective, creative and adaptive manner to protect the habitats and species that are supported by habitats within the Santa Ana River Watershed, in addition to managing the water available in the Watershed in an equitable and sustainable manner.*

This 2023 OBMPU RDSEIR further addresses this comment and notes that all OBMPU projects will undergo project-level environmental review when necessary and will identify project-specific mitigation measures at that time.

Comment Letter #5 Katie Gienger, Water Resources Manager for Ontario Municipal Utilities: The Comment identifies the process for future review of projects that may result in potential changes to surface flows in the Santa Ana River (quality or quantity), particularly in relation to recycled water discharges to the River and means to mitigate potential impacts from such changes. This comment states that the OBMPU should include discussion of the potential adverse impact to the Santa Ana River from proposed OBMPU future projects.

Response as it relates to Biological Resources: The OBMPU could result in water diversions that have a potential to contribute to a cumulative adverse impact on biological resources in both the Upper Santa Ana River channel and Prado Basin. Based on implementing avoidance and mitigation measures in accordance with the mitigation outlined in the SAR HCP DEIR (presented in Appendix 6), the impacts to 21 of the identified covered species can be reduced to a less than cumulatively considerable adverse impact or even beneficial impacts. However, according to the SAR HCP DEIR the cumulative operational diversions from the SAR may contribute to a significant adverse impact on the Santa Ana sucker. As described above, this impact is not unequivocal; it is based on insufficient data to ensure that all of the proposed avoidance and mitigation measures are effective, particularly translocation, which "may not achieve their intended result." The Watermaster and IEUA concur with the cumulative impact findings of the SAR HCP DEIR, which, in addition to the data provided in Appendix 3a and 3b of Volume 2 to

this DSEIR containing the SAR HCP DEIR's environmental analysis, addresses mitigation that would reduce impacts from the OBMPU on biological resources to the greatest extent feasible.

*At this time, no specific diversions in the Chino Basin have been proposed as part of the OBMPU; note that the CBP PEIR fully evaluated the impacts resulting from diversion of recycled water from the Santa Ana River. Mitigation is required to continue the Prado Basin monitoring program and to conduct detailed environmental reviews of future diversion impacts on Prado Basin habitat prior to approval of such projects. Mitigation Measure **BIO-17** requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects, but this does not preclude a determination of significance, particularly given that if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. However, based on the RDSEIR evaluation, diversion of additional water as part of the OBMPU (including recycled water) was concluded to represent a potentially unavoidable cumulatively considerable significant adverse impact to Prado Basin biological resources until proven otherwise with a project-specific CEQA evaluation.*

No comments were received at the scoping meeting held for the proposed Project. Much of the following text is abstracted directly from the report in Appendix 3 of Volume 2.

4.3.2 Environmental Setting: Biological and Physical Conditions of the Chino Basin

The Chino Basin is one of the largest groundwater basins in Southern California and has an unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles Counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed; refer to **Chapter 3, Project Description**, for the Exhibits included herein. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in **Exhibit 2**, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The principal drainage course for the Santa Ana River watershed is the Santa Ana River. It flows 69 miles across the Santa Ana Watershed from its origin in the eastern San Bernardino Mountains to the Pacific Ocean. The Santa Ana River enters the Chino Basin at the Riverside Narrows and flows along the southern boundary to the Prado Flood Control Reservoir, where it is eventually discharged through the outlet at Prado Dam and flows the remainder of its course to the Pacific Ocean. The Basin is traversed by a series of ephemeral and perennial streams that include: San Antonio Creek, Chino Creek, Cucamonga Creek, Deer Creek, Day Creek, Etiwanda Creek and San Sevaine Creek. Please refer to Exhibit 2 for the location of drainages.

These creeks flow primarily north to south and carry significant natural flows only during, and for a short time after, the passage of Pacific storm fronts that typically occur from November through April. Year-round flow occurs along the entire reach of the Santa Ana River in the Chino Basin due to year-round surface inflows at Riverside Narrows, discharges from municipal water recycling plants to the River between the Narrows and Prado Dam, and rising groundwater. Rising groundwater is assumed to occur in Chino Creek, in the Santa Ana River at Prado Dam, and potentially other locations on the Santa Ana River depending on climate and season.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W.

Both the California and Federal endangered species acts provide legislation to protect the habitats of listed species as well as the species itself. If a State or federally listed endangered species was determined to be present, the proposed Project may be constrained to avoid or minimize effects to the species. Species specific mitigation measures would thus need to be agreed upon and implemented to the satisfaction of all jurisdictional agencies. These jurisdictional agencies may be some or all of the following: U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and/or U.S. Army Corps of Engineers (COE).

The Project area is comprised of a primarily urban setting in the northern portion of the Basin with agricultural and open space uses in the southern-most portion of the Basin. A large majority of the approximately 225,000 acres that comprises the Chino Basin has been previously developed or disturbed by human activity. Relatively speaking, very few pristine areas of undisturbed natural habitat remain. The following is a discussion of areas within the Chino Basin that have the largest areas of extant habitat communities or have the most significant biological resources:

The Prado Basin Reservoir area comprises 9,741 acres northwest of Corona and south of Chino. Approximately 4,000 acres of this area can be classified as riparian woodland vegetation, of which 2,000 to 2,500 acres is dense riparian habitat dominated by large stands of willow woodland. This is one of the largest remaining riparian woodland areas in Southern California. This area supports a wide array of sensitive species, both floral and faunal. According to the Biological Resources section for the 2000 OBMP PEIR, a total of 311 species of vascular plants, belonging to 65 families, were identified in the Basin area. Three major vegetational communities occur in this area. First is riparian habitat which occurs in low lying sections of the Basin and along the Santa Ana River and other streams running into the Basin.

The riparian habitat is dominated by extensive stands of black willow, and smaller stands of arroyo willow. Several stands of tall cottonwoods and a single stand of sycamore have been identified. The second habitat type is upland habitat characteristic of coastal sage scrub, plus grasses and exotic weeds. This upland area has been heavily impacted by agriculture and grazing activities. The third major vegetational type is the aquatic and semi-aquatic communities occurring in permanent streams and artificial duck ponds, and intermittently filled reservoirs and streams within the Basin. The wildlife in the riparian area includes a variety of amphibians, mammals, and birds. For an additional discussion of the biological resources identified in the area, please refer to 2000 OBMP PEIR's biological resource section.

The Santa Ana River and its tributaries within the Chino Basin are also significant areas for biological resources as they provide refugia and breeding grounds for neotropical migrant species

as well as provide habitat linkages and movement corridors connecting various large blocks of relatively undisturbed habitat areas. The 2000 OBMP PEIR also reports that many of these tributary streams are proposed to be fully lined as part of flood control activities in the future.

Another significant area for biological resources that lies adjacent to the Chino Basin is Chino Hills State Park, which has approximately 13,000 acres of wild land situated in the hills north of Santa Ana Canyon. Although Chino Hill State Park contains large blocks of non-native grasslands, it also contains riparian habitat comprised of coast live oak and sycamore woodlands. Additionally, this park contains one of the largest remaining stands of Southern California black walnut. This park functions as an important area for connectivity to and movement between the park and the boundary of the Project area.

Based on the most recent field surveys of the area and desktop review for Peace II Subsequent Environmental Impact Report (SEIR, 2010), the proposed action area traverses vacant, public land designated as flood control, water conservation and open space. Patches of agricultural, industrial and commercial land uses are evident north of the Prado Dam inundation area (Prado Basin).

Prado Basin is dominated by flood plain riparian plant communities, with upland habitats primarily restricted to the perimeter of the Basin. The hydrological conditions in the Project area promote the establishment of riparian vegetation. A freshwater marsh habitat component is also present in the Project area because standing water is seasonally abundant in the Prado Basin upstream of the Prado Dam.

The present biological condition of Prado Basin was created by the construction of Prado Dam in 1941. Prado Dam was built where Chino Creek, Cucamonga Creek (also known as Mill Creek, south of Pine Avenue) and Temescal Wash have their confluence with the Santa Ana River. Due to a combination of the high groundwater table, storm flow accumulation held behind the Dam, sewage treatment plant effluent and agricultural irrigation runoff, a resultant perennial river flow exists that has created and sustains the extensive wetland habitat in the Basin. Presently, the riparian woodlands in the Basin comprise the largest single stand of this habitat in Southern California. Prado Basin supports a myriad of habitat types, including but not exclusive to cottonwood/willow riparian forest, riparian scrubland, herbaceous riparian, freshwater ponds, freshwater marsh, riverine, sandy wash, fallow fields, agricultural land, ruderal, coastal sage scrub, and oak woodland.

The riparian habitat within the Project area is in various seral stages and generally consists of tall, multilayered, open, canopy riparian forests. The dominant vegetative species within this riparian forest include: Eucalyptus, Fremont cottonwood (*Populus fremontii*), black cottonwood, (*P. tremuloides*) and several tree willows (*Salix spp*). Characteristic species, in addition to the eucalyptus and cottonwood, include black willow (*S. goodingii*) narrow-leaved willow (*S. exigua*), arroyo willow (*S. lasiolepis*), red willow (*S. laevigata*), sandbar willow (*S. hindsiana*), mulefat (*Baccharis salicifolia*) Sycamore (*Platanus recemosa*) and elderberry (*Sambucus mexicana*).

In addition to the riparian community, there are also freshwater marsh, eucalyptus groves, coastal sage scrub, riverine, grassland, and ruderal communities found within the Project area. Cattails and reeds are the dominant species within the freshwater marsh habitat.

4.3.2.1 Plant Communities

Additionally, a review of San Bernardino and Riverside County general plan documents included lists of the plant communities shown below as being present in the Project area. The general characteristics of the plant communities described below were extracted from the San Bernardino County General Plan Biological Resources Report (2007)(SCH No. 2005101038).

Chaparral

Several different chaparral subtypes occur in San Bernardino County. The most common subtypes in the valley region are southern mixed chaparral, chamise chaparral and scrub oak chaparral. These associations are located predominantly along the lower slopes of the mountains and in the interface zone between valley and mountain regions.

Southern mixed chaparral is composed of broad-leaved sclerophyllous shrubs that grow to about 8-12 feet tall and form dense, often nearly impenetrable stands. The plants of this association are typically deep-rooted. There is usually little or no understory, except in openings; however, considerable leaf litter accumulates. This habitat occurs on dry, rocky often steep north-facing slopes with little soil. It may grade into Riversidean coastal sage scrub at lower elevations, but generally grown on moister and rockier sites. Characteristic shrub species include chamise, toyon and lemonadeberry.

Chamise chaparral is dominated by chamise, almost to the exclusion of all other plants. This habitat occurs on shallower, drier soils or at somewhat lower elevations than mixed chaparral. Chamise has adapted to the characteristic fire cycles of this habitat by stump sprouting. In mature stands, the shrubs are densely interwoven and there is very little herbaceous understory or leaf litter.

Scrub oak chaparral is a dense evergreen association that grows to twenty feet tall and is dominated by scrub oak. This habitat occurs on wetter sites than other chaparral associations, often at slightly higher elevations. These more favorable sites recover from fire more quickly than other chaparral subtypes and substantial leaf litter accumulates. Additional shrub species found in scrub oak chaparral include eastwood manzanita, toyon and mountain mahogany, poison oak and narrow leaf bedstraw.

Other chaparral associations may occur in the Valley region but are more predominant at higher elevations. Such associations include buck brush chaparral, bigpod ceanothus chaparral and interior live oak chaparral.

Chaparral habitats are suitable for burrows and soil nests of many mammal species. Another important feature of this habitat are rock outcrops, which are important for reptiles and as raptor perch sites. No sensitive species of San Bernardino County are directly dependent upon chaparral habitat. However, sensitive faunal species from adjacent coastal sage scrub habitat may utilize chaparral as a corridor or for foraging. These species may include Stephens' kangaroo rat, Los Angeles pocket mouse, and San Diego horned lizard.

According to the California Native Plant Society (CNPS) database,

Coastal sage scrub

Coastal sage scrub in the valley region is classified as Riversidean sage scrub, the most xeric expression of coastal sage scrub south of Point Concepcion (Holland 1986). This

habitat grows on steep slopes with evenly drained soil and dominant species are relatively shallow-rooted shrubs, seldom over four feet tall.

Riversidean Alluvial Sage Scrub is a variation of Riversidean sage scrub which also exists in the valley region. This vegetation type is the dominant habitat of the Upper Santa Ana River floodplain and also occurs in the Cajon and Lytle washes (CNDDB, 2023).

*Coastal sage scrub habitat in Southern California is decreasing rapidly as a result of urbanization. Evidence of its decline is the growing number of declining plants often associated with it. In the valley region of San Bernardino County, three State and/or federally listed endangered species are known to occur in association with the coastal sage scrub: slender-horned spineflower (*Centrostegia lepoceras*), Santa Ana River woolly-star (*Eriastrum densifolium* spp. *sanctorum*), and Nevin's barberry (*Berberis nevinii*). Additionally, Pringles monardella is federally listed as a Category 1 species, while Payson's jewelflower and California bedstraw are category 2 species.*

San Bernardino kangaroo rat, a federally listed endangered species; and Stephens' kangaroo rat, a State-listed threatened species and federally listed endangered species are also known to have its habitat associated with this community type in the Valley area. Los Angeles pocket mouse is federally listed as a Category 2 species and a species of special concern by the State. The Los Angeles pocket mouse has been found in San Bernardino County near the Cajon Wash, north of Etiwanda and San Bernardino and in Reche Canyon.

The Valley region of San Bernardino County represents the northern limit of the range of the whiptail and coastal California gnatcatcher, a federally listed threatened species. Currently the U.S. Fish and Wildlife Service has proposed critical habitat for this species.

Deciduous woodlands

California walnut woodland is a rather specialized woodland habitat restricted to the Chino Hills and Etiwanda area within the Valley region. This woodland, which occurs among rocky outcrops integrating with scrub habitat or on more mesic sites integrating with canyon live oak woodland, is dominated by California walnut; associated species include canyon live oak, Engelmann oak, sugar bush, and squaw bush. California walnut woodland is considered a sensitive habitat due to its small acreage and limited distribution in the county; no sensitive floral species are solely dependent on this woodland habitat for their life cycle, however. No federal or state sensitivity listing exists for the live oak walnut or for any other species associated with California walnut woodland. Animals associates with California walnut woodland are similar to the species that would utilize oak woodland. These include Anna's hummingbird, acorn woodpecker, Nuttall's woodpecker, deer mouse, California ground squirrel, striped skunk, and coyote. No sensitive animals as listed by the USFWS or CDFW are dependent on California walnut woodland within the valley region in San Bernardino County.

Grasslands

The disturbed grasslands of the Valley region of San Bernardino County are a heterogeneous complex that may be associated with shrubs or trees on land that has been disturbed or altered by development or fire. Non-native weedy vegetation is common in this habitat and includes slender wild oats, foxtail fescue, ripgut grass, short-pod mustard, red-stem filaree, and pin-clover. One sensitive plant species that may occur in the grassland areas of the northern Valley area of San Bernardino County is Orcutt's brodiaea. This species, which is

seriously threatened by development, may be found in valley/foothill grasslands, cismontane woodlands and vernal pool habitats. Birds of prey utilize grassland areas for foraging. Locally breeding raptor species include black-shouldered kite, red-tailed hawk, red-shouldered hawk, great horned owl, and barn owl. Other faunal associates include house mouse, southern grasshopper mouse, and gopher snake. No sensitive animal species are expected to utilize the grassland areas of the Valley region of San Bernardino County.

Wetlands

Wetland communities are areas of land which are either permanently or seasonally wet and support vegetation that is specifically adapted for saturated soil conditions. These areas include riparian areas and marshes, where moisture is at or near the surface, and often include intermittent drainages. In Southern California, wetland habitats are declining and are considered sensitive. Wetlands are further subject to State and federal regulations that include the federal Clean Water Act (Section 404) and the CDFW Streambed Alteration Agreement (Section 1600 of the Fish and Game Code). A number of stream channels flow through the Valley region of San Bernardino County including Cucamonga Creek, Cajon and Lytle creek washes, and Santa Ana River. Where water is present near the surface in stream channels, a riparian woodland community can be maintained. In stream channels with intermittent surface or groundwater availability, a riparian scrub community may also develop. Both of these communities exist in the Valley region. Dominant woodland tree species include Fremont cottonwood, arroyo willow and black willow with western sycamore on the upper terraces. Common shrubs include mulefat, California mugwort, poison oak and the coyote bush. A well-developed stand of riparian woodland occurs in the Prado Basin of San Bernardino County and extends into Riverside County. Remnant riparian woodlands also occur in less frequently flooded areas such as the Santa Ana Wash area.

*A freshwater marsh is located north of Etiwanda in the Day Canyon wash area. Freshwater marsh also occurs in the Prado Basin and may occur in the other drainages of the valley region, wherever moisture is at or near the surface for a long duration during the growing season. This habitat is usually dominated by perennial emergent species 4 to 7 feet tall. Stands of bulrushes or cattails often characterize this habitat. Also, large stands of the non-native pest plant giant reed grass (*Arundo*) occur along much of the basin's riparian areas. This giant reed grass not only takes over native riparian communities, but it also uses a tremendous amount of water.*

These Riparian resources serve as important habitat, as water sources, and as movement corridors for wildlife. This habitat type also supports numerous sensitive animal species including least Bell's vireo, a state and federally listed endangered species; southwestern willow flycatcher, a State and federally listed endangered species; bald eagle, a state and federally endangered species; western yellow-billed cuckoo, a State listed threatened species; long eared owl, a species of special concern and the California black rail, a State listed threatened species. The cuckoo and vireo occur in the dense riparian habitat of the Prado Basin in Riverside County but apparently have been extirpated from the Valley region of San Bernardino County. The black rail, dependent on marshes, was recorded long ago at Chino but is not known to occur currently in San Bernardino County. (San Bernardino County Plan Biological Background Report, 1987).

4.3.2.2 Physical Conditions

The local climate is characterized by hot summers, mild winters and rainfall, which occurs almost entirely in the winter and early spring months. The average annual rainfall is about 19 inches. The climate is somewhat affected by the moderating effects of the Pacific Ocean. Average temperatures range from a minimum of 39 degrees Fahrenheit in January to an average of 91 degrees Fahrenheit in July. Winds occur from all directions, and onshore winds from the west/southwest occur during the day. At night, wind patterns reverse with an offshore flow generally coming from the east/northeast.

The five Management Zones are bordered by various waterways, such as the Santa Ana River along the southeast alignment of Management Zone 5, Chino Creek coursing northwest to southeast along the western border of Management Zone 1 and confluent with the Santa Ana River in Prado Basin in the southern portions of MZ's 1-5, and San Antonio Creek, which passes through MZ's 1 and 2.

Mt. Baldy to the north of the Project area channels alluvial and perennial flows through several smaller waterways, which fill reservoirs (Puddingstone Reservoir in the northeast of MZ 1, Live Oak Reservoir north of MZ 1) and continue their flows into several of the creeks running north to south along the Project alignment.

4.3.2.3 Topography and Soils

The majority of the Program area is characterized by flat topography through the basin, bordered by hilly to mountainous terrain. The elevation ranges from approximately 500 feet above mean sea level (amsl) at the extreme southern portion of the Basin to 1,200 feet amsl along the foothills leading to the adjacent mountains. General soil maps (NRCS, Web Soil Survey, January 2020) identify numerous soil associations (distinctive patterns of soils in defined proportions) in the Program area. An overview of topography and soil is presented in the following section. Once specific Program elements are located, designed or proposed a more specific soil map would be prepared for those specific activities.

**Table 4.3-1
SOIL TYPES IN THE PROGRAM AREA**

Management Zone	Map Unit Name	Map Unit Name
1	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Ramona-Hanford-Greenfield-Gorgonio (well- to excessively drained, low to medium runoff, moderately slow to rapid permeability, 0-30% slope)
	Soper-Fontana-Calleguas-Balcom-Anaheim (well-drained, low to high runoff, slow to moderate permeability, 5 to 75% slope)	
2	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Ramona-Hanford-Greenfield-Gorgonio (well- to excessively drained, low to medium runoff, moderately slow to rapid permeability, 0-30% slope)
	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)	

Management Zone	Map Unit Name	Map Unit Name
3	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Sesame-Rock outcrop-Cieneba (well to excessively drained, low to very rapid runoff, moderate to slow permeability, 0-85% slope)
	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)	
4	Sesame-Rock outcrop-Cieneba (well to excessively drained, low to very rapid runoff, moderate to slow permeability, 0-85% slope)	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)
5	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)

The preceding list summarizes the general soil types identified in the Program area, which consists of disturbed urban land, alluvial sedimentary sources, and distinct soil series along the more rocky terrain. Most of the soils in the inventory area formed from alluvial, sedimentary, and meta-sedimentary sources and have been formed in concert with the complex geologic history of the area. Many areas to the within of the Program area have been urbanized and/or altered to produce crops.

4.3.2.4 Biological and Physical Conditions of the Study Areas

This section describes the existing biological and physical conditions of the Study Areas. Areas with natural vegetation and wetlands are most prevalent in the lower 20 percent of the management zones, in particular Chino Creek to the southwest of and within MZ 1 and the Santa Ana River to the southeast and within MZ 1 and MZ 5. Native plants are uncommon in the Program area and are generally limited to the wetland and streambed areas in the program area. Most of the land area in the five Management Zones is developed. The lack of native vegetation throughout the majority of the Program area is a result of a history of industrial, commercial, agricultural, and residential housing development within the Program area and associated maintenance and continued construction within the Program area.

4.3.2.5 Regional Habitat and Land Use in the Assessment Areas

This section describes the general biological conditions in and around the assessment areas, with particular emphasis on the wildlife habitats. Most of the discussion focuses specifically on the habitats adjacent to and within the Program area, which is synonymous with the area slated for future program activities. The rationale for this approach is habitat conditions are particularly relevant to wildlife presence and use.

The assessment areas are located in the Southwestern California subregion (SW) of the California Floristic Province (i.e., a geographic area, made of six regions, defined by the continuity of its vegetational, topographic, geologic, and climatic features) of this subregion (Hickman 1993). Like other Mediterranean-type ecosystems, the California Floristic Province is distinguished more by the endemism of its plants than its animals. Of nearly 3,500 species of vascular plants in the hotspot, more than 2,120 (61 percent) are found nowhere else in the world. Around 52 plant

genera are also endemic. The high levels of plant species endemism are due to its varied topography, climate zones, geology and soils.

Overall, the Study Areas are highly disturbed and fragmented because of historic man-made changes to the landscape, including urban, agricultural, industrial, railroad, and highways/road development. In a few areas, native vegetation and quality wildlife habitat remain relatively undisturbed. The majority of land in the Study Areas is an active urban area with mixed residential, commercial, and industrial use. Urban areas are the second greatest land use, including large cities such as Chino Hills, Chino, Montclair, Ontario, Upland, Rancho Cucamonga, Fontana, Rialto, Eastvale, Norco, and Jurupa Valley. In these areas native vegetation is absent or highly disturbed, and the more typical vegetation consists of a variety of planted landscape plants and other nonnative or ornamental vegetation.

4.3.2.6 General Wildlife Resources in the Project Area

The riparian forest in the Prado Basin is noted for its very high bird species diversity and abundance. Neotropical migrants depend on the deciduous trees and shrubs for foraging during migration. The mature trees provide numerous cavities for cavity-dependent wildlife and the tall trees are used by nesting raptors. The emergent vegetation rooted at the water's edge provides escape cover, shade and food for fish.

The wildlife resources in Prado Basin are important due, in part, to their high diversity and the large numbers of certain wetland species that occur there. The extensive and continuous riparian woodland, unique for Southern California, supports several rare and declining species, particularly birds. A robust raptor population occurs within the Project area. The raptors have a wealth of resources to draw on for foraging and nesting. They use the tall eucalyptus for nesting, roosting and perching. There are records of eleven raptor species breeding successfully in Prado Basin, including the white-tailed kite (*Elanus leucurus*), Cooper's hawk, golden eagle (*Aquila chrysaetos*), western screech-owl (*Otus asio*), and long-eared owl (*Asio otus*). A moderate number of raptor species from other regions winter in Prado Basin along with the resident raptors. Two of the rarer wintering raptor species include the peregrine falcon (*Falco peregrinus*) and merlin (*Falco columbarius*).

The double-crested cormorant (*Phalacrocorax auritus*), great blue heron (*Ardea herodias*), and black-crowned night-heron (*Nycticorax nycticorax*) are conspicuous breeders among the larger water birds. The tree swallow (*Tachycineta bicolor*) is abundant locally, especially in the vicinity of dead trees with cavities where it nests. The red-winged blackbird (*Agelaius phoeniceus*) and marsh wren (*Cistothorus palustris*) are locally abundant nesters, as is pied-billed grebe (*Podilymbus podiceps*), ruddy duck (*Oxyura jamaicensis*), and American coot (*Fulica americana*). The mallard (*Anas platyrhynchos*) and cinnamon teal (*Anas cyanoptera*) are more widely scattered. Shorebirds known to nest in the Basin include: the killdeer (*Charadrius vociferus*), American avocet (*Recurvirostra americana*), black-necked stilt (*Himantopus mexicanus*), and spotted sandpiper (*Actitis macularia*). Marsh-nesting birds include: the American bittern (*Botaurus lentiginosus*), Virginia rail (*Rallus limicola*), common moorhen (*Gallinula chloropus*), common yellowthroat, song sparrow, and tricolored blackbird (*Agelaius tricolor*).

Species that nest in the eucalyptus groves include: the Anna's hummingbird (*Calypte anna*), northern flicker (*Colaptes auratus*), Cassin's kingbird (*Tyrannus vociferans*), American crow, European starling, Bullock's oriole (*Icterus bullockii*), and house finch. Nests of the red-tailed hawk (*Buteo jamaicensis*) and red-shouldered hawk are regularly found in the eucalyptus trees as well,

probably because they are often the tallest trees available. Oriole and kingbird nests are locally concentrated in eucalyptus trees. The commonly encountered winter visitors in the riparian forests are the ruby-crowned kinglet (*Regulus calendula*), white-crowned sparrow (*Zonotrichia leucophrys*), American pipit (*Anthus rubescens*) and savannah sparrow (*Passerculus sandwichensis*).

Winter concentrations of waterfowl in the Prado Basin are at least as large as those on any of the Southern California coastal lagoons, and the Basin may hold the largest wintering populations of some species. The wintering waterfowl resources in the Basin are vast and are exploited by several waterfowl hunt club operators. Sixteen species of waterfowl have been found in the Basin, many numbering in the thousands. The most abundant are green-winged teal (*Anas clecca*), mallard, cinnamon teal, Northern shoveler (*Anas clypeata*), American wigeon (*Anas americana*), ring-necked duck (*Aythya collaris*), and ruddy duck. Twenty-three species of mammals including three non-native species have been observed in the Prado Basin. Six species of mammals found in the Basin are listed in the California Hunting Regulations with seasons and limits set by the State Fish and Game Commission.

The mule deer is a big game animal, the Audubon cottontail and black-tailed jackrabbit (*Lepus californicus*) are resident small game animals, the gray fox (*Urocyon cinereoargenteus*) and raccoon are fur-bearing mammals, and the bobcat is a regulated non-game mammal.

There are seven amphibian species known to occur in the Prado Basin and surrounding areas (Glaser 1970, Robertson and Shipman 1974, and Zembal et al. 1985). The bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*) are two invasive, non-native species commonly observed in the basin. There are 13 reptile species documented in the Basin. The western fence lizard is the most frequently encountered reptile within the Basin. The side-blotched lizard is concentrated in upland areas. The western whiptail (*Cnemidophorus tigris*) is also found primarily in upland scrubland habitats around the perimeter of the Basin. The western skink (*Eumeces skiltonianus*) inhabits remnant scrublands. The gopher snake (*Pituophis melanoleucus*) is the snake most frequently observed in the Basin and is found in both uplands and in drier riparian habitats.

At least 15 species of fish have been found in the Prado Basin within the Santa Ana River. Most of these occur in the affected area, at least seasonally. Two, the SASU and arroyo chub, are native to Southern California; the rest are non-native introductions. According to Camm Swift, PH.D.—one of the leading authorities on the biology, management, and conservation of the fresh and brackish water fishes of coastal southern California with over 30 years of experience working in the field—the most abundant species in the Basin are the flathead minnow and mosquitofish. These two, along with the carp (*Cyprinus carpio*), comprise about 95 percent of all fish species in the Basin (Swift unpubl. data).

Common wildlife in the Project area includes coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), rattlesnake (*Crotalus* sp), western fence lizard (*Sceloporus occidentalis*), desert wood rat (*Neotoma lepida*), and deer mouse (*Peromyscus maniculatus*).

4.3.3 Regional Special Status Species and Habitats of Concern

Special status species are plants or animals that are legally protected under the federal ESA, the California ESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species include the following:

- Species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.12 [listed plants]); 50 CFR 17.11 (listed animals); and various notices in the *Federal Register* (proposed species).
- Species that are candidates for possible future listing as threatened or endangered under the federal ESA (76 Fed. Reg. 66370, October 26, 2011).
- Species listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 California Code of Regulations [C.C.R.] §§ 670.2, 670.5).
- Species that meet the definitions of “rare” or “endangered” under CEQA (CEQA Guidelines § 15380, et. seq.).
- Plants presumed by the California Native Plant Society (CNPS) to be “extinct in California” (Lists 1A, CNPS 2020).
- Plants considered by the CNPS to be “rare, threatened, or endangered in California” (Lists 1B and 2, CNPS 2020).
- Plants listed by CNPS as plants about which more information is needed to determine their status (List 3, CNPS 2020), and which may be included as special-status species on the basis of local significance or recent biological information.
- Plants listed by CNPS as plants of limited distribution or infrequent throughout a broader area in California (List 4, CNPS 2020); these plants are not “rare” from a statewide perspective but are uncommon enough that they are recommended for inclusion in environmental documents.
- Plant species listed as rare under the California Native Plant Protection Act (California Fish and Game Code §§ 1900, et seq.).
- Animal species of special concern to the CDFW (CDFW 2019).
- Bird species of conservation concern as identified by USFWS in *Birds of Conservation Concern 2008* (USFWS 2008).
- Animals that are fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]) (CDFW 2011).

The following table identifies the habitat types and land uses identified within the Study Areas of the proposed Project.

**Table 4.3-2
PROJECT AREA WILDLIFE HABITAT TYPES, LAND USES, AND TYPICAL VEGETATION**

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Tree-Dominated Habitats	
Montane Hardwood (MHW)	Jeffrey pine, ponderosa pine, sugar pine, incense-cedar, California white fir, bigcone Douglas-fir, California black oak, and Coulter pine. At lower elevations, associates are white alder, coast live oak, bigleaf maple, California laurel, bigcone Douglas-fir, and occasionally valley oak, foothill pine, and blue oak (Cheatham and Haller 1975, McDonald and Littrell 1976).
Desert Riparian (DR)	Tamarisk, velvet ash, mesquite, screwbean mesquite, Fremont cottonwood, and willows such as Gooding, Hinds, and arroyo (Bradley and Deacon 1967, Cheatham and Haller 1975, Küchler 1977, Paysen et al. 1980, Parker and Matyas 1981). The subcanopy includes smaller individuals of the canopy species as well as quailbush, Mojave seabligh, desert lavender, seep willow, and arrowweed (Bradley and Deacon 1967, Küchler 1977. Paysen et al. 1980, Parker and Matyas 1981).

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Valley Foothill Riparian (VRI)	Cottonwood, California sycamore and valley oak. Subcanopy trees are white alder, boxelder and Oregon ash. Typical understory shrub layer plants include wild grape, wild rose, California blackberry, blue elderberry, poison oak, buttonbush, and willows. The herbaceous layer consists of sedges, rushes, grasses, miner's lettuce, Douglas sagewort, poison-hemlock, and hoary nettle. (CDFW, 2023)
Shrub/Herbaceous-Dominated Habitats	
Riversidean Alluvial Fan Sage Scrub	Predominantly of drought-deciduous soft-leaved shrubs, but with significant cover of larger perennial species typically found in chaparral (Kirkpatrick and Hutchinson, 1977). Scalebroom (<i>Lepidospartum squamatum</i>) generally is regarded as an indicator of Riversidean alluvial scrub (Smith, 1980; Hanes, et al., 1989). In addition to scalebroom, alluvial scrub typically is composed of white sage (<i>Salvia apiana</i>), redberry (<i>Rhamnus crocea</i>), California buckwheat, Spanish bayonet, California croton (<i>Croton californicus</i>), cholla (<i>Opuntia spp.</i>), tarragon (<i>Artemisia dracuncululus</i>), yerba santa (<i>Eriodictyon spp.</i>), mule fat, and mountain-mahogany (Hanes, et al., 1989; Smith, 1980). Annual species composition has not been studied but is probably similar to that found in understories of neighboring shrubland vegetation. Two sensitive annual species are endemic to alluvial scrub vegetation in the proposed Study area: slender-horned spineflower (<i>Dodecahema leptocerus</i>) and Santa Ana River woolly-star (<i>Eriastrum densifolium ssp. sanctorum</i>). (Western Riverside County MSHCP, Chapter 3)
Mixed Chaparral (MCh)	Scrub oak, chaparral oak, and several species of ceanothus and manzanita. Individual sites may support pure stands of these shrubs or diverse mixtures of several species. Commonly associated shrubs include chamise, birchleaf mountain mahogany, silk-tassel, toyon, yerba-santa, California buckeye, poison-oak, sumac, California buckthorn, hollyleaf cherry, Montana chaparral-pea, and California fremontia. Some of these species may be locally dominant. Leather oak and interior silktassel are widely distributed on cismontane serpentine soils, and chamise and toyon may be abundant on these soils. Shrubs such as Jepson, coyote, and dwarf ceanothus and serpentine manzanita are local serpentine endemics (Cheatham and Haller 1975, Thorne 1976, Hanes 1977).
Aquatic Habitats	
Coastal and Valley Freshwater Marsh	Located in Day Canyon wash area and Prado Basin; cattail and bulrush dominated wetlands. Also present is non-native invasive giant reed grass (<i>Arundo</i>), which also occur along the riparian habitat outside of marshland.
Riverine and riparian	Santa Ana River, Cucamonga Creek, Cajon Creek, Lytle Creek that are tributary to the Chino and Prado Basins; this riparian habitat is dominated by Fremont cottonwood, arroyo willow, black willow and western sycamore. Common shrubs include mulefat, California mugwort, poison oak and coyote bush.
Disturbed Habitats	
RS, RM, SD-RES	Residential
IC, IR	Community industrial and regional industrial
SD-COM, COM	Special development and commercial
FW	Floodway resource management zone
RL	Rural living
OS	Open Space
KC/SP	Kaiser Commerce Center Specific Plan
Non-vegetated Habitats	
Barren (BAR)	Unvegetated, rock, gravel, soil

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Utilities ROW for water distribution	Cement-lined and herbaceous vegetation channels, pipes, culverts, pump stations, reservoirs.
HCP/Preserve Lands	
Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) June 22, 2004	The MSHCP encompasses 1.26 million acres of land in unincorporated Riverside County west of the San Jacinto Mountains and creates conservation land for 153,000 acres of land. Focal species covered include least Bell's vireo, southwestern willow flycatcher, wester yellow-billed cuckoo, Quino checkerspot butterfly, and fairy shrimp. Riparian, riverine, sage scrub and other upland vegetative communities are protected.
Designated Critical Habitat within Proximity to Proposed Project	
Spreading navarretia	19 miles southeast of the Study Area
Arroyo toad	6 miles northeast of Study Area and 9 miles south of the Study Area
Yellow-billed cuckoo	Directly overlapping with all MZ's in the south of the Study Area
Southern mountain yellow-legged frog	3 miles north of the Study Area
Thread-leaved brodiaea	7 miles northwest and 19 miles southeast of the Study Area
San Bernardino Merriam's kangaroo rat	Directly overlapping with MZ-2 in the north and within 1 mile northeast to 20 miles southeast of the Study Area
Least Bell's vireo	Directly overlapping all MZ's in the southern portion of the Study Area
Coastal California gnatcatcher	Directly overlapping the eastern portion of MZ-3 and within 1 mile of all MZ's within the Study Area
Southwestern willow flycatcher	Directly overlapping pockets in the southern portions of MZ-1, 2, 3, and 5 and within 1 mile of all MZ's in the Study Area
Santa Ana sucker	Directly overlapping the full southern extent of MZ-5 and within 2 miles of remaining MZ's
Braunton's milk-vetch	3 miles southwest of the 5 MZ's
Conservation Banks	
Cajon Creek Habitat Conservation Management Area Contact: Sheri Ortega Property Manager Vulcan Materials Company, Western Division 500 N. Brand Blvd. Suite 500 Glendale, CA 91203 (Division Office) 16013 Foothill Blvd., Irwindale, CA 91702 (626) 633-4236 (Office) (323) 637-2569 (Mobile) ortegas@vmcmail.com	24 T&E species and their associated habitats are covered, including: Riversidian alluvial fan sage scrub; San Bernardino kangaroo rat; Santa Ana wool- star; Slender-horned spineflower. Credits: Riversidian alluvial fan sage scrub
Soquel Canyon Mitigation Bank Contact: Mitigation Bank Manager (877) 445-8699 bankmanager@landveritas.com	Ephemeral; Intermittent and Permanent stream/riparian; Coastal sage scrub; Chaparral; Native grassland; Walnut woodland; Oak woodland; Mulefat scrub
Chiquita Canyon Conservation Bank Contact:	Coastal sage scrub; Riversidian sage scrub; California gnatcatcher

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Foothill / Eastern Transportation Corridor Agency 201 E. Sandpointe, Ste 200 P.O. Box 28870 Santa Ana, CA 92799-8870 Attn: William Woollett, Jr. Chief Executive Officer	
Black Mountain Conservation Bank Contact: Wild Desert EM Holdings, LLC 3301 Industrial Avenue Rocklin, CA 95765 (916) 435-3555 Fax: (916) 435-3556	Desert tortoise; Mohave ground squirrel; American badger; Desert kit fox; Loggerhead shrike; LeConte's thrasher; stream

4.3.3.1 Upper Santa Ana River Habitat Conservation Plan

Over the past several years the San Bernardino Valley Municipal Water District (Valley District) organized a number of water agencies in the Upper Santa Ana River Watershed to develop a habitat conservation plan for most of the special status species located with the Watershed. In May 2021 Valley District released both the Upper Santa Ana River Habitat Conservation Plan (HCP) and the Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report (SAR HCP DEIR) for public review and comment. IEUA has been a participant in the HCP development process and is one of a number of Permittee Agencies that will receive Incidental Take Permit (ITP) coverage for specific activities identified in the HCP as "Covered Activities." The two documents published in May 2021 are:

- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report*, May 2021 (SCH No. 2018121017)
- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan*, May 2021

Both documents were prepared by ICF and are hereby incorporated by reference into this document as permitted by Section 15150 of the CEQA Guidelines. Copies of these two documents are available for review upon request at the Inland Empire Utilities Agency located at 6075 Kimball Avenue, Chino, CA 91708 or are available via web at: <https://www.uppersarhcp.com/>

Of importance to this RDSEIR, the biology data base and biology evaluation in the SAR HCP DEIR represent the most comprehensive review of 22 of the most sensitive species in the Upper SAR Watershed, which includes the Chino Basin. The following summary information is abstracted from the Executive Summary of the SAR HCP DEIR.

*The Upper SAR HCP has been collaboratively prepared by Valley District and other Permittees to meet the requirements of Section 10 of the FESA and USFWS's HCP Handbook for a specified planning area, generally within San Bernardino and Riverside Counties (see Figure ES-2 (provided herein as **Figure 4.3-1**) and Section ES.4, HCP Planning Area and Permit Area). The HCP provides many valuable benefits to the region by providing a mechanism and approach to collaboratively address endangered species issues on a regional scale and with long-term funding assurances. The conservation approach is designed to anticipate, prevent, and resolve potential*

conflicts over current and future resource needs through the HCP planning and implementation process. This includes development of strategies to meet minimum in-stream flow requirements to protect native aquatic species and riparian communities in the Santa Ana River, creative solutions to be implemented for tributary habitat restoration/ rehabilitation and long-term protection, conservation and management of the natural resources and species of the Upper Santa Ana River watershed. These actions, as detailed in Chapter 5, Conservation Strategy, of the Upper SAR HCP and summarized in Chapter 2, Project Description, are intended to be implemented to benefit and reduce incidental take of Covered Species in a way that ensures long-term ecological value to the region. This regional conservation approach is intended to help avoid project-by-project incidental take approval for the specified Covered Activities, which can be costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.

The Upper Santa Ana River is home to dozens of water districts, flood control districts, and other, local water management agencies with an interest in the sound management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Many of these entities have participated in integrated regional watershed management coordination efforts in the Upper Santa Ana River since the 1960s. Recent cooperative planning initiatives among the water districts and Stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management (e.g., One Water, One Watershed 2.0 Plan finalized in 2014). However, several considerable challenges remain in the Upper Santa Ana River watershed, including ongoing modification of the Santa Ana River hydrogeomorphology, reduction of river flow, alteration of natural habitats, and the long-term effects of these changes on the functional ecology and native species of the watershed. These ongoing watershed effects are the result of continuing population growth, increased water demand, reductions in imported water supplies, and effects of climate change.

The Upper SAR HCP was initiated to help resolve some of these watershed challenges that need to be coordinated with regional water and other infrastructure projects. Because of the tremendous public value associated with improving regional water supply reliability and flood protection, the Permittees are proposing long-term commitments to native biological resources by agreeing to conserve, monitor, and manage Covered Species and their habitats for the next 50 years. In exchange, the Permittees would receive assurances that USFWS would not require additional land, water, or other natural resources mitigation beyond the level agreed upon in the HCP as long as the Permittees are honoring the terms and conditions of the permit.

A key to developing a regional conservation approach has been a highly collaborative and transparent process involving Federal, State, and local agencies and Stakeholder groups. The Santa Ana HCP Team includes the Permittees (the Permittee Agencies and SCE); Federal, State, and local agencies; and interested members of the public. During the planning process, the team met on a regular basis and were kept up to date via the HCP website (<http://www.uppersarhcp.com/>). The foundation of the HCP was developed by the Biological Technical Advisory Committee and the Hydrologic Technical Advisory Committee. The Biological Technical Advisory Committee helped to identify the Covered Species; provided conceptual species model input; and identified threats, natural drivers, and conservation targets for the Covered Species that helped develop biological goals and objectives. The Hydrologic Technical Advisory Committee provided input for the hydrological modeling conducted for the Upper Santa Ana River and its tributary system. A hydraulic model was used to estimate the effects on aquatic habitats in terms of low-flow habitat suitability and high-flow sediment transport. This modeling

created the foundation for quantifying existing hydrologic conditions and future conditions with implementation of the Covered Activities on the Upper Santa Ana River and its tributaries.

Implementing the Upper SAR HCP will be accomplished through the Upper Santa Ana River Sustainable Resources Alliance (Alliance). The Alliance will be responsible for implementing the conservation strategy, directing regulatory compliance, and conserving water and species habitat to facilitate timely approval and reliability of water supply projects. The ultimate goal of the Alliance is to maintain a sustainable watershed for water resources and species resources, of which the Upper SAR HCP is a substantial part. The Upper SAR HCP and other watershed sustainability components overseen by the Alliance will bring together a variety of organizations, agencies, and the public to create a forum for collaborative problem-solving to meet diverse needs and missions that include the protection of endangered species and timely approval and reliability of water supply projects.

*The HCP Planning Area is in San Bernardino and Riverside Counties, California, and encompasses approximately 862,966 acres (see **Figure 4.3-1**). The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is mostly constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Planning Area because conservation activities and the Covered Activities under the HCP are not planned therein.*

*The area covered by the proposed ITPs, which falls within but does not include the entire Planning Area, is referred to as the Permit Area. The Upper SAR HCP Permit Area is the geographic area where the impacts of the Covered Activities are expected to occur and is depicted as the ownership, easements, and areas of operation and maintenance (O&M) where all Covered Activities are located within natural habitats. The Permit Area also includes the HCP Preserve System so that the ITPs cover the potential take associated with habitat mitigation, management, and monitoring. While a number of mitigation areas are already known (e.g., tributary restoration/rehabilitation sites), others will be identified during HCP implementation. If the HCP Preserve System is expanded in the future, the Permit Area will also include any new areas of the HCP Preserve System. Figure ES-3 (provided herein as **Figure 4.3-2**) depicts the Permit Area based on mapping of the Covered Activities and the currently proposed HCP Preserve System.*

CEQA requires an EIR to contain a statement of the objectives of the project, including the underlying purpose of the project (State CEQA Guidelines §15124 (b)). The goal, or underlying purpose, of the proposed HCP Project is to streamline permitting for Covered Activities by protecting, and restoring the habitats needed for Covered Species to offset the effects of water supply management activities in the HCP Planning Area. To meet this goal, the Upper SAR HCP includes a Conservation Strategy that will conserve and protect the long-term ecological health and resilience of Covered Species and other non-listed native species within the HCP Preserve System.

In addition to this overarching goal, the Proposed Project would achieve the following, specific project objectives.

- Provide Federal ITPs that facilitate the ability of the Permittee Agencies to construct new facilities and/or operate and maintain facilities associated with their mission.*
- Establish the HCP Preserve System.*
- Maintain, enhance, or establish metapopulations of Covered Species within the HCP Preserve System.*

- *Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.*
- *Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.*
- *Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.*

To achieve these objectives, the Upper SAR HCP describes avoidance and/or minimization of impacts, mitigation measures to ensure habitat conservation strategies, compatible joint uses of lands, and land use restrictions.

The following HCP objectives will support the HCP goals:

- *Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.*
- *Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.*
- *Maintain and successfully enhance existing and new Santa Ana sucker habitats.*
- *Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.*
- *Implement successful conservation measures to promote the recovery of Covered Species.*
- *Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.*

The Upper SAR HCP is a regional, comprehensive program that would provide a framework to protect, enhance, and restore the habitat for specifically identified plant and animal species (Covered Species), while streamlining permitting for Covered Activities. The term Proposed Project, as used in this EIR, for CEQA purposes, is defined as the adoption and implementation of the Upper SAR HCP and associated ITPs for Permittees. Therefore, the Proposed Project evaluated in this EIR is focused on the potential direct and indirect impacts that could result from the implementation of conservation actions and the issuance of ITPs for Covered Activities.

For biological resources and hydrology, the Proposed Project impacts address the net effect of implementing the conservation actions in context with the Covered Species habitat impacts. The Proposed Project is specifically designed to offset (minimize and mitigate) Covered Activity habitat and streamflow impacts on Covered Species.

The analyses presented in this DEIR are focused on the direct and indirect impacts that may result from implementing the Proposed Project, which include the following major elements:

- *Issuance of permits for the incidental take of 20 of the 22 Covered Species.*
- *Conservation and restoration activities within an HCP Preserve System to be established and managed for Covered Species habitat.*
- *Additional actions to improve aquatic, riparian, and alluvial scrub habitats, as well as additional sensitive habitats throughout the Upper Santa Ana River watershed (i.e., not necessarily within the HCP Preserve System).*
- *Species-specific conservation measures that also include the re-establishment of native fish species, through processes of captive headstarting and translocation, to create additional resilience to extinction by establishing redundant populations in the Upper Santa Ana River watershed mountain tributary streams.*

- *Upper SAR HCP Preserve System management and monitoring, including habitat improvement, the control of nonnative species (flora and fauna), Covered Species captive headstarting and translocation activities, species surveys and research, additional vegetation management to reduce fire potential, site cleanup, preserve patrols, and others.*

Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. The following biological goals will be accomplished within the HCP Preserve System.

- **Goal 1:** *Conserve Covered Species and manage their habitats to contribute to the recovery of listed species or those that may become listed under the FESA.*
- **Goal 2:** *Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.*
- **Goal 3:** *Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.*
- **Goal 4:** *Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.*

The following biological objectives will support the HCP goals:

- **Objective 1:** *Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.*
- **Objective 2:** *Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.*
- **Objective 3:** *Maintain and successfully enhance existing and new Santa Ana sucker habitats.*
- **Objective 4:** *Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.*
- **Objective 5:** *Implement successful conservation measures to promote the recovery of Covered Species.*
- **Objective 6:** *Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.*

Species-specific objectives and species-specific conservation actions are presented for each Covered Species in Section 5.9, Species-Specific Conservation Strategies, of the Upper SAR HCP to achieve the HCP-level goals and objectives.

The Lytle Creek Conservation Bank and Cajon Creek Conservation Bank are in the alluvial floodplain and active channel of Lytle Creek and Cajon Creek, respectively, near the confluence of Lytle and Cajon Creeks (north of Interstate 210 and west of Interstate 215). Both banks have habitat conservation values available to mitigate impacts on SBKR and Santa Ana River woolly-star.

Mitigation to offset impacts on Covered Species (and their habitat) from Covered Activities within Alluvial Fan Preserve Unit B will be satisfied by land acquisition, habitat uplift (restoration or rehabilitation), and management of lands within this same Preserve Unit. Mitigation lands are actively being pursued for acquisition into the HCP Preserve System; however, if additional

mitigation is needed above and beyond these actions, then conservation/mitigation credits in the Lytle Creek or Cajon Creek Conservation Banks may be used.

The Upper SAR HCP includes specific habitat conservation, improvement, management, monitoring, avoidance and minimization measures (AMMs), and other actions for each Covered Species. The species-specific conservation strategies are the heart of the HCP Conservation Strategy. Each species-specific conservation strategy is described in terms of the conservation objectives and conservation actions developed specifically for that species. The strategy describes the species-specific AMMs to be implemented in addition to the general AMMs for the Upper SAR HCP. Specific instream flow management measures are included to benefit Santa Ana sucker and arroyo chub.

Captive headstarting and translocation of Santa Ana sucker is also planned for higher elevation streams to create additional resilience by establishing redundant populations in upper watershed tributaries. Streams considered for translocation sites include the Santa Ana River upstream of Seven Oaks Dam, and City, Plunge, Hemlock, Mill, Bear, and Lytle Creeks. San Antonio Creek may also be considered for translocation. Translocation activities for mountain yellow-legged frog is also being supported by the Upper SAR HCP Conservation Strategy.

The Delhi Sands flower-loving fly and arroyo toad are included in the Upper SAR HCP because they are species that overlap with known or modeled habitat areas; however, all impacts will be avoided by implementing both the general measures to avoid adverse impacts described in the Upper SAR HCP and the species-specific measures. The measures will be employed to avoid all impacts on the Delhi Sands flower-loving fly and arroyo toad by implementation of Covered Activities, and the Upper SAR HCP does not provide incidental take coverage for either species. If the proposed activity does not have the potential to directly or indirectly result in adverse effects on these two species, including temporary or permanent impacts on their habitat, no additional mitigation or AMMs would be required for this species.

4.3.3.1.1 SAR HCP DEIR Covered Species Potentially Occurring within the Chino Basin Area

The SAR HCP addresses both federally and State-listed threatened and endangered species, as listed in Table ES-1 (**Table 4.3-3** in this document). Although the primary intent of the SAR HCP is to provide mitigation for effects on Covered Species, it would also contribute to the overall protection of native biological diversity, habitat for native species, natural communities, and local ecosystems. This broad scope would conserve a wide range of natural resources, including native species that are common and those that are rare.

As listed in Table ES-1 (**Table 4.3-3** in this document) 20 species are covered by the SAR HCP, 9 listed and 11 non-listed species, and there are 2 additional fully avoided species that are listed but that will be fully avoided by impacts from Covered Activities. The incidental take authorization under Section 10 of the FESA will apply to the wildlife species. Impacts on listed plant species are not prohibited under the FESA or authorized under a Section 10(a)(1)(B) permit. However, the two plant species conserved by the SAR HCP are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the Upper SAR HCP such that the Permittees will receive assurances pursuant to the USFWS “No Surprises” Rule. Similarly, the unlisted Covered Species will also receive assurances under the “No Surprises” rule should they become listed in the future. In addition to Covered Species for which incidental take authorization is requested, two species are fully avoided species: Delhi Sands flower-loving fly and arroyo toad. The AMMs included in Chapter 5, Conservation Strategy, of the Upper SAR HCP are expected to reduce any adverse effects on these species so that any adverse effects from Covered Activities would not rise to the level of take.

State authorization for incidental take of other wildlife species that may be State-listed in the future may be sought through the amendment process and in accordance with the applicable provisions of the California Fish and Game Code. The HCP conservation strategies are intended to satisfy the requirements of the CESA and support the issuance of the ITP(s). Species for which incidental take authorization will be requested under the CESA are indicated as State-listed species in Table ES-1 (**Table 4.3-3** in this document).

The plant and animal species listed in **Table 4.3-3** reflects several years of development by the Permittees with input from the CDFW and USFWS. The inclusion of the SAR HCP Covered Species in this DSEIR is not intended to supplant the standard process of identifying sensitive species for each specific OBMPU facility site in the future. As individual OBMPU facility site locations are identified and evaluated in the future, the concurrent biology surveys will compile the standard list of sensitive species from the California Natural Diversity Data Base (CNDDB) and the USFWS's Information for Planning and Consultation (IPaC) data bases. No sensitive species will be overlooked and the Watermaster and Stakeholders are committed to conducting comprehensive site-specific biological surveys during the appropriate season(s).

The goal is to focus on those species of concern that have already been identified within the Upper SAR watershed through the extensive effort of the Permittees and the regulatory agencies. By narrowing the number of species of most concern (i.e., species of special concern) within the Program area, Watermaster and Stakeholders can further contribute to managing the essential supporting habitats over the long term. In the HCP document, detailed descriptions of these 22 species are provided in Section 3.8.3 Covered species Accounts), from page 3-33 to 3-106. These data, including maps of species historic occupancy, are provided for review in Appendix 3c of Volume 2 of this RDSEIR. From the standpoint of the OBMPU, the most pertinent finding is that very few of these covered species occur where the vast majority of OBMPU facilities are likely to be located. Furthermore, the Biological Resources Report, prepared by Jacobs for the OBMPU, specifically identifies both species identified in the SAR HCP, and additional special status plant and animal species potentially occurring along or within the Chino Basin specific to the OBMPU (refer to **Subsection 4.3.3.2**, below). The species that are discussed in further detail under **Subsection 4.3.3.2**, are identified in bold in **Table 4.3-3**, below.

**Table 4.3-3
COVERED SPECIES**

Status			
Common Name	Scientific Name	Federal	State
<i>Covered Species</i>			
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	Endangered	Endangered
Santa Ana River woolly-star	<i>Eriastrum densifolium</i> ssp. <i>Sanctorum</i>	Endangered	Endangered
Santa Ana sucker	<i>Catostomus santaanae</i>	Threatened	None
Arroyo chub	<i>Gila orcuttii</i>	None	SSC
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	None	SSC
Mountain yellow-legged frog (Southern California DPS)	<i>Rana muscosa</i>	Endangered	Endangered
Western spadefoot	<i>Spea hammondi</i>	None	SSC
California glossy snake	<i>Arizona elegans occidentalis</i>	None	SSC
South coast garter snake	<i>Thamnophis sirtalis</i> sp.	None	SSC
Western pond turtle	<i>Emys pallida</i>	None	SSC

Status			
Common Name	Scientific Name	Federal	State
<i>Covered Species</i>			
Tricolored blackbird	<i>Agelaius tricolor</i>	None	Threatened
Burrowing owl	<i>Athene cunicularia</i>	None	SSC
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	None	SSC
Yellow-breasted chat	<i>Icteria virens</i>	None	SSC
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	Threatened	Endangered
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered
Coastal California gnatcatcher	<i>Polioptila californica</i>	Threatened	SSC
Least Bell's vireo	<i>Vireo bellii pusillus</i>	Endangered	Endangered
Los Angeles pocket mouse	<i>Perognathus longimembris brevinasus</i>	None	SSC
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	Endangered	Candidate
<i>Fully Avoided Species^a</i>			
Delhi Sands flower-loving fly	<i>Rhaphiomidas abdominalis</i>	Endangered	None
Arroyo toad	<i>Anaxyrus californicus</i>	Endangered	None

^aImplementation of avoidance measures as described in Chapter 5, *Conservation Strategy*, of the Upper SAR HCP would prevent the take of these species.

Bolded species are those with a likelihood to occur within the areas proposed for future OBMPU facilities. These species are discussed in detail under Subsection 4.3.3.2.

DPS = Distinct Population Segment; SSC = California Department of Fish and Wildlife Species of Special Concern

When **Exhibits 12, 17, and 27** (refer to **Chapter 3, Project Description**) are compared to **Figure 4.3-2**, it is clear that almost all of the of the OBMPU facilities would likely be located within the Urban and Built-Up Land/Developed area of the Chino Basin. The individual species maps from the **HCP Figures 3-26 through 3-61** substantiate this finding. Although covered species, such as burrowing owl, arroyo toad and/or San Bernardino kangaroo rat, may be encountered on a limited case-by-case basis by future OBMPU projects, installation of the required individual facilities appears to have a limited potential to directly impact special status or sensitive covered species.

4.3.3.1.2 SAR HCP DEIR Utilization in this RDSEIR

IEUA understands that the SAR HCP DEIR is a draft document as of the publication of the RDSEIR. However, this document has been published and is available for public view and the actual HCP has also been published and contains much of the same information. The CBP PEIR utilizes the research and data created on behalf of the Upper Santa Ana River Habitat Conservation Plan Draft EIR (Upper SAR HCP DEIR). Similar to the technical studies prepared on behalf of the CBP PEIR, the data that was generated on behalf of the Upper SAR HCP DEIR is publicly available, and regardless of whether the DEIR has been certified, the data therein was prepared by experts in their field. Accordingly, utilizing that data in support of making conclusions in this RDSEIR is to utilize the best currently available technical data that has been prepared to analyze environmental impacts when considering the whole of the watershed, or in other words,

the cumulative impacts that might result from OBMPU implementation. Using such data in this way is consistent with the Legislature's policy set forth in CEQA Section 21003(d) and (e).

4.3.3.2 Special Status Plant and Animal Species Potentially Occurring Along or Within the Project Assessment Areas, Specific to the OBMPU

4.3.3.2.1 Special Status Plant Species with Potential for Occurrence in the Project Area

Santa Ana River woolly-star (*Eriastrum densifolium*) (Federal and State Endangered)

Santa Ana River woolly-star is a low shrubby perennial which can grow to one meter (3.3 feet) tall, with gray-green stems and leaves. This species blooms from June to August and produces bright blue flowers that are up to 1.4 inches long that occur in flower heads with about 20 blossoms each. There are three primary pollinators: long-tongued digger bee, giant flower-loving fly and hummingbirds. This species is associated with early- to moderate-successional alluvial scrub, and thus requires periodic flooding and silting for the creation of new habitats and colonization. The Santa Ana River woolly-star is found only within open washes and early-successional alluvial fan scrub on open slopes above main watercourses on fluvial deposits where flooding and scouring occur at a frequency that allows the persistence of open shrublands. Suitable habitat is comprised of a patchy distribution of gravelly soils, sandy soils, rock mounds and boulder fields (Zembal and Kramer 1984; Zembal and Kramer 1985; U.S. Fish and Wildlife Service 1986). The Santa Ana River woolly-star occurs along the Santa Ana River and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the Santa Ana River through Riverside County into the Santa Ana Canyon of northeastern Orange County from about 150 to 580 meters (Munz 1974; Patterson 1993; Roberts 1998; Zembal and Kramer 1985; Patterson and Tanowitz 1989).

Slender-horned spineflower (*Dodecahema leptoceras*) (Federal and State Endangered)

Slender-horned spineflower is a small annual plant in the buckwheat family with distinctive basal leaves and small clusters of flowers. The branched flowering stalk is 3-10 cm tall with pink flower clusters surrounded by a horned or spiny bract. It is found in areas prone to drought, and plants usually occur in isolated patches of large floodplain habitats categorized as alluvial scrub. Onset of germination is likely related to rainfall, and occurred by late February at several study sites in 1995 and 1996. Flowers generally bloom from April to May.

4.3.3.2.2 Special-Status Wildlife Species with Potential for Occurrence in the Project Area

Southwestern pond turtle (*Emys marmorata*) (Federal None/ State SSC)

These turtles are 3.5-8.5 inches in shell length (Stebbins 2003). It is a small to medium-sized drab dark brown, olive-brown, or blackish turtle with a low unkeeled carapace and usually with a pattern of lines or spots radiating from the centers of the scutes. The plastron lacks hinges, and has 6 pairs of shields which can be cream or yellowish in color with large dark brown markings, or unmarked. The legs have black speckling and may show cream to yellowish coloring. The head usually has a black network or spots may show cream to yellowish coloring. Males usually have a light throat with no markings, a low-domed carapace, and a concave plastron. Females usually have a throat with dark markings, a high-domed carapace, and a flat or convex plastron which tends to be more heavily patterned than the males. They are diurnal and thoroughly aquatic. This turtle is often seen basking above the water, but will quickly slide into the water when it feels threatened. Southwestern pond turtle is active from around February to November, hibernates underwater, often in the muddy bottom of a pool, and estivates during summer droughts by burying itself in soft bottom mud.

They eat aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish. Pond turtles mate in April and May. They are found from the San Francisco Bay south, along the coast ranges into northern Baja California. Isolated populations occur along the Mojave River at Camp Cody and Afton Canyon from sea level to over 5,900 ft in elevation. This turtle is found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, it prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking.

Tricolored blackbird (Agelaius tricolor) (Federal None/ State SSC)

The CDFW maintains a biodiversity database for tricolors. This database includes records for breeding and non-breeding tricolors during the breeding season and a winter distribution database. The recent breeding records were compiled by U.C. Davis and are included in annual reports to USFWS and CDFW. Since 1980, breeding has occurred in 46 California counties (Beedy and Hamilton 1999). With the exception of a few peripheral sites, the geographic distribution has not declined perceptively. Unlike most species, when tricolors settle at high densities, as in flooded willows, territories may be vertically stacked. Arrival date on breeding grounds is mid-March through mid-July. Tricolored blackbirds are at as high a risk as any of the narrowly endemic North American bird species and are at far greater risk than Swainson's hawks, burrowing owls and other relatively widely distributed California species. But because they are a flocking species, and are in some places abundant, they do not command management attention.

Burrowing Owl (Athene cunicularia) (Federal MBTA/ State SSC)

Burrowing owl is a small ground-dwelling owl with a round head and no ear tufts. They have white eyebrows, yellow eyes, and long legs. The owl is sandy colored on the head, back, and upperparts of the wings and white-to-cream with barring on the breast and belly and a prominent white chin stripe. They have a rounded head, and yellow eyes with white eyebrows. The young are brown on the head, back, and wings with a white belly and chest. They molt into an adult-like plumage during their first summer. Burrowing owls are comparatively easy to see because they are often active in daylight and are surprisingly bold and approachable.

The burrowing owl occurs in shortgrass prairies, grasslands, lowland scrub, agricultural lands particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas as a year-long resident (Haug, et al. 1993). They require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. As a critical habitat feature need, they require the use of rodent or other burrows for roosting and nesting cover. They may also dig their own burrow in soft, friable soil (as found in Florida) and may also use pipes, culverts, and nest boxes where burrows are scarce (Robertson 1929). The mammal burrows are modified and enlarged. One burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl.

Yellow-billed cuckoo (Coccyzus americanus occidentalis) (Federal Threatened/ State Endangered)

The yellow-billed cuckoo is dependent on the combination of a dense willow understory for nesting, a cottonwood overstory for foraging and large patches of habitat in excess of 20 ha. (Laymon and Halterman 1991). It is also not known to utilize non-native vegetation in the majority of its range (Hunter et al. 1984). It is a medium sized bird. Its profile is long and slim. Its legs are short and bluish-gray. Its long tail is gray-brown above and black below with three striking pairs of large white dots visible in flight. Its body is brown above with white under parts. The undersides

of its pointed wings are rufous. Adult birds have a long-curved bill which is blue-black above and yellow at the base of the mandibles. Juveniles have a completely blue-black bill. While they have been known to feed on beetles, cicadas, bugs, wasps, flies, katydids, dragonflies, damselflies, praying mantids, lacewings, mosquito hawks, cankerworms, fall webworms (*Platyrepia virginalis*), and even tree frogs (Beal 1898, Green 1978, Laymon 1980, Ryser 1985, Dillinger 1989), more than three fourths of the yellow-billed cuckoo diet is made up of grasshoppers and caterpillars (Beal 1898). The yellow-billed cuckoo is an "incipient brood parasite," its eggs have been found in the nests of black-billed cuckoos, American robins, black-throated sparrows, mourning doves, house finches and red-winged blackbirds (Ryser 1985).

Black-billed cuckoos have also been known to occasionally parasitize yellow-billed cuckoos. Though they will occupy a variety of marginal habitats, particularly at the edges of their range, yellow-billed cuckoos in the West are overwhelmingly associated with relatively expansive stands of mature cottonwood willow forests. Canopy height ranged from 5-25 m, canopy cover from 20-90%, and understory cover from 30-90%. Willows and open water are required and the habitat will vary from dense willow-cottonwood forests to marshy bottomlands with scattered willow thickets. The cuckoo was once common in riparian habitat throughout the western United States. In California the yellow-billed cuckoo has declined from a "fairly common breeding species" throughout most of the State to a current population of less than 50 pairs (Gaines and Laymon 1984; Laymon and Halterman 1991). In 1971 it was listed by the California Department of Fish and Wildlife as Rare. By 1977 it had become "one of the rarest birds" in the State. A 1977 survey of historical sites and suitable habitat at six widely scattered rivers turned up 54 birds in the Sacramento Valley (Tehama, Putte, Glenn, Colusa, and Sutter counties), 9 on the South Fork of the Kern River near Weldon, 3 along the Santa Ana River, Riverside County, 4 in Owens Valley, Inyo County, 6 on the Armargosa River south of Tecopa, Inyo and San Bernardino County, and 65 on both sides of the Colorado River from the Nevada state line to the Mexican border (Gaines 1977).

Santa Ana Sucker (Catostomus santaanae) (Federal Threatened/ State None)

The Santa Ana sucker is a freshwater ray-finned fish, endemic to California. It is closely related to the mountain sucker and has dark grey upper parts and silvery underparts. Adult Santa Ana suckers average three inches in length and have dark-grey, blotchy backs with silvery-white undersides. Their large lips and small mouths enable them to suck algae and invertebrates from river bottoms. Santa Ana suckers live in the shallow portions of rivers and streams. These fish exist in flashy systems where currents range from swift in the canyons to sluggish in the bottomlands. During times of deluge and flooding, the suckers seek refuge in backwater eddies and other less turbulent areas. Once flooding lessens, they move back into the mainstem of these mostly-quiet rivers. Preferred substrates are generally coarse and consist of gravel, rubble, and boulders with growths of algae. The Santa Ana sucker is native to the Los Angeles and Santa Ana basins in Southern California. Today it is restricted to three geographically separate populations in three different stream systems: the lower and middle Santa Ana River; east, west, and north forks of the San Gabriel River; and the lower Big Tujunga Creek. A population also occurs in the Santa Clara River. Spawning peaks between late May and early June, and eggs hatch within 15 days of fertilization, adults live from 1 to 4 years. Most commonly only living 1 to 2 years.

San Bernardino Kangaroo Rat (Dipodomys marriami parvus) (Federal Endangered/ State Candidate E)

San Bernardino kangaroo rats is a species of rodent in the family Heteromyidae, and have yellow to dusky brown fur above, with white undersides. Their long tails have dark brown stripes, and

there is a dark line on each side of their noses. They measure approximately nine inches in length, more than half of which is their tail. Like all kangaroo rats, they have large hind feet on which they hop around, which also give them their name. San Bernardino kangaroo rats are distinguished from other species in that they have four toes instead of five on each hind foot. San Bernardino kangaroo rats are found on the gentle slopes of alluvial fans, on flood plains, along washes, and on adjacent upland areas with soils containing sand, loam, and gravel deposited by rivers and streams. They also occupy areas where sandy soils are wind deposited. These soft soils allow kangaroo rats to dig shallow burrows and they support alluvial sage scrub, coastal sage scrub, and chaparral vegetation. They were once a common resident of the San Bernardino Valley in San Bernardino County and in the San Jacinto River valley in Riverside County. The species' range included 326,000 acres of alluvial scrub habitat in these areas. Critical habitat has been designated in the Etiwanda Fan, Lytle Creek, and Cajon Creek areas, along the Santa Ana River in San Bernardino County, and near the San Jacinto River and Bautista Creek in Riverside County. Breeding occurs from January through November, peaking in late June. Following a one-month gestation period, female San Bernardino kangaroo rats give birth to one litter per year, averaging two to three young. Young rats are born and reared inside the burrow, and feed on seeds, grains, insects, and seasonally available green vegetation. They have pouches on the outsides of their cheeks that they use for carrying seeds back to their burrows. While kangaroo rats rely mostly on storing large quantities of seeds in tiny pit caches near their burrow entrances, insects have also been shown to constitute as much as half of their diet at certain times of the year. Kangaroo rats do not need to drink water, since they extract the moisture they need from their diet.

Stephens' Kangaroo Rat (Dipodomys stephensi) (Federal and State Threatened)

Stephens's kangaroo rat is a species of rodent in the family Heteromyidae. It is endemic to the Southern California region of the United States, primarily in western Riverside County. The natural habitat of Stephens's kangaroo rat is sparsely vegetated temperate grassland. It occurs sympatrically with the agile kangaroo rat, but tends to prefer few shrubs and gravelly soils to the agile's preference for denser shrubs. This kangaroo rat is medium size for its genus at 277 to 300mm in total length and an average weight of 67.26g. Its tail length is 164 to 180mm, which puts the tail about 1.45 times the length of the body. The color is described as being bicolored with tan to dark brown on the dorsal side and white on the ventral side. The soles of the hind limbs have a dusky color to them, there are a few white hairs on the tufts of the tail, and there are ventral and dorsal white stripes that run along the tail. Stephens's kangaroo rat was once found in limited regions in Southern California, but now due to development leading to habitat loss the populations are now only found in select nature reserves in San Jacinto Valley, San Bernardino, and northwestern San Diego Counties in California.[5] Roads surround all the locations that they live or are found to live. This creates problems if they are paved and used often because of car fatalities. However, the Stephens's kangaroo rat has been found to inhabit and colonize dirt roadsides. This may be due to the type of habitat they prefer, and prefers sparsely vegetated areas, about 15% cover that have annual grasslands with low shrub cover of sagebrush. They like seral stage, intermediate, plant communities that are retained by fires, grazing, and or agriculture. They are also limited to gravelly soil that cannot be too dense. This is because they have to burrow into it to make their tunnel systems for nesting and storage. They are granivorous. In doing dissection of kangaroo rat stomachs, it was found that their diets are comprised of red brome (*Bromus rubens*), common Mediterranean grass (*Schismus barbatus*), and red-stemmed filaree (*Erodium cicutarium*). All of these species were introduced to North America. Ants, chewing lice, and darkling beetles were also found in their stomachs but not as prominent as the plant species listed above.

Coastal California gnatcatcher (Poliioptila californica californica) (Federal Threatened/State None)

The Coastal California gnatcatcher is a small blue-gray songbird. It has dark blue-gray feathers on its back and grayish-white feathers on its underside. The wings have a brownish wash to them. Its long tail is mostly black with white outer tail feathers. They have a thin, small bill. The males have a black cap during the summer which is absent during the winter. The gnatcatcher typically occurs in or near sage scrub habitat, which includes the following plant communities as classified by Holland (1986): Venturan coastal sage scrub, Diegan coastal sage scrub, maritime succulent scrub, Riversidean sage scrub, Riversidean alluvial fan sage scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub. Ninety-nine percent of all gnatcatcher locality records occur at or below an elevation of 984 feet (Atwood 1990). Gnatcatchers also use chaparral, grassland, and riparian habitats where they occur adjacent to sage scrub (Bontrager 1991). These non-sage scrub habitats are used for dispersal (Bowler 1995; Campbell et al. 1995). Gnatcatchers are persistent nest builders and often attempt multiple broods, which is suggestive of a high reproductive potential. Historically, gnatcatchers occurred from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, and into Baja California, Mexico (Atwood 1990). The amount of coastal sage scrub available to gnatcatchers has continued to decrease during the period after the listing of the species. It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion (Barbour and Major 1977).

Southwestern Willow Flycatcher (Empidonax traillii extimus) (Federal and State Endangered)

Grinnell and Miller (1944) reported that chats bred over the entire length and breadth of the State exclusive of higher mountains and coastal islands, and were more numerous toward the interior. Breeders arrive from April to early May. Departure from breeding grounds occurs from August – September (after complete prebasic molt); some may leave in July, some stragglers into October. Spring migration: March - May. Fall migration: July - October. Poorly documented due to the species' secretive nature; it goes largely undetected once singing ceases in mid-July (Dunn and Garrett 1997). Delacour (1959) reported the capture of an adult chat in Los Angeles on 5 December 1958. Dunn and Garrett (1997) report that western birds appear to move south during fall migration on a broad front, although migrants are generally scarcer near the coast. In California, chats require dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds (Small 1994). Chat nests frequently host Brown-headed Cowbird (*Molothrus ater*) and rarely hosts the Bronzed Cowbird (*Molothrus aeneus*). Flood control and river channelization eliminates early successional riparian habitat (willow/alder shrub habitats with a dense understory) that chats (and many other riparian focal species) use for breeding. Hunter et al. (1988) found that chats will use the exotic saltcedar (*Tamarix chinensis*), and they suggest that chats may use the saltcedar preferentially to native habitat. The authors do not report the frequency of nest placement in saltcedar, but Brown and Trosset (1989) report that chats nest in tamarisk and native shrubs in proportion to the occurrence of the different types of vegetation.

Least Bell's vireo (Vireo bellii pusillus) (Federal and State Endangered)

The least Bell's vireo (LBVI) is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian woodland habitats. Bell's vireos as a group are highly territorial and are almost exclusively insectivorous. Least Bell's vireo nesting habitat typically consists of well-developed overstory, understory, and low densities of aquatic and herbaceous cover. The understory frequently contains dense sub-shrub or shrub thickets. These thickets are often dominated by plants such as narrow-leaf willow, mulefat, young individuals of other willow species

such as arroyo willow or black willow, and one or more herbaceous species. LBVI generally begin to arrive from their wintering range in southern Baja California and establish breeding territories by mid-March to late-March. A large majority of breeding vireos apparently depart their breeding grounds by the third week of September and only a very few have been found wintering in the United States.

LBVI typically inhabit riparian forests with well-developed overstories and understories. The understory often contains dense subscrub or thickets above the ground. These thickets are usually dominated by sandbar willow, mulefat, blackberry (*Rubus ursinus*), and young trees of other willow species such as black willow and arroyo willow. The overstory usually contains black willow, cottonwood and Sycamore. Although LBVI use a variety of riparian plant species for nesting, it appears that the structure of the vegetation is more important than other factors such as species composition or the age of the stand. Vireos forage in riparian and adjacent chaparral habitats up to 984 feet from the nest, and use both high and low scrub layers as foraging substrate.

Crotch's Bumble Bee (Bombus crotchii)

The Crotch's bumblebee is characterized as a short- or medium- tongue length species of bumble bee. This species is often confused with *Bombus caliginosus*, *Bombus occidentalis*, and *Bombus vandykei*, because they have similar appearances to Crotch's bumblebee. Crotch's Bumble Bee males are generally present from May to September with their peak occurring in July. Workers of this species are active from April to August and queen bees are active for only two months from March until May; the peak of worker activity is between May and June, while queens reach maximum activity in April. Bees of this species all have a square-shaped face and a rounded ankle on the mid leg. Drones (males) have a slightly different appearance from queens and workers. They display yellow hair on their faces, and a black stripe mid-thorax. This species occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of Southwestern California. It has also been documented in Southwest Nevada, near the California border. In the United States, they primarily occur in California. Crotch's bumblebee is extant but uncommon in Baja California, Mexico, and into Nevada. The most densely populated area of occurrence is in Southern California in coastal areas. The overwintering habitat of this bumblebee is not known, but it is believed that they have similar behaviors to other bumblebees in this respect, overwintering under leaf litter or soft soils. Crotch's bumblebee inhabits grassland and scrub areas, requiring a hotter and drier environment than other bumblebee species, and can only tolerate a very narrow range of climatic conditions. Crotch's bumblebee nests underground, often in abandoned rodent dens. Its food plants include milkweeds, dustymaidens, lupines, medics, phacelias, and sages. It also feeds on snapdragons, Clarkia, poppies, and wild buckwheats. Milkweed is a favorite nectar source of Crotch's bumblebee. Due to the wide range of host plants visited by Crotch's bumblebee, it is characterized as a dietary generalist.

For further information regarding flora and fauna that may have a potential to occur in the Chino Basin area, please refer to Table 3.3, Flora and Fauna with Potential to Occur in the Program Area (Source: CNDDDB, January 2023, Occurrence Potential Assessed) in the Biological Resources Report.

4.3.4 Regulatory Setting

The proposed OBMPU would be required to comply with the following federal and State regulations and laws:

1. Compliance with NEPA and CEQA Guidelines regarding sensitive biological resources
2. U.S. Army Corps of Engineers (USACE) Clean Water Act Section 404 Permit and
3. U.S. Environmental Protection Agency (EPA) 404 (b)1 Alternatives Analysis
4. Section 7 and/or 10 of U.S. Endangered Species Act of 1973, as amended
5. U.S. Migratory Bird Treaty Act
6. U.S. Bald Eagle Act
7. California Endangered Species Act
8. CDFW Streambed Alteration Agreement, (Section 1600 et seq. of the Fish and Game Code)
9. State of California Native Plant Protection Act
10. Plant Protection and Management Ordinances (County Code Title 8, Div. 11)

4.3.4.1 Federal

4.3.4.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) (1973) protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of FESA (USA) prohibits the taking of endangered wildlife, where taking is defined as any effort to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. FESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features “essential to the conservation of the species,” or which may require “special Management consideration or protection...” (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the FESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in “the destruction or adverse modification of habitat determined to be critical” (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of ESA provides a means for authorizing the “take” of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a proposed project “may affect” a listed species or destroy or modify critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans, Section 10 of the federal ESA, requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or “take”) endangered or threatened wildlife on their land. To obtain

a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species.

4.3.4.1.2 The Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or “take” any migratory bird listed in Title 50 of the Code of Federal Regulations CFR Part 10. “Take” is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MTBA.

4.3.4.1.3 Clean Water Act Section 404

Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the USACE which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the Clean Water Act (CWA), the USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term “waters” includes certain wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR and by federal case law.

Currently, the “2023 Waters Rule” is in the process of being harmonized with the Supreme Court of the United States (SCOTUS) ruling in *Sackett v. EPA* (*Sackett II*)¹.

During the first two months of the 2023 Rule implementation, several court cases have enjoined the use of the rule and subsequently have reverted to the Pre-2015 Rule. Currently 27 states are using the Pre-2015 Rule. However, California has not been enjoined and continues to fall under the 2023 Rule. On May 26, 2023 the SCOTUS ruled on *Sackett II*. In this ruling they found the CWA’s use of “waters” encompasses “only those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic[al] features’ that are described in ordinary parlance as ‘streams, oceans, rivers, and lakes.’” 547 U. S., at 739 (quoting Webster’s New International Dictionary 2882 (2d ed. 1954) (Webster’s Second); original alterations omitted).

The SCOTUS appears to have struck down the use of the Significant Nexus Analysis, use of “Similarly Situated Waters” being combined to have a biological, chemical, or biological nexus to a Traditionally Navigable Water. Further, the Court has determined that WOTUS extends only to tributaries of Traditionally Navigable Waters that have Relatively Permanent Flows, such that they flow or are inundated unless there is unusually prolonged drought, or the ebb of a tide.

On Aug. 29, 2023, the Biden administration issued a prepublication version the final Clean Water Act rule revising the definition of WOTUS in response to the U.S. Supreme Court’s decision in *Sackett II* (“Conforming 2023 WOTUS Rule”). The Conforming 2023 WOTUS Rule strikes references to the “significant nexus” test definition and its application to jurisdictional tributaries; wetlands; and intrastate lakes, ponds and wetlands. It also clarifies that interstate wetlands are not within the “interstate waters” category of jurisdictional waters. The Conforming 2023 WOTUS Rule became effective on September 8, 2023.

¹ *Sackett v. Environmental Protection Agency* (2023) 598 U.S. 651.

4.3.4.1.4 Rivers and Harbors Act 1899

Section 10 of the Rivers and Harbors Act (RHA) of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable waters of the U.S.

4.3.4.1.5 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal project where any body of water is impounded, diverted, deepened, or otherwise modified. Implementing Agencies are required to consult with the USFWS and the appropriate state wildlife agency.

4.3.4.1.6 Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. Section 1801 et seq.) requires all federal agencies to consult with the NMFS on all actions or proposed actions (permitted, funded, or undertaken by the agency) that may adversely affect fish habitats. It also requires cooperation among NMFS, the councils, fishing participants, and federal and state agencies to protect, conserve, and enhance essential fish habitat, which is defined as those waters and substrates needed by fish for spawning, breeding, feeding, and growth to maturity.

4.3.4.1.7 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (*Haliaeetus leucocephalus*). In 1962, Congress amended the Eagle Act to cover golden eagles (*Aquila chrysaetos*), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

4.3.4.1.8 Executive Orders (EO)

Invasive Species—Executive Order 13112 (1999)

Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

Protection of Wetlands—Executive Order 11990 (1977)

Issued on May 24, 1977, helps avoid the long-term and short-term adverse impacts associated with destroying or modifying wetlands and avoiding direct or indirect support of new construction in wetlands when there is a practicable alternative.

Migratory Bird—EO 13186 (2001)

Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act

The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (*Columba livia*) and domestic goose (*Anser domesticus*).

4.3.4.2 State

4.3.4.2.1 California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the main provisions of the federal ESA and is administered by the California Department of Fish and Wildlife (CDFW). Unlike its federal counterpart, CESA applies the take prohibitions to not only listed threatened and endangered species, but also to State candidate species for listing. Section 86 of the California Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife, which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

4.3.4.2.2 Clean Water Act Section 401/Porter-Cologne Act

California regulates water quality related to discharge of dredge or fill material into waters of the State pursuant to the Porter-Cologne Water Quality Control Act (Porter-Cologne) and, when involving waters of the United States, under its authority pursuant to Section 401 of the CWA. Section 401 compliance is a federal mandate regulated by the State. The local Regional Water Quality Control Boards (RWQCB) have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. In addition, the RWQCBs regulate water quality for all waters of the State, which may also include isolated wetlands, as defined by the California Porter-Cologne Water Quality Control Act (Porter Cologne; Ca. Water Code, Div. 7, Section 13000 et seq.). The RWQCB regulates discharges that can affect water quality of both waters of the U.S. and waters of the State. If there is no USACE jurisdiction over waters of the U.S., then the RWQCB regulates water quality of waters of the State through a Waste Discharge Permit, as required to comply with the Porter-Cologne Water Quality Control Act when a Section 401 water quality certification would not apply.

4.3.4.2.3 Sections 1600 through 1606 of the California Fish and Game Code

This section requires that a Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

4.3.4.2.4 California Fish and Game Codes

All birds, and raptors specifically, and their nests, eggs and parts thereof are protected under Sections 3503.5 of the California Fish and Game Code. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) is considered a violation of this code. Additionally, Section 3513 of the Fish and Game Code prohibits the take or possession of any migratory non-game bird listed by the MBTA. The CDFW has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (California Fish & Game Code Section 1802). The CDFW, as a trustee agency under CEQA Guidelines Section 15386, provides expertise in reviewing and commenting on environmental documents and makes and regulates protocols regarding potential negative impacts to biological resources held in California.

4.3.4.2.5 Fully Protected Species

Four sections of the California Fish and Game Code list 37 fully protected species (i.e., Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and state that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

4.3.4.2.6 Bird Nesting Protections

Bird nesting protections in Sections 3503, 3503.5, 3511, and 3513 of the California Fish and Game Code include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), or Strigiformes (owls).
- Section 3511 prohibits the take or possession of fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

4.3.4.2.7 CA Migratory Bird Act-Assembly Bill 454

Existing federal law, the Migratory Bird Treaty Act, provides for the protection of migratory birds, as specified. The federal act also authorizes states and territories of the United States to make and enforce laws or regulations that give further protection to migratory birds, their nests, and eggs. Existing state law makes unlawful the taking or possession of any migratory nongame bird, or part of any migratory nongame bird, as designated in the federal act, except as provided by rules and regulations adopted by the United States Secretary of the Interior under provisions of the federal act..... (a) It is unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act.

4.3.4.2.8 Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (California Fish and Game Code Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants

in this State.” The NPPA is administered by CDFW. The Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. CESA, discussed above at 4.3.4.2.1, provides further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

4.3.4.2.9 Natural Communities Conservation Planning Act

This act was enacted to encourage broad-based planning to provide for effective protection and conservation of the state’s wildlife resources while continuing to allow appropriate development and growth (California Fish and Game Code Sections 2800 to 2835). Natural Community Conservation Plans (NCCP) may be implemented, which identify measures necessary to conserve and manage natural biological diversity within the planning area, while allowing compatible and appropriate economic development, growth, and other human uses.

4.3.4.2.10 Senate Concurrent Resolution No. 17 – Oak Woodlands

State Senate Concurrent Resolution No. 17 is legislation that requests State agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing Blue, Englemann, Valley, or Coast Live Oak. The measure requests those State agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands. The mitigation measures, as described above, will ensure that impacts to oak woodlands are less than significant.

4.3.4.3 Local

The Chino Basin area encompasses unincorporated county land and nine incorporated cities. Each of these jurisdictions has its own independent General Plan and municipal code that pertain to biological resources. The County of San Bernardino and City of Upland have tree removal permits, the City of Fontana, City of Chino Hills, and the City of Rancho Cucamonga contain tree preservation ordinances. The cities of Montclair and Chino do not have ordinances protecting trees.

4.3.5 Thresholds of Significance

The criteria used to determine the significance of potential Program-related biological resource impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to biological resources if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The potential biological changes in the environment are addressed in response to the above thresholds in the following analysis.

4.3.6 Potential Impacts

As described in **Subsection 4.3.1**, the analysis contained in the 2000 OBMP PEIR, while still applicable as described herein, must be updated to reflect the current environmental conditions of the Basin. The following discussion represents an analysis of the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin.

4.3.6.1 a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The construction and operation of the infrastructure across all Project Categories required to support the OBMPU may result in direct and indirect impacts on special-status wildlife species. The extent and nature of impacts on special-status wildlife species varies depending on the species under consideration, their range, and the type and quality of suitable habitats present.

In general, permanent and temporary direct impacts on special-status wildlife species during construction of the future infrastructure improvements across all Project Categories may include mortality or injury, and will likely include disturbances to suitable habitats for special-status wildlife species, including disruption of wetland and streambeds; water pollution; and reptile, bird, and mammal burrow or nest disturbance. These habitat disturbances within the Chino Basin area, or at specific new or modified facilities, could lead to the permanent or temporary abandonment of these habitats by special-status species, a disruption in the life cycle of these species, or direct mortality or injury of individuals of these species. Because it is difficult to determine the number or extent of these kinds of impacts, direct impacts on special-status wildlife species will be addressed in subsequent, project-specific environmental reviews once a specific component of the OBMPU has been defined for design and implementation.

Permanent and temporary indirect impacts on special-status wildlife species would occur through construction or maintenance activities associated with future OBMPU facilities in a number of ways depending on the species and type of disturbance. Potential indirect impacts include erosion, soil compaction, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution. These indirect impacts could lead to the disturbance of special-status wildlife species such as a temporary shift in foraging patterns or territories, refugia abandonment, increased predation, decreased reproductive success, and reduced population viability. Because it is difficult to quantify and measure these kinds of impacts, indirect impacts on special-status wildlife species are described qualitatively and will be quantitatively addressed in project-specific second tier environmental evaluations once specific aspects of the Program are proposed for implementation and designed.

Construction of any OBMPU facility should only result in mostly minimal impacts on special-status wildlife species, because only a limited amount of marginal habitat for special-status wildlife species could be impacted by construction activities. The location where most of the proposed OBMPU facilities will be installed or constructed to occur within urban, built-up land, barren, agricultural, or otherwise disturbed locations (such as IEUA's Regional Plants, WFA Agua de Lejos Plant, Chino Desalters, etc.), and thus construction would potentially impact special-status wildlife species that use mostly urban areas. This does not negate the fact that special-status species, critical habitat, and habitat supporting special status species exists within the Chino Basin, and may be impacted by a minimal number and type of facilities proposed as part of the OBMPU. Refer to **Exhibits 12, 17, and 27** (refer to Chapter 3) and **Figure 4.3-2** for a comparison of proposed project general site locations and existing land uses, including identified critical habitat locations shown on **Figure 4.3-3**. Due to this circumstance, a majority of the facilities proposed by the OBMPU would potentially impact only those special-status wildlife species that inhabit mostly urban areas (e.g., burrowing owl, Los Angeles pocket mouse, San Bernardino kangaroo rat, coastal California gnatcatcher, arroyo toad and California glossy snake) during construction. However, several facilities proposed as part of the OBMPU, such as the Mills Wetlands Storage Basin, contain sensitive or riparian habitat that may support additional special-status wildlife or plant species.

Ongoing operations or maintenance activities requiring ground disturbance, clearing, or grubbing could cause erosion and sedimentation, or could indirectly affect the hydrology of nearby jurisdictional waters and the species that depend on these resources. Chemical runoff from trucks or equipment within the future OBMPU facility rights-of-way could indirectly degrade suitable habitat used by these species that are present adjacent to or within the management zone boundaries. If operational maintenance requires weed abatement activities, such as the use of herbicides, these activities could also contribute to chemical runoff and pollution of adjacent suitable habitats. However, maintenance activities that would have potential impacts on special-status wildlife species are limited to the program right-of-way areas that are currently in service or that will be added to normal program operations and maintenance through separate design, environmental review, and construction of such facilities at a later date.

While the 2000 OBMP PEIR could quantify the diversion proposed at Prado Basin, the OBMPU includes no specific diversion projects, and therefore cannot at this time apply a specific diversion amount that would occur over the 20-year horizon of OBMPU implementation. Project Category 3 includes storage basins that may divert flows that ultimately reach Prado Basin. Prado Basin supports dense riparian forests supported in part by surface runoff contributed by these creeks. The reduction of surface water would reduce the total flow to the Prado Basin. The habitat within Prado Basin is supported by surface water inflows, rising groundwater, and detention by the Prado Dam. Groundwater levels are managed by the Chino Basin Watermaster with the objectives of optimizing groundwater storage capacity while maintaining groundwater levels within the basin to continue supporting habitat that in turn supports sensitive species such as least Bell's vireo (Federal and State Endangered), yellow-breasted chat (State SSC), and yellow warbler (State SSC). These species and impacts thereof are outlined under **Table 4.3-4**.

A reasonable assumption of the volume of water consumed by Prado Basin wetland/riparian habitat is about 18,000 AFY. The OBMPU could result in a significant and unavoidable impact to the wetland/riparian habitat at Prado Basin should future diversions fall below this figure. The IEUA and Western Municipal Water District (WMWD) are collectively responsible for an average annual flow of 42,000 afy at Prado. However, when their cumulative credits exceed 30,000 afy (which they currently do and will continue to do so for the foreseeable future), they are responsible

for a minimum annual flow of 34,000 afy. The OBMPU is not anticipated to result in the inability of IEUA and WMWD to meet this obligation, and is, therefore, not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin.

For example, the Watermaster, on behalf of the Chino Basin Stakeholders and Parties, committed to maintain the current extent of Prado Basin habitat in light of the hydraulic control program initiated in the Peace II SEIR certified in 2010. To ensure that interested agencies have sufficient information to evaluate the effects of hydraulic control, the Watermaster created the Prado Basin Habitat Sustainability Program. This program has been in effect for the past five years, and an annual report of habitat status is compiled and published by the Watermaster. The monitoring itself is not considered mitigation, but the commitment of the Watermaster to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) serves as the mitigation to offset such damage or loss of Prado Basin Habitat.

Since the 2010 SEIR was certified, very little additional surface water diversions have been implemented within the Chino Basin. The OBMPU has identified future surface water diversions to increase water availability within the Chino Basin, but these potential diversions have not been quantified and are considered speculative until specific projects are proposed for future implementation. Of critical importance is to ensure that any future diversion proposals receive detailed evaluation and correlation of such diversions to the potential loss of essential habitat within Prado Basin. There is sufficient data regarding historic surface flows into Prado Basin from the Upper Santa Ana Watershed to both craft diversion proposals to minimize habitat impacts, such as diverting flows only during high flow winter periods (for example according to **Exhibit 4.7-2 (Subchapter 4.7, Hydrology and Water Quality)** runoff downstream of Prado Dam was measured at about 800,000 acre-feet), which can far exceed the water demand of the Prado Basin habitat (estimated at 18,000 afy), and to meet the 34,000 afy (total estimate of 52,000 afy) that must be delivered from the Chino Basin downstream of Prado Dam. In a surplus water year, additional diversions can clearly be achieved without adversely impacting either the Prado Basin habitat or downstream water rights. On the other hand, during a low-flow-year, additional diversions could possibly have an adverse impact on this habitat.

Fundamentally, retention of recycled water would constitute a diversion of water from discharge to either Chino or Mill Creek, initially, and subsequently to the Santa Ana River in Prado Basin. Examining the issue of diversion of discharges (any type, including recycled water, stormwater, and non-point source urban discharges) requires future site- and project-specific proposals because no such specific proposals have been included in or defined to a sufficient degree in the OBMPU Project Description, and the complicated variables make any future forecasts speculative. Thus, no significance determination can be reached at this point for Prado Basin Habitat.

As put forth by one of the commenters on the NOP for the OBMPU, the following will be implemented by the Watermaster and IEUA as part of the OBMPU design itself, which is intended to minimize and continue management actions related to Prado Basin:

1. The IEUA will continue to support the preparation of the Prado Basin Habitat Sustainability Program (PBHSP) in cooperation with the Chino Basin Watermaster and Upper Santa Ana River Watershed Stakeholders. This would continue the monitoring and mitigation efforts intended to protect Prado habitat and the species that the Prado habitat supports.
2. Continue to support the Upper Santa Ana River Habitat Conservation Plan (HCP), via input and refinement of the Plan itself, both its programs and the forum that it will establish to focus on adaptive management to protect sensitive species in the Upper Watershed. This

will ensure that species and habitats protected by the cumulative efforts put forth by the HCP continue to be carried forth.

3. Consider which forum to use (SAWPA, PBHSP, HCP implementation/management group, or a new group) to most effectively manage the whole Santa Ana River Watershed water resources in an effective, creative and adaptive manner to protect the habitats and species that are supported by habitats within the Santa Ana River Watershed, in addition to managing the water available in the Watershed in an equitable and sustainable manner.

The above will ensure that IEUA and the Watermaster, and Stakeholders monitor and adapt to future environmental conditions in the Chino Basin which, with unknowns associated with climate change, may require future adaptations in management of the whole watershed's recycled water resources. Co-permittees of the SAR HCP² shall also implement the seven biological resources mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 3c of Volume 2 to this RDSEIR of this document) where they provide additional support to protect the 22 covered species. The monitoring and contingency measures themselves are not considered mitigation, but the commitment of the Watermaster and IEUA to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) and to commit to the contingency measures identified above serve as the mitigative project design features to offset such damage or loss of Prado Basin Habitat.

Conclusion

There are certain areas, such as the Mills Wetlands and Prado Basin within the overall Project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources, or alternatively, a potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat may result from OBMPU implementation because certain construction or operation activities, such as diversion of additional surface runoff, may not be capable of being mitigated. Because a specific proposal to develop a project within these and other areas of the Basin known to contain sensitive resources has not been submitted to the Watermaster, and because the specific amount of flow to be diverted by individual OBMPU facilities has not been defined, there is a potential that an individual OBMPU facility may be developed and have operations within an area containing biological resources that cannot be avoided, even at the design level, or, may result in reduced flow to habitat that supports special status species, and the flow reduction (diversion) could therefore result in a significant and unavoidable impact.

Ultimately, because the Chino Basin contains many areas that may support candidate, sensitive, or special status species, and the specific sites in which future OBMPU facilities will be developed are presently unknown, or if known, site-specific investigation has not yet begun because the proposed Program is at a conceptual level of planning, a significant impact may occur. The species listed in **Table 4.3-4** are those that may be impacted by the implementation of the OBMPU directly or indirectly. These are largely drawn from **Subsection 4.3.3.2**, but include additional species that may experience indirect habitat loss as a result of OBMPU implementation. **Table 4.3-4** also outlines the potential OBMPU activities that could impact these species, and whether those impacts would be potentially significant.

² Inland Empire Utilities Agency and West Valley Water District

Table 4.3-4
SPECIAL STATUS PLANT AND ANIMAL SPECIES POTENTIALLY OCCURRING ALONG OR WITHIN THE
PROJECT ASSESSMENT AREAS, SPECIFIC TO THE OBMPU

Common Name	Scientific Name	Impacts
Slender-horned spineflower	<i>Dodecahema leptoceras</i>	<p>The slender-horned spineflower is found in areas prone to drought, and plants usually occur in isolated patches of large floodplain habitats categorized as alluvial scrub. Onset of germination is likely related to rainfall, and occurred by late February at several study sites in 1995 and 1996. Flowers generally bloom from April to May. As future projects proposed under the OBMPU would potentially involve construction activities that could occur within the occurrence areas for this species, a significant direct impact could occur should development be unable to avoid take of this species.</p> <p>Future projects proposed under the OBMPU could result in significant indirect impacts to this species that could occur under the OBMPU during construction or operation of future OBMPU facilities through erosion, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, and destruction of native vegetation. These indirect impacts could lead to the disturbance of this species through water stress, indirect habitat modification, and reproductive success, which could result in a significant impact to this species.</p> <p>Cumulative impacts could occur should cumulative development in the Chino Basin and San Bernardino Valley region within which this species occurs, result in a substantial loss of this species, resulting in a cumulative reduction in species occurrences across its known occurrence area. The OBMPU could result in cumulatively considerable impacts to this species as a result of cumulatively considerable contributions to loss of occurrences (land area) occupied by this species.</p>
Santa Ana River woolly-star	<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	<p>The Santa Ana River woolly-star occurs along the Santa Ana River and Lytle and Cajon Creek flood plains from the base of the San Bernardino Mountains in San Bernardino County southwest along the Santa Ana River through Riverside County into the Santa Ana Canyon of northeastern Orange County from about 150 to 580 meters. As future projects proposed under the OBMPU would potentially involve construction activities that could occur within the occurrence areas for this species, a significant direct impact could occur should development be unable to avoid take of this species.</p> <p>Impacts would be the same as those identified for the slender-horned spineflower.</p>
Santa Ana sucker	<i>Catostomus santaanae</i>	<p>Santa Ana suckers live in the shallow portions of rivers and streams. These fish exist in flashy systems where currents range from swift in the canyons to sluggish in the bottomlands. The Santa Ana sucker is native to the Los Angeles and Santa Ana basins in Southern California. Today it is restricted to three geographically separate populations in three different stream systems: the lower and middle Santa Ana River; east, west, and north forks of the San Gabriel River; and the lower Big Tujunga Creek. A population also occurs in the Santa Clara River.</p> <p>Permanent and temporary direct impacts on this species during construction of the future infrastructure improvements across all Project Categories include mortality or injury, and disturbances to</p>

Common Name	Scientific Name	Impacts
		<p>suitable habitats for special-status wildlife species, including disruption of wetland and streambeds; and, water pollution. A significant impact to this species could occur should unauthorized "take" of the species occur or should any of the above permanent or direct impacts to this species occur. It is not anticipated that, based on the general location of future facilities under the OBMPU, direct impacts would occur to this species.</p> <p>Potential indirect impacts include erosion, soil compaction, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution. These indirect impacts could lead to the disturbance of special-status wildlife species such as a temporary shift in foraging patterns or territories, refugia abandonment, increased predation, decreased reproductive success, and reduced population viability. Based on the types of projects proposed, and that the Santa Ana sucker is a species that occurs within the Santa Ana River, within which no new facilities would be installed, no direct or indirect impacts would be anticipated to occur.</p> <p>A significant cumulative impact could occur where future development or future projects divert water from the Santa Ana River. The OBMPU's contribution to additional diversion from the Santa Ana River would be cumulatively considerable due to the impacts to the Santa Ana sucker disclosed in both the CBP PEIR and SAR HCP DEIR. This is because in conjunction with Low Impact Development ordinances, local policies, and municipal storm water detention, existing regulations, when combined with the facilities proposed as part of the OBMPU, SAR HCP DEIR, and CBP PEIR will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker.</p>
Arroyo chub	<i>Gila orcuttii</i>	<p>Typical habitat for this species includes native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave & San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates. Occurrence potential is medium. Suitable habitat exists in the Santa Ana River and Chino Creek. The most recent occurrence is found outside of the Chino Basin in Covina, CA, 2013. All other occurrences were in the late 1990's and early 2000's.</p> <p>Impacts would be the same as those identified for the Santa Ana sucker.</p>
Tricolored blackbird	<i>Agelaius tricolor</i>	<p>Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony. Occurrence potential for this species is medium to high, particularly along the Santa Ana River corridor along the southern portion of the Program area. Individuals have been recorded in the area most recently between 2009 - 2015.</p>

Common Name	Scientific Name	Impacts
		<p>Permanent and temporary direct impacts on this species during construction of the future infrastructure improvements across all Project Categories include mortality or injury, and disturbances to suitable habitats for special-status wildlife species, including disruption of wetland and streambeds; water pollution; and reptile, bird, and mammal burrow or nest disturbance. A significant impact to this species could occur should unauthorized "take" of the species occur or should any of the above permanent or direct impacts to this species occur. As the future projects proposed under the OBMPU would potentially involve construction activities that could occur within the occurrence areas for this species, a significant direct impact could occur should development be unable to avoid take of this species.</p> <p>Potential indirect impacts include erosion, soil compaction, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution. These indirect impacts could lead to the disturbance of special-status wildlife species such as a temporary shift in foraging patterns or territories, refugia abandonment, increased predation, decreased reproductive success, and reduced population viability, which could result in a significant and unavoidable impact to this species.</p> <p>Cumulative impacts could occur should cumulative development in the Chino Basin and San Bernardino Valley region result in reduced habitat for this species, thereby resulting in a cumulative reduction in species occurrences across the existing habitat supporting this species. The OBMPU could result in cumulatively considerable impacts to this species as a result of cumulatively considerable contributions to loss of habitat supporting this species, or cumulative take of this species, including increasing the status level of this species a higher status under CESA or FESA.</p>
Burrowing owl	<i>Athene cunicularia</i>	<p>Typical habitat for this species includes open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel. Potential to occur is high in all Chino Basin MZ's. Burrowing owl has been shown to adapt to urban areas and overwinter in drain pipes, abandoned tires and other cover sites.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p>
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	<p>Typical habitat for this species includes riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. Critical habitat extends along the southern portion of the Chino Basin. Occurrence potential for this species is low due to presumed low population numbers and the only one recent observation in the Chino Basin in 2001 along the Santa Ana River. This species could inhabit areas with willow or cottonwood riparian areas on the edges of the Chino Basin. Critical habitat overlaps with the southern portions of the Program area.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p>

Common Name	Scientific Name	Impacts
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	<p>Typical habitat for this species includes riparian woodlands in Southern California. Critical habitat extends along the southern portion of the Chino Basin. Occurrence potential for this species is medium to high in areas with willow or cottonwood riparian areas on the edges of the Chino Basin. Critical habitat overlaps with the southern portions of the Program area and few occurrences have been recorded in the southern Program area along the Santa Ana River as recently as 2005.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p>
Coastal California gnatcatcher	<i>Poliophtila californica</i>	<p>This species is an obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. Occurrence potential is medium to high. Several individuals have been observed as recently as 2017 in the Chino Basin. Potential for occurrence is concentrated in pockets of sage scrub habitat.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p>
Least Bell's vireo	<i>Vireo bellii pusillus</i>	<p>This species is a summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite. Critical habitat overlaps with the southern portion of the Chino Basin. Occurrence potential for this species is high in riparian areas on the edges of the Chino Basin. Critical habitat overlaps with the Program Area in the south and individuals have been observed from 2003 through 2014 along the Santa Ana River.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p>
Yellow-breasted chat	<i>Icteria virens</i>	<p>This species is a summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground. Occurrence potential for this species is medium to high, particularly along the Santa Ana River corridor / Prado Basin, along the southern portion of the Program area. Individuals have been recorded in this area most recently between 2015.</p>
Yellow warbler	<i>Setophaga petechia</i>	<p>The habitat for this species is riparian plant associations in close proximity to water. It also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. It is frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders. Occurrence potential for this species is medium to high, particularly along the Santa Ana River corridor / Prado Basin, along the southern portion of the Program area. Individuals have been recorded in this area most recently between 2016.</p> <p>Impacts would be the same as those identified for the Tricolored blackbird.</p> <p>However, note that cumulative impacts specific to the OBMPU include that cumulative diversions from the Santa Ana River and its tributaries have a potential to result in a significant cumulative contribution to habitat loss for this species.</p>
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	<p>Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat,</p>

Common Name	Scientific Name	Impacts
		chamise, brome grass and filaree. Will burrow into firm soil. Low occurrence potential due. Possibly extirpated. Impacts would be the same as those identified for the Tricolored blackbird and yellow warbler.
Crotch bumble bee	Bombus crotchii	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum. No recent observation data in the Project area. Low occurrence potential. Impacts would be the same as those identified for the Tricolored blackbird.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

2000 OBMP Mitigation Measures:

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable or have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR are Mitigation Measures **4.8-1, 4.8-2, 4.8-3, 4.8-6, 4.8-7, 4.8-9, and 4.8-11**, and the text for 2000 OBMP PEIR Mitigation Measures **4.8-4, 4.8-5 and 4.8-8** has been modified and updated, as identified in the text below.

To reduce or prevent activities that may adversely affect sensitive species identified in **Table 4.3-4**, above, the following mitigation measures will be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.

Implementation of the Mitigation Measures **4.8-1, 4.8-2, 4.8-3, 4.8-6, 4.8-7, 4.8-9, and 4.8-11** will ensure that project design and site selection reduce impacts to the sensitive biological resources and the species identified under **Table 4.3-4** to the extent feasible.

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-1):

4.8-1 *Place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat area, and protect the integrity of habitat linkages. As part of this emphasis, incorporate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of pipelines and other facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific project.*

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-2):

4.8-2 *When determining which portion of a facility site should be retained in open space, give emphasis to the preservation of habitat areas and linkages, avoiding destruction of viable, sensitive habitat areas and linkages as a trade-off for preserving open space for purely aesthetic purposes. Further, whenever feasible, avoid impacts and disturbances to individuals and species considered sensitive by jurisdictional agencies.*

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-3):

- 4.8-3** *Require facility designs to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions.*
- a. Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources.*
 - b. Within riparian areas and wetlands subject to state or federal regulations (e.g. blue line streams); riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, faunal resting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in a measurable reduction in the reproductive capacity of sensitive biotic resources.*
 - c. Within habitats of plants listed by the CNDDDB or CNPS as "special" or "of concern," require that new facilities not result in a reduction in the number of these plants, if they are present.*

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-6):

- 4.8-6** *Require the establishment of buffer zones adjacent to areas of preserved biological resources. Such buffer zones shall be of adequate width to protect biological resources from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identified resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer area are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource.*

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-6):

- 4.8-7** *Require conservation or open space easements, granting of development rights, or other similar protections over biological habitats, and habitat linages being preserved in their natural state.*

Not every project will be required to implement all of the mitigation measures proposed herein. Proponents of future OBMPU projects shall select pertinent mitigation measures for the specific project site and operating impacts of the proposed project. Proponents shall also identify which mitigation measures from this OBMPU are not being implemented and state the reasons for not implementing the specified mitigation measures. This shall be further enforced through the implementation of 2000 OBMP PEIR Mitigation Measure **4.8-9**:

- 4.8-9** *Mitigation measures should be determined on a project-by-project basis. Potential mitigation measures may include avoidance or minimization of impacts. One means of minimizing impacts to sensitive plants, for example, has included transplanting individuals out of harm's way.*

Implementation of the project-specific mitigation measures is considered adequate to minimize construction-related impacts to the extent feasible, including the potential for invasive species occupancy caused by project-related disturbance of natural areas.

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.8-11). It would ensure that, where appropriate, incidental take permits and scientific collection permits from CDFW are obtained and the mitigation required therein to minimize impacts to special status species compensates for the impacts to the species at a beneficial level:

4.8-11 *Mitigation must be designed so that development of a given project will effectively benefit the species. The 2081 and 10(a) permits should be complimentary of one another to avoid conflicts between State and federal mitigation requirements. These permits will likely require land purchase, endowment funds, fencing funds, and mitigation measures. Section 7 consultations also usually include a land acquisition component.*

OBMPU Mitigation Measures:

Mitigation Measure **BIO-1** applies to all species identified under **Table 4.3-4**. It would ensure that direct impacts to the species identified under **Table 4.3-4** are mitigated through avoidance, mitigation or compensation in accordance with regulatory requirements including compliance with CDFW and USFWS through the acquisition of incidental taker permits where required. This would avoid or compensate for potential “take” of this species. Mitigation Measure **BIO-1** has been modified from the 2000 OBMP PEIR (measure 4.8-8). The modifications enable a more detailed list of requirements for pre-construction consultation than that which was identified in 2000 OBMP PEIR Mitigation Measure **4.8-8**.

BIO-1 ***Pre-Construction Consultations.** All future OBMPU projects shall be required to consult with a biologist³ to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a biologist, in any case in which a future OBMPU project will affect undeveloped land, or in which the Implementing Agency seeks State Funding, site surveys shall be conducted by a biologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, all work must stop in the area until the following subsequent mitigation actions are taken:*

- a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.*
- b. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.*
- c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted when needed in areas that were not previously surveyed because of access or timing issues or project design changes. Pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species.*

Mitigation Measure **BIO-2** would ensure that the protective mitigation measures provided herein are successfully implemented for the duration of construction and operation of future OBMPU

³ Biologist throughout this document means: a person holding a bachelor's degree in biology, or biologist certified by CDFW.

facilities, which would ensure direct and indirect impacts to the species identified under **Table 4.3-4** are minimized to the extent feasible.

- BIO-2** **Biological Resources Management Plan (BRMP).** *Biological Resources Management Plan (BRMP): During final design and prior to issuance of construction permits each specific infrastructure improvement project, a BRMP shall be prepared to:*
- *Assemble the biological resources mitigation measures to be applied for each specific infrastructure improvement in the future;*
 - *Specify the terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility;*
 - *Discuss habitat replacement and revegetation, protection during ground-disturbing activities, performance (growth) standards, maintenance criteria, and monitoring requirements for temporary and permanent native plant community impacts.*
- The parameters of the BRMP will be formed with the mitigation measures from subsequent CEQA documentation (if required), including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.*

The following mitigation can reduce the impact to burrowing owl to a less than significant level.

- BIO-3** **Burrowing Owl.** *All future OBMPU projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the “Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012”, or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed in coordination with CDFW and submitted to the Implementing Agency that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.*

Implementation of the following Mitigation Measures **BIO-4** through **BIO-15** will ensure that Project construction impacts, both direct, and indirect, to sensitive biological resources and the species identified under **Table 4.3-4**, including the potential effects of invasive species, are reduced to a level of insignificance.

- BIO-4** **Post Construction Return to Natural State.** *As part of completion of the final site development, after ground disturbance has occurred within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management at the specific site, which shall be implemented in cooperation with regulatory agencies and with oversight from a biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.*
- BIO-5** **Clean Construction Equipment.** *During construction, equipment will be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials will be removed from construction equipment when working in native plant communities, near special-status plant communities, or in areas where special-status plant species have been identified.*

BIO-6 **Contractor Education and Environmental Training.** Personnel who work onsite will attend a Contractor Education and Environmental Training session conducted by a biologist. The environmental training will cover general and specific biological information on the special-status plant species that may be present near the construction site, including the distribution of the resources, the recovery efforts, the legal status of the resources, and the penalties for violation of project permits and laws.

The Contractor Education and Environmental Training sessions will be given before the initiation of construction activities and repeated, as needed, when new personnel begin work within the project limits. Daily updates and synopsis of the training will be performed during the daily safety ("tailgate") meeting. All personnel who attend the training will be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training, and such tracking sheets shall be maintained for inspection by the Implementing Agency.

BIO-7 **Biological Monitoring.** Biological Monitor to Be Present during Construction Activities in areas where impacts to Riparian, Riverine, Wetland, Endangered Species or Endangered Species Critical habitat occurs. A biological monitor (or monitors) will be present onsite during construction activities that could result in direct or indirect impacts on sensitive biological resources (including listed species) and to oversee permit compliance and monitoring efforts for all special-status resources.

A biological monitor (biologist) is any person who has a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field and/or has demonstrated field experience in and knowledge about the identification and life history of the special-status species or jurisdictional waters that could be affected by project activities. The biological monitor(s) will be responsible for monitoring the Contractor to ensure compliance with the Section 404 Individual Permit, Section 401 Water Quality Certification and the Lake and Streambed Alteration Agreement. Activities to ensure compliance would include performing construction-monitoring activities, including monitoring environmental fencing, identifying areas where special-status plant species are or may be present, and advising the Contractor of methods that may minimize or avoid impacts on these resources. Biological monitor(s) will be required to be present in all areas during ground disturbance activities and for all construction activities conducted within or adjacent to identified Environmentally Sensitive Areas, Wildlife Exclusion Fencing, and Non-Disturbance Zones as defined by the project biologist.

BIO-8 **Food and Trash.** All food-related trash items (e.g., wrappers, cans, bottles, food scraps) will be disposed of in closed containers and removed at least once a week from the construction site.

BIO-9 **Rodenticides and Herbicides.** Use of rodenticides and herbicides in the project footprint will be restricted at the direction of the project biologist. This measure is necessary to prevent poisoning of special-status species and the potential reduction or depletion of the prey populations of special-status wildlife species. Where pesticides must be used, they must be used in full accordance with use instructions for the particular chemical and at the direction of the project biologist.

BIO-10 **Wildlife Exclusion Fencing.** Exclusion barriers (e.g., silt fences) will be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas as defined by the project biologist prior to the commencement of construction activities to restrict special-status species from entering the construction area during construction. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW, as appropriate. Clearance surveys will be conducted for special-

status species after the exclusion fence is installed in compliance with USFWS and/or CDFW requirements. The project biologist shall determine the frequency in which clearance surveys will be conducted to determine the efficacy of the exclusion fencing.

BIO-11 **Equipment Staging Areas.** *Prior to the commencement of construction, the Implementing Agency shall identify staging areas for construction equipment to be utilized during construction that will be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors.*

BIO-12 **Erosion Control Material Exclusions.** *Plastic mono-filament netting (erosion-control matting) or similar material will not be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds will be used as substitutes.*

This measure has been modified from the 2000 OBMP PEIR (measure 4.8-5) to reflect more intensive restrictions on vehicle traffic.

BIO-13 **Vehicle Traffic.** *During ground-disturbing activities, project-related vehicle traffic will be restricted within the construction area to established roads, construction areas, and other designated areas to prevent avoidable impacts. Access routes will be clearly flagged; traffic outside of the designated areas will be prohibited. Furthermore, the use of motorized vehicles within sensitive habitat areas and linkages shall be prohibited except for crucial maintenance and/or construction activities.*

BIO-14 **Entrapment Prevention.** *All excavated, steep-sided holes or trenches more than 8 inches deep will be covered at the close of each working day with plywood or similar materials, or a minimum of one escape ramp constructed of earth fill for every 10 feet of trenching will be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. All culverts or similar enclosed structures with a diameter of 4 inches or greater will be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material will be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.*

BIO-15 **Weed Control Plan.** *Prior to the commencement of construction, a Weed Control Plan will be developed for the Implementing Agency by the project biologist to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics will be addressed:*

- *A Schedule for noxious weed surveys shall be addressed.*
- *Weed control treatments shall be addressed and ultimately implemented by the Implementing Agency, including permitted herbicides, and manual and mechanical methods for application; herbicide application will be restricted in Environmentally Sensitive Areas (as defined by the project biologist).*
- *The timing of the weed control treatment for each plant species shall be addressed.*
- *Fire prevention measures shall be addressed.*

The Implementing Agency shall maintain records demonstrating implementation of the Weed Control Plan, and shall make those records available to inspection by the Implementing Agency upon request.

BIO-16 **Dewatering/Water Diversion Plan.** *If construction is planned to occur where there is open or flowing water, prior to the commencement of construction the Implementing Agency shall prepare a Dewatering Plan prepared in coordination with the resource agencies (e.g., COE, SWRCB/RWQCB, and CDFW, as appropriate). The Dewatering Plan*

shall identify how open or flowing water will be routed around construction areas, such as through the creation of cofferdams. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures shall be implemented to avoid and lessen impacts on jurisdictional waters during construction:

- The cofferdams, filter fabric, and corrugated steel pipe are to be removed from the creek bed after completion of the project.*
- The timing of work within all channelized waters is to be coordinated with the regulatory agencies.*
- The cofferdam is to be placed upstream of the work area to direct base flows through an appropriately sized diversion pipe. The diversion pipe will extend through the Contractor's work area, where possible, and outlet through a sandbag dam at the downstream end.*
- Sediment catch basins immediately below the construction site are to be constructed when performing in-channel construction to prevent silt- and sediment-laden water from entering the main stream flow. Accumulated sediments will be periodically removed from the catch basins.*

BIO-17 ***Permanent Water Diversion Projects.** The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. The IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or shall implement a comparable and equally effective monitoring program in its place to enable OBMPU Implementing Agencies to utilize the monitoring data to address and mitigate any future potential adverse impacts to Prado Basin Habitat due to implementation of the OBMPU. The Implementing Agency shall conduct an evaluation of each water diversion projects associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of such diversion projects.*

Co-permittees of the SAR HCP⁴ shall also implement the seven biology mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 3c of Volume 2 to this DPEIR of this document) where they provide additional support to protect the 22 covered species.

Level of Significance After Mitigation: Significant and Unavoidable

Impacts to all species identified under **Table 4.3-4** can be avoided through implementation of Mitigation Measures **BIO-1** through **BIO-17**, and **BIO-23**, in addition to 2000 OBMP PEIR Mitigation Measures **4.8-1**, **4.8-2**, **4.8-3**, **4.8-6**, **4.8-7**, **4.8-9**, and **4.8-11** identified above, with a few exceptions. Species such as the least Bell's vireo, yellow-breasted chat, and yellow warbler, which rely on Prado Basin habitat that may be significantly indirectly impacted should future diversions of water from the Santa Ana River and its tributaries be cumulatively considerable such that habitat supporting these species is degraded. Mitigation Measure **BIO-17** requires the continuation of the Prado Basin Habitat Sustainability Monitoring Program, or comparable and equally effective monitoring program in its place to enable Implementing Agencies to utilize the monitoring data and address and mitigate future potentially adverse impacts to Prado Basin Habitat as set forth in the Prado Basin Habitat Sustainability Monitoring Program. Furthermore, Mitigation Measure **BIO-17** requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin

⁴ Inland Empire Utilities Agency and West Valley Water District

and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects, but this does not preclude a determination of insignificance, as a project-specific evaluation may determine that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR.

Additionally, while the impacts to the Arroyo chub can be avoided through implementation of SAR HCP DEIR mitigation measures by co-permittees of the SAR HCP, no feasible mitigation measures exist that would ensure cumulative impacts to the Santa Ana sucker do not occur from cumulative diversions to the SAR.

Furthermore, it remains that Mills Wetlands resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources, or alternatively, a potential to adversely impact riparian/wetland habitat therein may result from OBMPU implementation because certain construction or operation activities, such as diversion of additional surface runoff, may not be capable of being mitigated. Given that the Mills Wetlands project has not been defined in sufficient detail, a significant and unavoidable impact to special status species supported by this habitat has been identified, as the destruction of this habitat has a potential to cause indirect effects to habitat supporting special status species.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.6.2 b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Critical Habitat

Critical habitat has been designated for several species adjacent to, directly overlapping, or in the general vicinity of the Program area, with significant concentration along the Santa Ana River corridor (refer to **Figure 4.3-3**). **Figure 4.3-4** also depicts an overview of USFWS Critical Habitat as an overlay depicting the Chino Basin. One example is the critical habitat designated for the Southwestern willow flycatcher along the Santa Ana River to the south of the Program area. It is rare that critical habitat extends directly within the property owned by Implementing Agencies because these areas are already generally maintained to support the existing Stakeholder facility or OBMPU operations, rather than providing protection for habitat. A primary project design feature for individual projects that are part of the OBMPU will be avoidance of critical habitat. Where avoidance is not possible, the project could have a potentially substantial adverse effect on critical habitat.

Riparian Habitat or Sensitive Natural Communities

Please review **Table 4.3-2**, Project Area Wildlife Habitat Types, Land Uses, and Typical Vegetation. Additionally, please refer to the discussion under **Subsection 4.3.6.1**, above.

A primary project design feature for individual projects that is part of the OBMPU will be avoidance of riparian habitat and sensitive natural communities. Where avoidance is not possible, the Project

could have a potentially substantial adverse effect on riparian habitat or sensitive natural communities.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measures **BIO-1, BIO-2, 2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3, BIO-4 through BIO-9, and BIO-11 through BIO-17** are required to minimize direct and indirect effects to both critical habitat and riparian habitat or other sensitive natural communities.*

Critical Habitat

Impacts to critical habitat will be determined based on the location of such habitat to a given project footprint and the presence of primary constituent elements. To reduce or prevent activities that may adversely affect critical habitat, Mitigation Measures **BIO-1 and BIO-2** would be required to protect critical habitat from being impacted at all. These measures would aid in avoidance of critical habitat. Where avoidance of critical habitat is not feasible, 2000 OBMP PEIR Mitigation Measures **4.8-1 and 4.8-3** will be implemented. In this same instance, where either permanent or temporary disturbances will occur within critical habitat, additional full mitigation will be provided to offset impacts to such habitat through the implementation of additional Mitigation Measures **BIO-4 through BIO-9, and BIO-11 through BIO-17**.

As indicated in the subsequent discussion on cumulative impacts, certain areas that contain critical habitat for species may not be fully mitigable, and an unavoidable significant adverse biological resource impact may occur. This can only be determined after future projects are identified, and design and engineering are completed, and avoidance measures incorporated per specific, necessary project actions. Where avoidance cannot be achieved, the residual impact to critical habitat may be unavoidable, and therefore, significant.

Riparian Habitat or Sensitive Natural Communities

To reduce or prevent activities that may adversely affect riparian habitat, the Mitigation Measures **BIO-1 and BIO-2** would be required to protect sensitive riparian resources and natural communities. These measures would aid in avoidance of riparian habitat and sensitive natural communities. Where avoidance of riparian habitat is not feasible, for instance, where either permanent or temporary disturbances will occur within sensitive riparian resources and natural communities, additional full mitigation will be provided to offset impacts to such habitat through the implementation of additional 2000 OBMP PEIR Mitigation Measures **4.8-1 and 4.8-3 and Mitigation Measures BIO-4 through BIO-12, and BIO-14 through BIO-20 BIO-4 through BIO-9, and BIO-11 through BIO-17**.

As indicated in the subsequent discussion on cumulative impacts, certain areas that contain sensitive riparian habitat resources and natural communities may not be fully mitigable, and an unavoidable significant adverse biological resource impact may occur. This can only be determined after future projects are identified, and design and engineering are completed, and avoidance measures incorporated per specific, necessary project actions. Where avoidance cannot be achieved, the residual impact to sensitive riparian resources and natural communities may be unavoidable, and therefore, significant.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.6.3 c) Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Wetlands and Other Waters Coordination Summary

Wetlands in the Program area are shown on **Figure 4.3-5**. Wetlands and other waters in the Program vicinity, including waters of the U.S., waters of the State, and State streambeds, are regulated by the federal government (COE) and the State of California (RWQCB and CDFW). When considering wetlands and other waters, these features are collectively termed jurisdictional waters. Wetlands and other waters are assumed to fall under the jurisdiction of the COE, SWRCB, and CDFW for purposes of this discussion. The jurisdictional status of these waters will be confirmed by the COE, SWRCB, and CDFW when the regulatory permitting process is conducted. Further definitions are presented below.

- **Wetlands:** The CWA defines waters of the U.S. as follows: (1) waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; the territorial seas; or interstate waters; (2) impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of 33 CFR § 328.3; (3) tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water; (4) wetlands adjacent to waters identified in paragraph (a)(1) of 33 CFR § 328.3; or relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of 33 CFR § 328.3 and with a continuous surface connection to those waters; and (5) intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of 33 CFR § 328.3 that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.(33 CFR § 328.3[a]). As noted above in Subsection 4.3.4.1.3, the Conforming 2023 WOTUS Rule became effective on September 8, 2023 and updated the what qualifies as a WOTUS in accordance with Sackett II. The regulatory environment must be reassessed for each future project implemented under the OBMPU to determine which rules apply and which permitting may be necessary during the planning and permitting phase.
- **Waters of the State:** Waters of the State are broadly defined by the Porter-Cologne Water Quality Control Act as “any surface water or groundwater, including saline waters, within the boundaries of the state” (Water Code Section § 13050(e)). In its Resolution No. 2019-0015, the SWRCB stated that natural wetlands, wetlands created by modification of a surface water of the State, and artificial wetlands that meet certain criteria are Waters of the State.
- **State Streambeds:** CDFW has not released an official definition of lake or streambed and therefore the extent of the area regulated under Section 1602 remains undefined. However, CDFW jurisdiction generally includes the streambed and bank, together with the adjacent floodplain and riparian vegetation.

Based on the background review and subsequent windshield surveys, numerous jurisdictional waters occur in the Study Area where the OBMPU will be implemented. Many of the jurisdictional waters (built waterways) are heavily managed by local agencies, which serve public water needs, flood control, and agricultural production. As a result, some of these jurisdictional waters support few natural biological functions and values. The biological functions of these man-made features include limited habitat for wildlife and capacity for water storage or release. A number of these

jurisdictional waters have been previously degraded or impacted by existing roads and water resource management infrastructure.

Direct impacts on natural and man-made features include the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources.

Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas.

Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. These discharges would indirectly impact adjacent or downstream jurisdictional waters.

The identification and location of jurisdictional Waters of the United States, including wetlands, regulated by the COE under Section 404 of the CWA and Sections 9 and 10 of the RHA is determined through a process known as a Jurisdictional Determination. A Jurisdictional Determination and subsequent approval of the determination by the regulatory agencies will be conducted on each facility as the design becomes available and construction of a particular facility is scheduled to occur within the foreseeable future. However, unforeseen direct impacts, indirect impacts, and temporary impacts to natural and man-made water bodies may occur depending upon the design of the infrastructure improvement, and the construction methodology required.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measures **BIO-1, BIO-2, 2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and Mitigation Measures BIO-4 through BIO-16, BIO-18, and BIO-19** are required to minimize direct and indirect effects to federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. For discussion of Mitigation Measures **BIO-1, BIO-2, 2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and Mitigation Measures BIO-4 through BIO-16, BIO-18, and BIO-19**, please refer to analysis above throughout this section. **BIO-18 and BIO-19** are discussed below:*

BIO-18 **Streambed Alteration.** *Any future project that must discharge fill into a channel or otherwise alter a streambed shall be minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional*

waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1, and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the Implementing Agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

BIO-19 *Jurisdictional Water Preconstruction Surveys: A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with BIO-18.*

As stated above, unforeseen direct impacts, indirect impacts, and temporary impacts to natural and man-made water bodies may occur depending upon the design of the infrastructure improvement, and the construction methodology required. Mitigation Measure **BIO-19** would ensure that jurisdictional features are documented in accordance with State and federal guidelines. This would aid in identification of jurisdictional features that may be impacted by discharge of fill or streambed alteration by a future OBMPU project. The implementation of Mitigation Measure **BIO-18** would ensure that future projects that would discharge of fill or streambed alteration of State or federal water jurisdictional areas are designed to minimize and be protective of the environment both during construction, and once operational for activities that would require ongoing maintenance within jurisdictional features. Furthermore, Mitigation Measures **BIO-1**, **BIO-2**, 2000 OBMP PEIR Mitigation Measures **4.8-1** and **4.8-3** and Mitigation Measures **BIO-4 through BIO-16**, **BIO-18**, and **BIO-19** address the potential for ongoing and project-specific protections to the environment to prevent direct and indirect effects that could affect federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means by future OBMPU facilities. Thus, through the implementation of mitigation, the OBMPU would have a less than significant impact on federally and State protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Level of Significance After Mitigation: Less Than Significant

4.3.6.4 d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Please refer to the discussion under **Subsection 4.3.6.1**, above. The proposed OBMPU will be developed within the Chino Basin, which contains many areas that could serve to enable

movement of native resident or migratory fish or wildlife species, or serve established native resident or migratory wildlife movement corridors, or serve as native wildlife nursery sites. There are many stream channels that traverse this area from a north-south direction that could serve to enable movement of native resident or migratory fish or wildlife species, or serve established native resident or migratory wildlife movement corridors, or serve as native wildlife nursery sites.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and 4.8-6 and Mitigation Measures BIO-6, and BIO-20 are required to minimize the Project's potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. For discussion of 2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and 4.8-6 and Mitigation Measure BIO-6, please refer to analysis above throughout this section. BIO-20 is discussed below:

BIO-20 ***Nesting Birds.** To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 1 of a given calendar year, depending on the species). Alternatively, a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction can be conducted by a qualified biologist no more than 14 days prior to initiation of ground disturbance; construction may only commence once a biologist has demonstrated that no nesting birds are present at a given site. The Implementing Agency shall coordinate with the CDFW to develop nesting bird survey protocol. The results of the nesting bird survey will be documented in a report submitted by the avian biologist to the Implementing Agency. The Implementing Agency, in coordination with CDFW and USFWS (as appropriate), may designate nest buffers outside of which construction activities may be allowed to proceed. There are no standard nest buffers specified in the Migratory Bird Treaty Act (MBTA) or within the California Fish and Game Code. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project- and site-specific basis.*

Mitigation to protect nesting birds will be implemented by Watermaster and Stakeholders of the Chino Basin in future through Mitigation Measure **BIO-20**. Mitigation Measure **BIO-20** will require a nesting bird survey that demonstrates that no bird nests will be disturbed during individual project construction, or construction will occur entirely outside of nesting season. This will ensure that nesting birds are not impacted by construction activities thereby ensuring compliance with the MBTA and Bird nesting protections (Sections 3503, 3503.5, 3511, and 3513) in the Fish and Game Code. Furthermore 2000 OBMP PEIR Mitigation Measure **4.8-1** would ensure that wildlife corridor preservation is ensured when future OBMPU project site selection is undertaken. OBMP PEIR Mitigation Measure **4.8-3** would require protection of habitat values, and preservation of habitat connections, which would further preserve wildlife corridors as future OBMPU projects are implemented. OBMP PEIR Mitigation Measure **4.8-6** would create buffer zones that would further enhance nesting bird protections outside of nesting season. Mitigation Measure **BIO-6** would require education of the construction workers, which would ensure that the principals of the mitigation measures identified herein intended to comply with the law are known by the construction workers, which would ensure further protection of nesting birds that could otherwise

be impacted by construction. As such, future OBMPU facilities will be required to perform these subsequent environmental analyses at the time individual infrastructure improvements are considered for funding. The mitigation provided above minimizes the impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.3.6.5 e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Please refer to the discussion under **Subsection 4.3.6.1**, above. The proposed OBMPU will be developed within the Chino Basin, which includes the following incorporated cities: Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties. As such, future OBMPU facilities would be subject to various local ordinances, including the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) to avoid a significant impact under this issue.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

This measure has been adapted from the 2000 OBMP PEIR (measure 4.8-4) to better define “preservation” and to further accommodate the additional Mitigation Measures required to preserve trees under the topic of Aesthetics:

BIO-21 **Tree Preservation.** *Maximize the preservation of individual oak, sycamore and walnut trees within proposed OBMPU facility sites. Preservation is defined within this measure as follows: existing oak, sycamore and walnut trees within a given project site shall be retained within the site to the maximum extent feasible except where their preservation would interfere with functional and reasonable project design. Where the preservation of individual trees is not possible, the guidelines set forth in MM AES-4 regarding tree preservation and adherence to local ordinances thereof shall be followed.*

The following mitigation can ensure consistency with any HCP or MSHCP.

BIO-22 **MSHCP Planning.** *Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP.*

Mitigation Measure **BIO-21** would ensure that future OBMPU projects conform to tree preservation ordinances within the cities and counties within which future projects are proposed. This would minimize conflicts with local policies and ordinances pertaining to biological resources. Mitigation Measure **BIO-22** would ensure consistency with HCP and MSCHPs, and would therefore minimize conflicts thereof. With the implementation of these mitigation measures, impacts would be less than significant.

Level of Significance After Mitigation: Less Than Significant

4.3.6.6 f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The OBMPU is located within the Chino Basin, which includes a part of western Riverside County, and as such, areas located therein are subject to the Western Riverside County Multiple Species Habitat Conservation Plan (HCP). Other HCPs within the Chino Basin include the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. OBMPU Facilities located within these areas would have a potential to conflict with the provisions of an HCP, and conflicts thereof would result in a significant impact under this issue.

The SAR HCP DEIR summary of biology findings is provided in Appendix 3c of Volume 2 to this RDSEIR. As the SAR HCP has not yet been adopted, conflicts with the SAR HCP are not applicable. However, the OBMPU's contributions to the findings in the SAR HCP DEIR would be cumulatively significant if it was to impede the successful implementation of the Mitigation Measures that were identified to protect covered species, or if it would contribute to an unmitigated cumulative reduction in flows to the SAR, thereby affecting the Santa Ana sucker and Arroyo Chub.

Level of Significance: Potentially Significant

Mitigation Measures:

*Mitigation Measure **BIO-22** is required to minimize the potential for conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Co-permittees of the SAR HCP⁵ shall also implement the seven biology mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 3c of Volume 2 to this RDSEIR) where they provide additional support to protect the 22 covered species.*

On a project-specific basis, the OBMPU does not propose any action that would impede the successful implementation of the Mitigation Measures identified in the SAR HCP DEIR because the co-permittees are committed to ensuring these mitigation measures are adhered to for future projects. Furthermore, Mitigation Measure **BIO-22** would ensure compliance with other HCPs covering the Chino Basin area, which would minimize impacts thereof.

On a cumulative basis, all potential cumulative impacts to covered species, except for the Santa Ana sucker, can be reduced to a less than significant cumulative impact. Impacts to the Santa Ana sucker are forecast to potentially experience an unavoidable cumulatively significant impact based on the findings in the SAR HCP DEIR due to the inability to ensure that all future HCP management measures for SAR will be successful. Refer to Appendix 3c of Volume 2 to this RDSEIR for a more in-depth discussion of this issue.

Level of Significance After Mitigation: Significant and Unavoidable

⁵ Inland Empire Utilities Agency and West Valley Water District

4.3.7 Avoidance, Minimization and Mitigation Measures

4.3.7.1 2000 OBMPU PEIR Mitigation Measures

As described in **Subsection 4.3.1** and **Subsection 4.3.6**, the analysis contained in the 2000 OBMP PEIR, while still applicable, must be updated to reflect the current conditions of the Basin. Not only have regulations changed, but the plant and wildlife species occurrences and availability of quality habitat to support special status species within the Chino Basin has changed since the 2000 OBMP PEIR was certified.

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are applicable to the OBMPU, while others are no longer applicable or have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR include Mitigation Measures **4.8-1**, **4.8-2**, **4.8-3**, **4.8-6**, **4.8-7**, **4.8-9**, and **4.8-11**, while the text for 2000 OBMP PEIR Mitigation Measures **4.8-4**, **4.8-5** and **4.8-8** has been modified and updated, as identified in the text provided under **4.3.6, Potential Impacts**, above. All other 2000 OBMP PEIR Mitigation Measures are no longer applicable, as described in greater detail below.

2000 OBMP PEIR Mitigation Measure **4.8-4** has been modified to be better define “preservation” and to further accommodate the additional Mitigation Measures required to preserve trees under the topic of Aesthetics. Therefore, 2000 OBMP PEIR Mitigation Measure **4.8-4** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.8-5** has been modified to reflect more intensive restrictions on vehicle traffic, which would further protect sensitive biological resources. Therefore, 2000 OBMP PEIR Mitigation Measure **4.8-5** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.8-8** has been modified to enable a more detailed list of requirements for pre-construction consultation than that which was identified in 2000 OBMP PEIR. Therefore, 2000 OBMP PEIR Mitigation Measure **4.8-8** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.8-10** pertains to preservation of critical habitat for the least Bell’s vireo and other riparian resources within the Santa Ana River and Prado Basin. The specifications in this mitigation measure pertaining to the Santa Ana River watermark are no longer applicable due to the fluctuation in water elevation needed to sustain critical habitat for the least Bell’s vireo and other riparian resources within the Santa Ana River and Prado Basin. In essence, the Prado Basin Habitat Sustainability Monitoring Program, which is presently in place, accomplishes the intended impact minimization that 2000 OBMP PEIR Mitigation Measure **4.8-10** seeks to accomplish. Therefore, the required continuation of the Prado Basin Habitat Sustainability Monitoring Program or comparable and equally effective monitoring program in its place beyond its expiration in 2030 would be sufficient to avoid the impacts to riparian resources and sensitive species that 2000 OBMP PEIR Mitigation Measure **4.8-10** was intended to protect. Therefore, 2000 OBMP PEIR Mitigation Measure **4.8-10** is no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.8-4**, **4.8-5**, **4.8-8**, and **4.8-10** are no longer applicable for the purposes of the OBMPU.

4.3.7.2 Applicable Project Mitigation Measures

Because the individual projects implemented throughout the Program could result in potentially significant impacts on biological resources, mitigation measures were designed to avoid or reduce the impacts on these resources. The mitigation strategy includes avoidance of impacts on biological resources to the extent possible: field verification of sensitive resources and filling data gaps; the formulation of alternative designs (minimization and avoidance); limiting modifications to access and egress points to facilities (minimization); designing cuts and fills to minimize the area of disturbance; and where necessary, compensation to offset unavoidable impacts to individual species or sensitive habitat.

The following mitigation measures are required to reduce impacts associated with future Program site-specific projects to a less than significant level. Each Stakeholder implementing specific project-related specific capital improvement projects shall implement the measures outlined below, as needed, when the impact being mitigated will be caused by such project.

To reduce or prevent activities that may adversely affect sensitive species identified in **Subsections 4.3.3.1 and 4.3.3.2**, the following mitigation measures will be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.

The following mitigation measures from the 2000 OBMP PEIR have been abstracted and are repeated below for reference:

- 4.8-1** *Place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat area, and protect the integrity of habitat linkages. As part of this emphasis, incorporate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of pipelines and other facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific project.*
- 4.8-2** *When determining which portion of a facility site should be retained in open space, give emphasis to the preservation of habitat areas and linkages, avoiding destruction of viable, sensitive habitat areas and linkages as a trade-off for preserving open space for purely aesthetic purposes. Further, whenever feasible, avoid impacts and disturbances to individuals and species considered sensitive by jurisdictional agencies.*
- 4.8-3** *Require facility designs to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions.*
 - a.** *Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources.*
 - b.** *Within riparian areas and wetlands subject to state or federal regulations (e.g., blue line streams); riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, faunal resting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in a measurable reduction in the reproductive capacity of sensitive biotic resources.*
 - c.** *Within habitats of plants listed by the CNDDDB or CNPS as “special” or “of concern,” require that new facilities not result in a reduction in the number of these plants, if they are present.*
- 4.8-6** *Require the establishment of buffer zones adjacent to areas of preserved biological resources. Such buffer zones shall be of adequate width to protect biological resources*

from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identifies resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer area are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource.

- 4.8-7** *Require conservation or open space easements, granting of development rights, or other similar protections over biological habitats, and habitat linages being preserved in their natural state.*
- 4.8-9** *Mitigation measures should be determined on a project-by-project basis. Potential mitigation measures may include avoidance or minimization of impacts. One means of minimizing impacts to sensitive plants, for example, has included transplanting individuals out of harm's way.*
- 4.8-11** *Mitigation must be designed so that development of a given project will effectively benefit the species. The 2081 and 10(a) permits should be complimentary of one another to avoid conflicts between State and federal mitigation requirements. These permits will likely require land purchase, endowment funds, fencing funds, and mitigation measures. Section 7 consultations also usually include a land acquisition component.*

The following mitigation measures are specific to this OBMPU RDSEIR.

- BIO-1** *Pre-Construction Consultations. All future OBMPU projects shall be required to consult with a biologist⁶ to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a biologist, in any case in which a future OBMPU project will affect undeveloped land, or in which the Implementing Agency seeks State Funding, site surveys shall be conducted by a biologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, all work must stop in the area until the following subsequent mitigation actions are taken:*
- a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.*
 - b. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.*
 - c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted when needed in areas that were not previously surveyed because of access or timing issues or project design changes. Pre-construction surveys for special-status plant communities and special-status*

⁶ Biologist throughout this document means: a person holding a bachelor's degree in biology, or biologist certified by CDFW.

plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species.

BIO-2 **Biological Resources Management Plan (BRMP).** *Biological Resources Management Plan (BRMP): During final design and prior to issuance of construction permits each specific infrastructure improvement project, a BRMP shall be prepared to:*

- Assemble the biological resources mitigation measures to be applied for each specific infrastructure improvement in the future;*
- Specify the terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility;*
- Discuss habitat replacement and revegetation, protection during ground-disturbing activities, performance (growth) standards, maintenance criteria, and monitoring requirements for temporary and permanent native plant community impacts.*

The parameters of the BRMP will be formed with the mitigation measures from subsequent CEQA documentation (if required), including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.

BIO-3 **Burrowing Owl.** *All future OBMPU projects shall be required to consult with a qualified avian biologist to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed in coordination with CDFW and submitted to the Implementing Agency that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.*

BIO-4 **Post Construction Return to Natural State.** *As part of completion of the final site development, after ground disturbance has occurred within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management at the specific site, which shall be implemented in cooperation with regulatory agencies and with oversight from a biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.*

BIO-5 **Clean Construction Equipment.** *During construction, equipment will be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials will be removed from construction equipment when working in native plant communities, near special-status plant communities, or in areas where special-status plant species have been identified.*

BIO-6 **Contractor Education and Environmental Training.** *Personnel who work onsite will attend a Contractor Education and Environmental Training session conducted by a biologist. The environmental training will cover general and specific biological information on the special-status plant species that may be present near the construction site, including the distribution of the resources, the recovery efforts, the legal status of the resources, and the penalties for violation of project permits and laws.*

The Contractor Education and Environmental Training sessions will be given before the initiation of construction activities and repeated, as needed, when new personnel begin work within the project limits. Daily updates and synopsis of the training will be performed during the daily safety ("tailgate") meeting. All personnel who attend the training will be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training, and such tracking sheets shall be maintained for inspection by the Implementing Agency.

BIO-7 **Biological Monitoring.** *Biological Monitor to Be Present during Construction Activities in areas where impacts to Riparian, Riverine, Wetland, Endangered Species or Endangered Species Critical habitat occurs. A biological monitor (or monitors) will be present onsite during construction activities that could result in direct or indirect impacts on sensitive biological resources (including listed species) and to oversee permit compliance and monitoring efforts for all special-status resources.*

A biological monitor (biologist) is any person who has a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field and/or has demonstrated field experience in and knowledge about the identification and life history of the special-status species or jurisdictional waters that could be affected by project activities. The biological monitor(s) will be responsible for monitoring the Contractor to ensure compliance with the Section 404 Individual Permit, Section 401 Water Quality Certification and the Lake and Streambed Alteration Agreement. Activities to ensure compliance would include performing construction-monitoring activities, including monitoring environmental fencing, identifying areas where special-status plant species are or may be present, and advising the Contractor of methods that may minimize or avoid impacts on these resources. Biological monitor(s) will be required to be present in all areas during ground disturbance activities and for all construction activities conducted within or adjacent to identified Environmentally Sensitive Areas, Wildlife Exclusion Fencing, and Non-Disturbance Zones as defined by the project biologist.

BIO-8 **Food and Trash.** *All food-related trash items (e.g., wrappers, cans, bottles, food scraps) will be disposed of in closed containers and removed at least once a week from the construction site.*

BIO-9 **Rodenticides and Herbicides.** *Use of rodenticides and herbicides in the project footprint will be restricted at the direction of the project biologist. This measure is necessary to prevent poisoning of special-status species and the potential reduction or depletion of the prey populations of special-status wildlife species. Where pesticides must be used, they must be used in full accordance with use instructions for the particular chemical and at the direction of the project biologist.*

BIO-10 **Wildlife Exclusion Fencing.** *Exclusion barriers (e.g., silt fences) will be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas as defined by the project biologist prior to the commencement of construction activities to restrict special-status species from entering the construction area during construction. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW, as appropriate. Clearance surveys will be conducted for special-status species after the exclusion fence is installed in compliance with USFWS and/or CDFW requirements. The project biologist shall determine the frequency in which clearance surveys will be conducted to determine the efficacy of the exclusion fencing.*

BIO-11 **Equipment Staging Areas.** *Prior to the commencement of construction, the Implementing Agency shall identify staging areas for construction equipment to be utilized during construction that will be located outside sensitive biological resources*

areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors.

BIO-12 **Erosion Control Material Exclusions.** *Plastic mono-filament netting (erosion-control matting) or similar material will not be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds will be used as substitutes.*

BIO-13 **Vehicle Traffic.** *During ground-disturbing activities, project-related vehicle traffic will be restricted within the construction area to established roads, construction areas, and other designated areas to prevent avoidable impacts. Access routes will be clearly flagged; traffic outside of the designated areas will be prohibited. Furthermore, the use of motorized vehicles within sensitive habitat areas and linkages shall be prohibited except for crucial maintenance and/or construction activities.*

BIO-14 **Entrapment Prevention.** *All excavated, steep-sided holes or trenches more than 8 inches deep will be covered at the close of each working day with plywood or similar materials, or a minimum of one escape ramp constructed of earth fill for every 10 feet of trenching will be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. All culverts or similar enclosed structures with a diameter of 4 inches or greater will be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material will be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.*

BIO-15 **Weed Control Plan.** *Prior to the commencement of construction, a Weed Control Plan will be developed for the Implementing Agency by the project biologist to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics will be addressed:*

- *A Schedule for noxious weed surveys shall be addressed.*
- *Weed control treatments shall be addressed and ultimately implemented by the Implementing Agency, including permitted herbicides, and manual and mechanical methods for application; herbicide application will be restricted in Environmentally Sensitive Areas (as defined by the project biologist).*
- *The timing of the weed control treatment for each plant species shall be addressed.*
- *Fire prevention measures shall be addressed.*

The Implementing Agency shall maintain records demonstrating implementation of the Weed Control Plan and shall make those records available to inspection by the Implementing Agency upon request.

BIO-16 **Dewatering/Water Diversion Plan.** *If construction is planned to occur where there is open or flowing water, prior to the commencement of construction the Implementing Agency shall submit to the Implementing Agency a Dewatering Plan prepared in coordination with the resource agencies (e.g., COE, SWRCB/RWQCB, and CDFW, as appropriate). The Dewatering Plan shall identify how open or flowing water will be routed around construction areas, such as through the creation of cofferdams. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures shall be implemented to avoid and lessen impacts on jurisdictional waters during construction:*

- *The cofferdams, filter fabric, and corrugated steel pipe are to be removed from the creek bed after completion of the project.*
- *The timing of work within all channelized waters is to be coordinated with the regulatory agencies.*

- *The cofferdam is to be placed upstream of the work area to direct base flows through an appropriately sized diversion pipe. The diversion pipe will extend through the Contractor's work area, where possible, and outlet through a sandbag dam at the downstream end.*
- *Sediment catch basins immediately below the construction site are to be constructed when performing in-channel construction to prevent silt- and sediment-laden water from entering the main stream flow. Accumulated sediments will be periodically removed from the catch basins.*

BIO-17 *Permanent Water Diversion Projects.* *The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. The IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or shall implement a comparable and equally effective monitoring program in its place to enable OBMPU Implementing Agencies to utilize the monitoring data to address and mitigate any future potential adverse impacts to Prado Basin Habitat due to implementation of the OBMPU. The Implementing Agency shall conduct an evaluation of each water diversion projects associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of such diversion projects.*

BIO-18 *Streambed Alteration.* *Any future project that must discharge fill into a channel or otherwise alter a streambed shall be minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensating habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1, and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. This increase in ratio will be determined by the regulatory agency. A Habitat Mitigation and Monitoring Proposal shall be prepared by a biologist or regulatory specialist and reviewed and approved by the appropriate regulatory agencies. These agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) can impose greater mitigation requirements in their permits, but the Implementing Agency will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.*

BIO-19 *Jurisdictional Water Preconstruction Surveys:* *A federal and State jurisdictional water preconstruction survey shall be conducted by a biologist or regulatory specialist at least six months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters as defined by State and federal law are within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values in accordance with BIO-18.*

- BIO-20** **Nesting Birds.** *To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season for applicable bird species (nesting season is approximately from February 15 through September 1 of a given calendar year, depending on the species). Alternatively, a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction can be conducted by a qualified biologist no more than 14 days prior to initiation of ground disturbance; construction may only commence once a biologist has demonstrated that no nesting birds are present at a given site. The Implementing Agency shall coordinate with the CDFW to develop nesting bird survey protocol. The results of the nesting bird survey will be documented in a report submitted by the avian biologist to the Implementing Agency. The Implementing Agency, in coordination with CDFW and USFWS (as appropriate), may designate nest buffers outside of which construction activities may be allowed to proceed. There are no standard nest buffers specified in the Migratory Bird Treaty Act (MBTA) or within the California Fish and Game Code. Disturbance factors including nest location, human activity, activity duration, and noise level may influence nesting behavior and reproductive success, shall be considered by the project biologist in coordination with CDFW and USFWS (as appropriate) in establishing standard buffer distances for individual species on a project and site-specific basis.*
- BIO-21** **Tree Preservation.** *Maximize the preservation of individual oak, sycamore and walnut trees within proposed OBMPU facility sites. Preservation is defined within this measure as follows: existing oak, sycamore and walnut trees within a given project site shall be retained within the site to the maximum extent feasible except where their preservation would interfere with functional and reasonable project design. Where the preservation of individual trees is not possible, the guidelines set forth in MM AES-4 regarding tree preservation and adherence to local ordinances thereof shall be followed.*
- BIO-22** **MSHCP Planning.** *Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP.*

Not every project will be required to implement all of the above mitigation measures. Proponents of future OBMPU projects shall select pertinent mitigation measures for the specific project site and operating impacts of the proposed project. Proponents shall also identify which mitigation measures from this OBMPU are not being implemented and state the reasons for not implementing the specified mitigation measures. Implementation of the project-specific mitigation measures is considered adequate to minimize construction-related impacts to the extent feasible, including the potential for invasive species occupancy caused by project-related disturbance of natural areas. Co-permittees of the SAR HCP⁷ shall also implement the seven biology mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 3c of Volume 2 to this RDSEIR) where they provide additional support to protect the 22 covered species. These measures would be carried forth by co-permittees only if the SAR HCP DEIR is ultimately certified. Compliance with the HCP will be mandatory via implementation of Mitigation Measure **BIO-22**, above.

4.3.8 Cumulative Impacts

- 4.3.8.1 a)** **Would the project contribute cumulatively significant contributions to substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local**

⁷ Inland Empire Utilities Agency and West Valley Water District

or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Cumulative development within the Chino Basin includes infill and conversion of open undeveloped land to urban and rural development. This future cumulative development has the potential to reduce the availability of suitable habitat for special-status species, including suitable foraging habitat for raptor species. Additionally, the conversion of open undeveloped land has the potential to reduce the size, extent, and/or quality of existing wildlife movement corridors due to habitat fragmentation of undeveloped open space areas within the Chino Basin.

The reduction of flow into Prado Basin resulting from diversions from the Santa Ana River and its tributaries would contribute to a cumulative reduction in future flows reaching Prado Basin. In addition, Low Impact Development ordinances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin and the Santa Ana River. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub. While the OBMPU may result in surface flow diversions that would contribute to the cumulative effect, IEUA and Watermaster would continue to participate in regional planning efforts to mitigate habitat deterioration. The multi-agency coordination that presently occurs to achieve regional habitat conservation objectives aimed at protecting the habitat within Prado Basin will continue under the OBMPU, which will ensure that the cumulatively significant reduction in surface flows would not occur or is minimized and mitigated to the greatest extent feasible. The SAR HCP proposes to develop projects to protect sensitive species and achieve regional habitat conservation objectives, as documented and analyzed in the context of biological resources impacts in the SAR HCP DEIR. In the context of regional cumulative projects, the SAR HCP DEIR relates to the OBMPU in that, future cumulative diversions from the Santa Ana River are analyzed therein, and the OBMPU proposes individual projects that could contribute to the cumulative diversions from the Santa Ana River. As a result, the SAR HCP DEIR is used to determine how these future diversions could impact the 22 covered species analyzed in the SAR HCP DEIR.

The Covered Activities outlined in the SAR HCP DEIR under **Tables 2-1** and **2-2** indicate that the majority of the Covered Activities (projects) in the SAR HCP DEIR do not overlap with that which are proposed as part of the OBMPU. Furthermore, the SAR HCP DEIR Covered Activities are defined in that, the amount of additional or new capture of flow proposed by diversion projects is defined for each covered activity. The OBMPU RDSEIR does not define the specific increase in capture that the proposed new storage basins and modifications to existing storage basins would achieve, as the designs for the individual facilities have not been defined in enough detail to make such assumptions. The two facilities that overlap between that which is proposed by the SAR HCP DEIR and this OBMPU RDSEIR are the modifications to Riverside Basin (called "Riverside Basin Recharge Project" in the SAR HCP DEIR) and the modifications to Jurupa Basin, the increase in capture for which was analyzed in the IEUA 2010 Recharge Master Plan Update (RMPU). The SAR HCP DEIR forecast that the only cumulatively considerable impacts to significant biological resources that would occur as a result of SAR HCP implementation would be impacts to the Santa Ana sucker. This is because the mitigation available to protect this species cannot conclusively protect it from being significantly impacted by cumulative diversions from the Santa Ana River.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measures **BIO-1** through **BIO-17** and Mitigation Measure **BIO-22** are necessary to minimize cumulative impacts to the greatest extent feasible.*

To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, the SAR HCP DEIR has determined that potential impacts of water management agencies in the Upper Santa Ana River Watershed and cumulative impacts to covered species and supporting habitat can be mitigated by implementing the HCP, except for one species. As such, due to the cumulative diversions proposed or already occurring within the Chino Basin, the OBMPU would have a potential to contribute cumulatively considerable impacts to the Santa Ana sucker. The SAR HCP DEIR concluded that such impacts should be treated as cumulatively considerable and unavoidably significant given the possibility that the effectiveness of some of the HCP mitigation measures cannot be guaranteed to be successful. As a contributor to this cumulative effect and a Permittee Agency, the Watermaster concurs with this finding.

In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Therefore, these impacts should be quantified and analyzed in a second-tier environmental evaluation.

There are other areas within the overall Project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. These areas are highly dependent upon the final design of each Program facility, i.e., individual project, and if those actions cannot be reasonably or feasibly offset, the ultimate design of these Program improvements must be based on sound engineering. In each case where most environmental impacts cannot be fully avoided, it may be possible to avoid certain impacts by designs that avoid such impacts through sound mitigation-based planning at each step. Given the speculative nature of the locations of proposed OBMPU facilities, there is a potential that an individual OBMPU facility may be developed and have operations within an area containing biological resources that cannot be avoided, even at the design level.

The loss of potentially suitable habitat for special-status species as a result of cumulative development would primarily result from the total conversion of undeveloped land to urban and rural development. This potential conversion by cumulative development is considered a potentially significant impact on special-status species.

Regardless, to mitigate the effects of the cumulative diversions on habitat values and conservation objectives to the greatest extent feasible, regional organizations such as the Santa Ana Watershed Project Authority and San Bernardino Valley Water District—which is the Lead Agency proposing the SAR HCP—have developed local programs and partnerships to address cumulative impacts to habitat within Prado Basin. The Chino Basin Watermaster groundwater management and monitoring efforts include provisions to maintain groundwater levels sufficient to avoid adversely affecting existing habitat that relies on groundwater; this effort will be continued under the OBMPU, and is enforced by Mitigation Measure **BIO-22**, above.

Since the OBMPU would also result in potentially significant impacts on special-status species, the Project's contribution is considered cumulatively considerable, however, for all species identified in **Table 4.3-4**, except the Santa Ana sucker, the OBMPU's contributions to cumulatively

considerable significant impacts under this issue, can be mitigated to a level of less than cumulatively considerable through the implementation of Mitigation Measures **BIO-1** through **BIO-17**. Regardless, impacts to the Santa Ana sucker are forecast to potentially experience an unavoidable cumulatively significant impact based on the findings in the SAR HCP DEIR due to the inability to ensure that all future HCP management measures for SAR will be successful.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.8.2 b) Would the project contribute cumulatively significant contributions to substantial adverse effects on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Implementation of cumulative development within the Chino Basin could result in potential impacts to riparian habitat and special status natural communities. Cumulative development could encroach into areas adjacent to existing drainages and creeks that could contain riparian habitat. In addition, cumulative development could result in potential impacts on riparian habitat. In addition, dry weather flow diversions could contribute to a reduction of surface water reaching the riparian forest in Prado Basin as discussed above.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measures **BIO-1**, **BIO-2**, 2000 OBMP PEIR Mitigation Measures **4.8-1** and **4.8-3**, **BIO-4** through **BIO-9**, and **BIO-11** through **BIO-17** are required to minimize cumulative direct and indirect effects to both critical habitat and riparian habitat or other sensitive natural communities.*

Certain areas within the Chino Basin that contain critical habitat for species may not be fully mitigable, and an unavoidable significant adverse biological resource impact may occur. As the number and type of projects, and the locations thereof, under the OBMPU have not yet been defined in substantial detail it is possible that, even with mitigation (Mitigation Measures **BIO-1**, **BIO-2**, 2000 OBMP PEIR Mitigation Measures **4.8-1** and **4.8-3**, **BIO-4** through **BIO-9**, and **BIO-11** through **BIO-17**), the significant project-specific impacts to critical habitat, riparian habitat or other sensitive natural communities could be substantial enough to contribute cumulatively considerable contributions to significant adverse impacts thereof. Thus, the Project's contribution to cumulative impacts could be considerable and would represent a significant cumulative impact.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.8.3 c) Would the project contribute cumulatively significant contributions to substantial adverse effects on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The conversion of undeveloped areas to cumulative development, within the IEUA service area may increase effects on protected wetland habitats. Cumulative development that encroaches into wetland habitat areas or indirectly impacts wetland habitat through the increase of upstream urban runoff could result in a cumulatively significant impact. Other cumulative impacts may include direct impacts such as the removal or modification of local hydrology, the redirection of

flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas. In addition, diversions could contribute to a reduction of surface water reaching the riparian forest in Prado Basin as discussed above.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Since the development in accordance with the OBMPU could increase impacts on wetland habitats, the Project's contribution to potential impacts on wetland habitat would be cumulatively considerable without the implementation of mitigation. Implementation of Mitigation Measures **BIO-1, BIO-2, 2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and 4.8-6, BIO-4 through BIO-16, BIO-18, and BIO-19** would reduce the future facilities under the OBMPU's contribution to cumulative wetland impacts to less than cumulatively considerable through compensation and implementation of construction and operational best management practices to control stormwater pollutants from exiting a proposed facility site and compliance with regulatory requirements.

Level of Significance After Mitigation: Less than Significant

4.3.8.4 d) Would the project contribute cumulatively significant contributions to interference substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Implementation of cumulative development within the Chino Basin could be located in areas that are currently undeveloped and could contain a wildlife corridor or trees and vegetation that could provide suitable habitat for birds covered under the MBTA. Cumulative development could result in potentially significant cumulative impacts to wildlife corridors and nesting birds. Since development in accordance with the OBMPU could result in potential impacts to wildlife corridors and nesting birds, the Project's contribution to cumulative impacts could be considerable without the implementation of mitigation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

2000 OBMP PEIR Mitigation Measures 4.8-1 and 4.8-3 and 4.8-6 and Mitigation Measures BIO-6, and BIO-20 are required to minimize the cumulative potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

The implementation of Mitigation Measure **BIO-20** would reduce impacts on wildlife nests and movement of fish and wildlife species to less than significant through the avoidance of the nesting

season for construction activities or provision of a construction buffer from active nests. The implementation of 2000 OBMP PEIR Mitigation Measures **4.8-1 and 4.8-3 and 4.8-6, and Mitigation Measure BIO-6** would avoid or minimize impacts to wildlife corridors to less than cumulatively considerable.

Level of Significance After Mitigation: Less than Significant

4.3.8.5 e) Would the project contribute cumulatively significant contributions to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Implementation of cumulative development within the Chino Basin could be located in areas that are currently protected by local policies or ordinances within the cities and counties within which OBMPU projects may be implemented. Therefore, cumulative development could result in potentially significant cumulative impacts on biological resources protected by local policies or ordinances. Since development in accordance with the OBMPU could result in potential impacts to biological resources protected by local policies or ordinances, the Project's contribution to cumulative impacts could be considerable without the implementation of mitigation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measures **BIO-21 and BIO-22** are required to minimize cumulative contributions to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

Implementation of Mitigation Measures **BIO-21 and BIO-22** would reduce the proposed OBMPU's contribution to cumulative biological resources impacts to less than cumulatively considerable through compliance with the local regulations that protect biological resources.

Level of Significance After Mitigation: Less than Significant

4.3.8.6 f) Would the project contribute cumulatively significant contributions to conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Implementation of cumulative development within the Chino Basin could be located in areas with existing and planned HCPs. Therefore, cumulative development within these HCP areas would conflict with the provisions of the HCPs and would represent a potentially significant impact. Since development in accordance with the OBMPU could result in potential impacts to existing HCPs, the Project's contribution to cumulative impacts could be considerable without the implementation of mitigation. Additionally, the OBMPU's contributions to the findings in the SAR HCP DEIR would be cumulatively significant if it was to impede the successful implementation of the Mitigation Measures that were identified to protect covered species, or if it would contribute to a cumulative reduction in flows to the SAR, thereby affecting the Santa Ana sucker and Arroyo Chub.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

*Mitigation Measure **BIO-22** is required to minimize the potential for cumulative conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Co-permittees of the SAR HCP⁸ shall also implement the seven biology mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 3c of Volume 2 to this RDSEIR) where they provide additional support to protect the 22 covered species.*

The implementation of Mitigation Measure **BIO-22** would reduce some contribution to cumulative HCP impacts through either avoidance or compliance with HCP permitted activities. However, as discussed extensively under **Subsection 4.3.8.1**, above, while all potential cumulative impacts to covered species can be reduced to a less than significant cumulative impact, impacts to the Santa Ana sucker would be cumulatively significant. As stated above, the SAR HCP DEIR concluded that cumulative diversions would potentially contribute cumulatively considerable impacts to the Santa Ana sucker, and therefore, impacts thereof would be cumulatively considerable and unavoidably significant. Therefore, based on the discussion above, the Program's contribution under this issue is considered cumulatively considerable, and would result in a significant or cumulatively considerable adverse impact.

Level of Significance After Mitigation: Significant and Unavoidable

4.3.9 Unavoidable Adverse Impacts

Because the specific locations for future OBMPU projects are not presently known, or if known, site-specific investigation has not yet begun because the future Project is at a conceptual level of planning, there is a potential that a future OBMPU facility may be developed in an area containing significant biological resources that cannot be avoided. Though substantial mitigation is provided to minimize impacts under most circumstances for future OBMPU facilities, no feasible mitigation exists to completely avoid impacts to biological resources within the Chino Basin.

A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources. Analysis of site-specific biological resource impacts can only occur and thereby be identified, once a site is defined or in the case of water diversions, once a water diversion project is identified. Thus, the proposed Project is forecast to cause significant unavoidable adverse impacts to biological resources.

⁸ Inland Empire Utilities Agency and West Valley Water District

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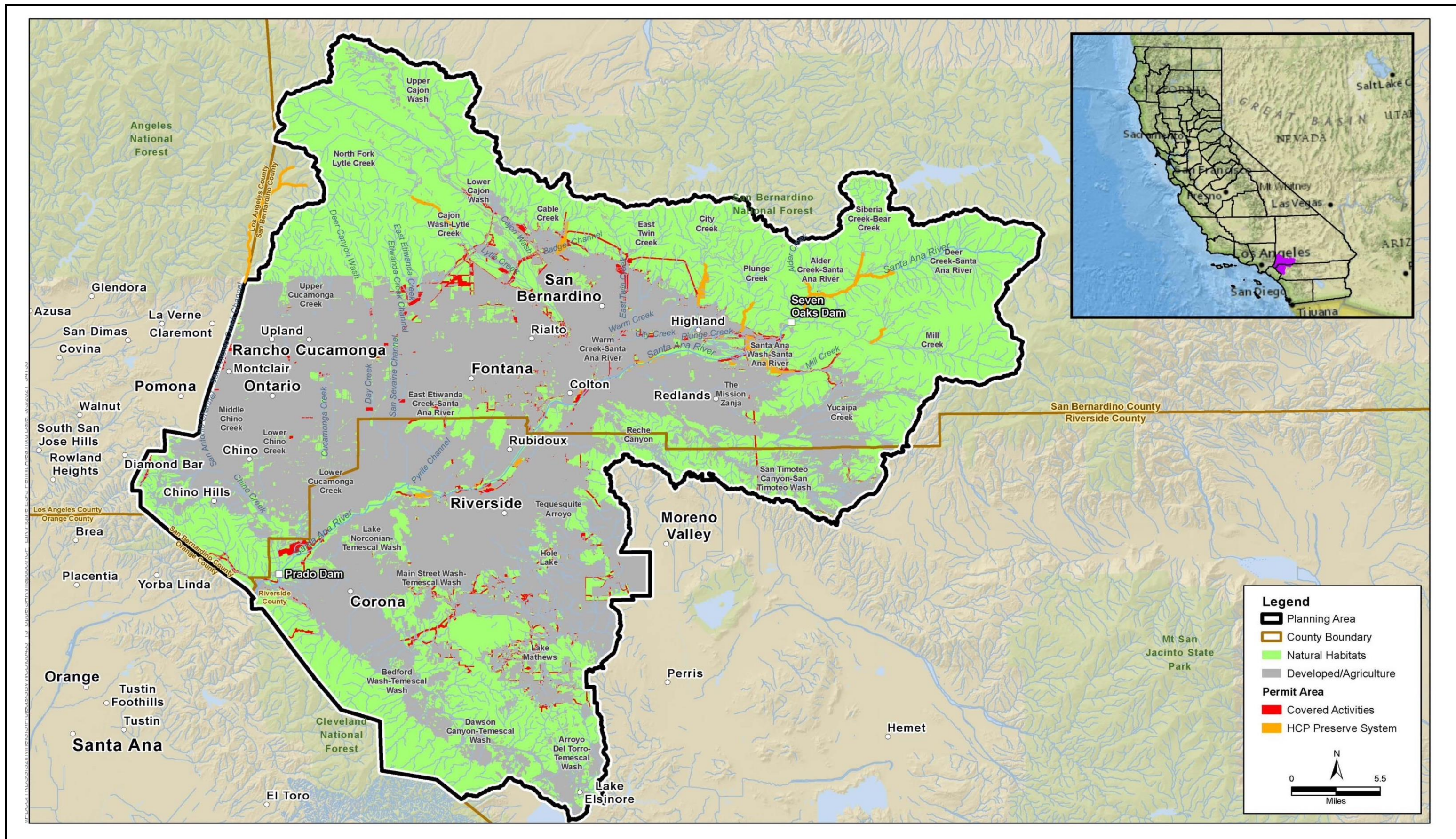


FIGURE 4.3-2

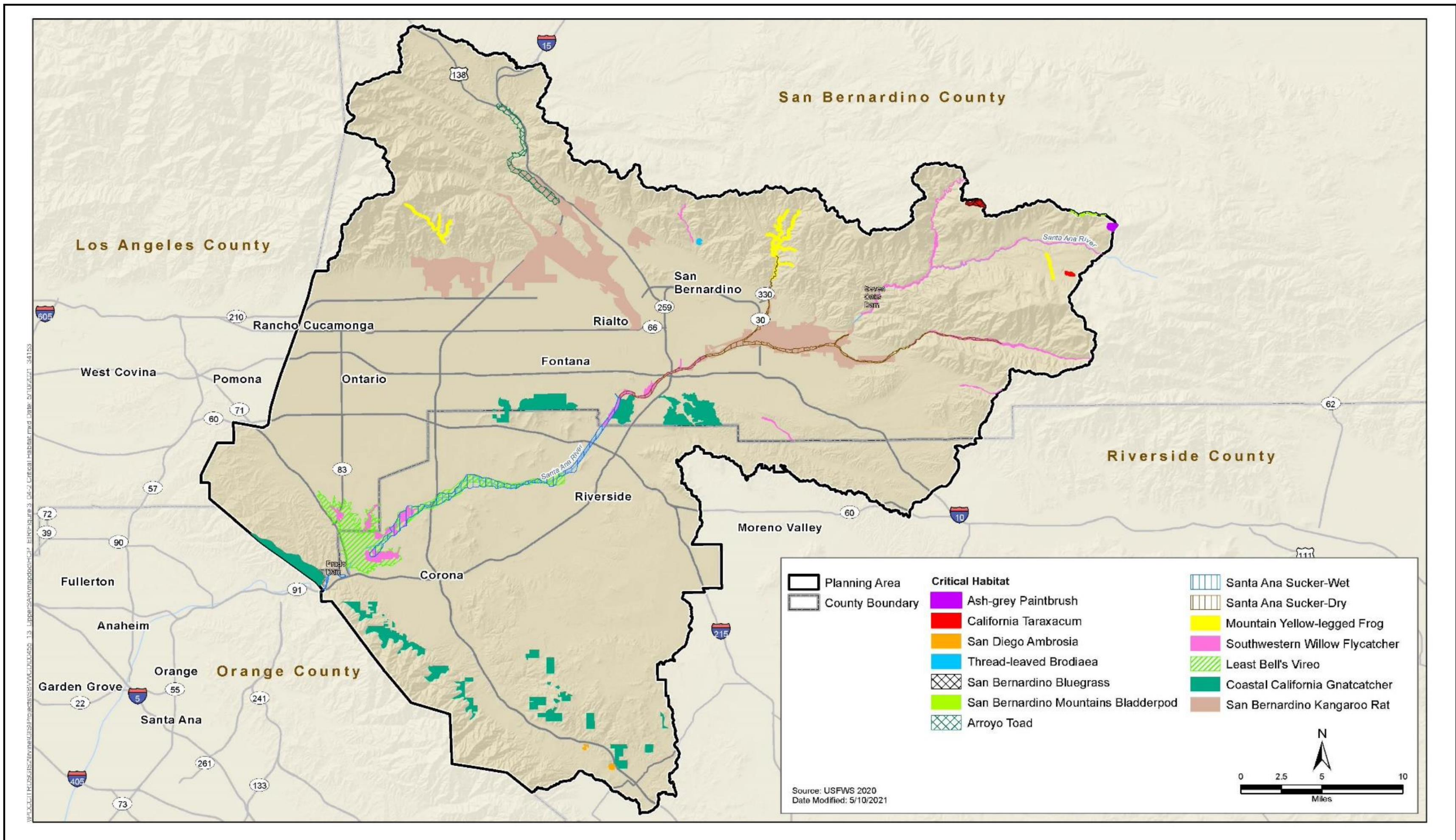


FIGURE 4.3-3

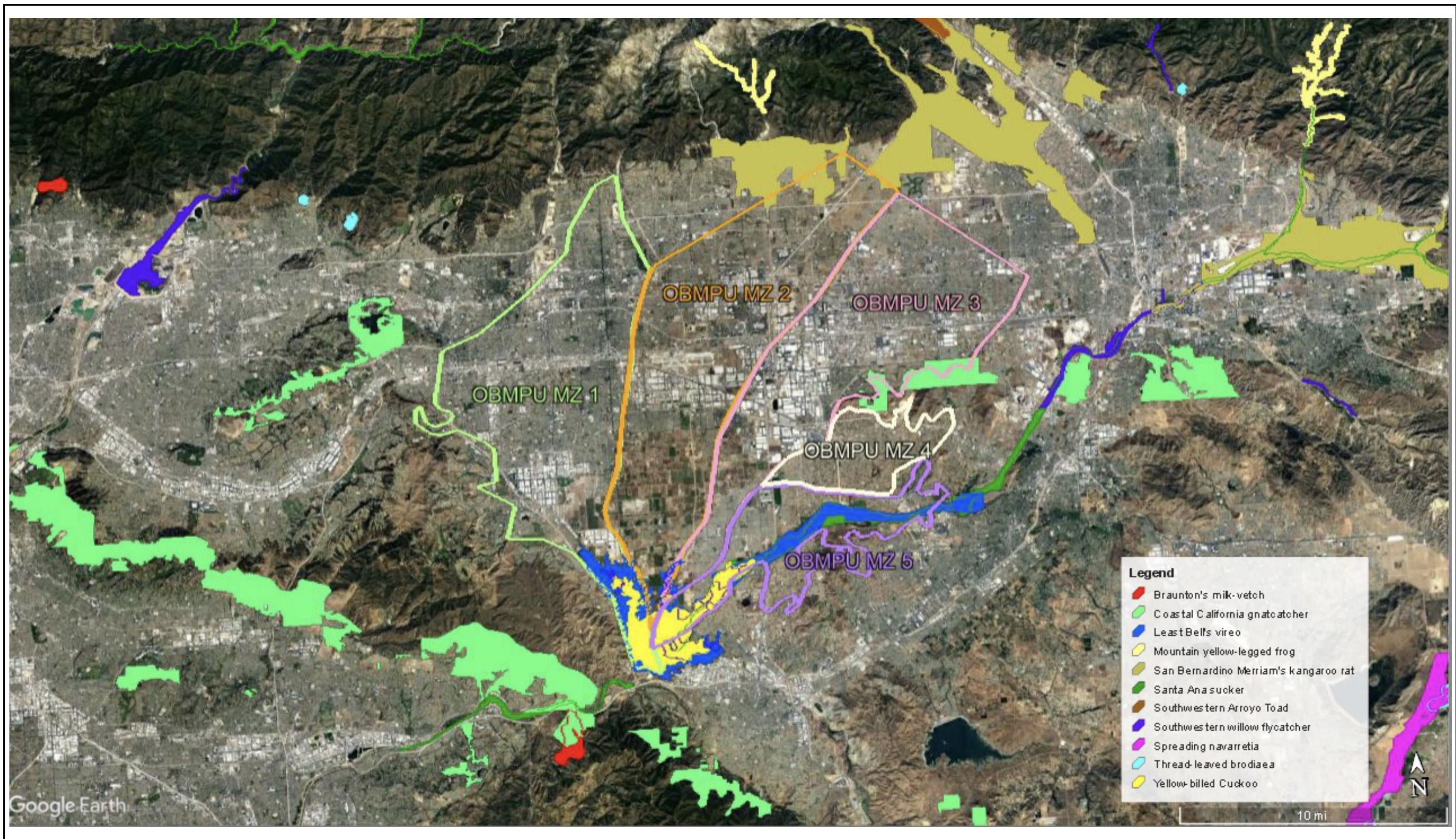


FIGURE 4.3-4

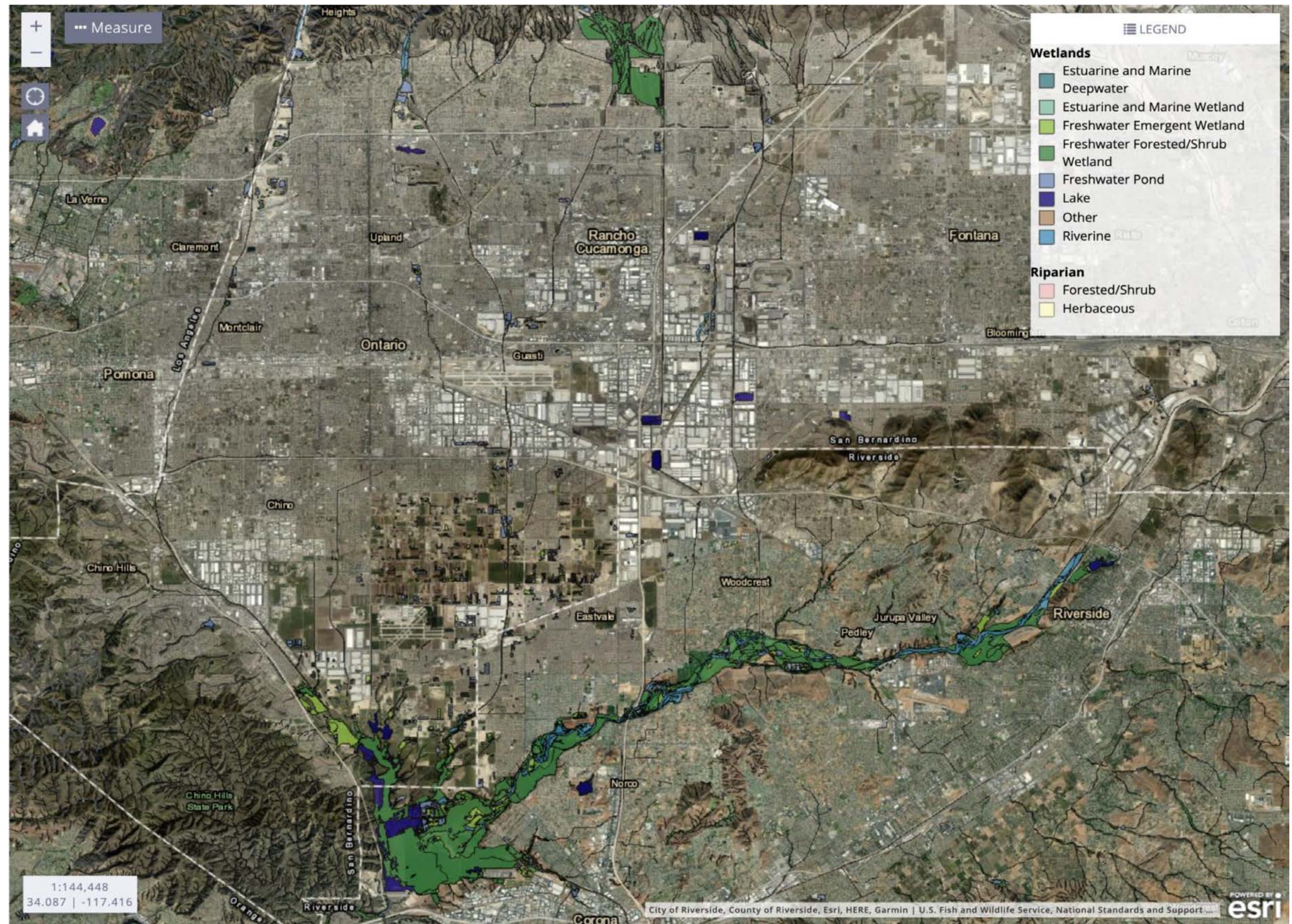


FIGURE 4.3-5

4.4 CULTURAL RESOURCES

4.4.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of cultural resources from implementation of the OBMPU. The following topics address whether the proposed Project would alter or destroy an historic site; cause a substantial adverse change in the significance of a historical resource as defined in California Code of Regulations Section 15064.5; alter or destroy an archaeological site; cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5; or, disturb any human remains, including those interred outside of formal cemeteries; restrict existing religious or sacred uses within the potential impact area. The purpose of the cultural resources evaluation of this RDSEIR is to provide a spatial analysis of previously identified cultural resources and to provide a broad assessment of the potential for as-yet undocumented historical, archaeological, or paleontological resources to be encountered within the Chino Basin Watermaster's OBMPU Planning Area. In this way, the sensitivity for such resources to be encountered in a specific project area can be incorporated into the planning process for future statutory/regulatory compliance considerations.

The analysis contained in the 2000 OBMP PEIR, while still applicable in ways described herein, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated. The thresholds of significance have been updated since the 2000 OBMPU PEIR was certified. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations and current significance thresholds.

"Cultural resource" is primarily a term representing the physical evidence or a place associated with past human activity. Because paleontological resources (fossil remains) can also be exposed through grading, excavation, and other ground-disturbing activities, they are also considered under the cultural resource component for the purpose of this RDSEIR. Cultural resources can be a building, structure, site, landscape, object, or natural feature that can be characterized temporally as prehistoric or historical in origin:

- Prehistoric cultural resources are the result of cultural activities of the ancestors and predecessors of contemporary Native Americans, and often retain traditional and spiritual significance values in them. Examples of prehistoric cultural resources include the archaeological remains of Native American villages and campsites; food processing, lithic resource procurement, or tool-making localities; and human burials and cremations. They may also consist of trails, rock art and geoglyphs, and isolated artifacts.
- Historical cultural resources are any human-made environmental features that contain significance values for human activity during the historic period, from the beginning of European colonization to 50 years before present (B.P.). Examples include buildings, structures, and their remains; roads, irrigation works, and other infrastructure/engineering features; and refuse deposits. They may relate to mission activities, travel and exploration, settlement and homesteading, cattle and sheep herding, mining, agriculture, industrial and commercial development, and urban/suburban expansion, among other themes. In the Chino Basin area, historical cultural resources may date to as early as the Spanish exploration period in the late 18th century.
- Paleontological resources represent the remains of prehistoric plant and animal life, exclusive of any human remains, and include the localities where fossils were collected

as well as the rock formations in which such fossils are found. Common fossil remains include marine shells; bones and teeth of fish, amphibians, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces, another type of paleontological resource, are internal and external molds (impressions) and casts created by these organisms. Because of the infrequency of fossil preservation, they can be considered nonrenewable resources of significance. All vertebrate fossils are considered to be significant, while other kinds of paleontological resources must be evaluated individually for significance depending on their potential scientific value.

Cultural Resource issues will be discussed below as set in the following framework:

- 4.4.1 Introduction
- 4.4.2 Environmental Setting: Cultural Resources
- 4.4.3 Sensitivity Assessment
- 4.4.4 Regulatory Setting
- 4.4.5 Thresholds of Significance
- 4.4.6 Potential Impacts
- 4.4.7 Avoidance, Minimization and Mitigation Measures
- 4.4.8 Unavoidable Adverse Impacts

No comments regarding cultural resources issues were raised at the public scoping meeting or as part of the Notice of Preparation.

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- General Land Office, U.S. Department of the Interior: land survey plat maps, 1850s-1910s; available at U.S. Bureau of Land Management, California Desert District, Moreno Valley.
- Google Earth: historic aerial photograph collection, 1984-2016; available through the Google Earth software.
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- Natural History Museum of Los Angeles County, Vertebrate Paleontology Section: paleontology collection records; available at the museum, Los Angeles.
- San Bernardino County Museum, Division of Earth Sciences: Regional Paleontological Localities Inventory; available at the museum, Redlands.
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The following information has been prepared by CRM TECH with minor edits to fit the focus of this RDSEIR.

4.4.2 Environmental Setting

4.4.2.1 Geology and Paleontology

The defining character of fossils or fossil deposits is their geologic age, which is typically regarded as predating the end of the Pleistocene Epoch (approximately 11,700 B.P.), but even fossils dating to the beginning of the middle Holocene Epoch, or circa 5,000 radiocarbon years B.P., may be considered paleontological resources. Fossil resources generally occur only in areas of sedimentary rock, such as sandstone, siltstone, mudstone, claystone, and shale.

A formation or rock unit has paleontological sensitivity or the potential for scientifically significant paleontological resources if it has previously yielded, or has lithologies conducive to the preservation of, vertebrate fossils and associated or regionally uncommon invertebrate and plant fossils. All sedimentary rocks, except those younger than 5,000 years, are considered to have potential for paleontological resources, as are certain extrusive volcanic rocks and mildly metamorphosed rocks.

Occasionally fossils may be exposed at the surface through the process of natural erosion or because of human disturbances, but they generally lay buried beneath the surficial soils. Thus, the absence of fossils on the surface does not preclude the possibility of their presence in subsurface deposits, while fossil remains exposed at the surface is often a good indication that more could be found subsurface.

Across the planning area, the vast majority of the surface geology is mapped as Young Alluvial Fan Deposits of Holocene to Late Pleistocene (less than 129,000 years B.P.) age, with some Very Old Alluvial Fan Deposits from the Early Pleistocene Epoch (773,000-2.58 million years B.P.). A more detailed discussion of geologic units mapped at the surface within the planning area is presented below.

4.4.2.2 Prehistory/Ethnohistory

The Chino Basin area lies mostly within the traditional territory of the Gabrielino, a Native American group believed to have been the most populous and most powerful ethnic nationality in aboriginal Southern California. Gabrielino territory was centered in the Los Angeles Basin, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The Gabrielino's territorial claim in the Riverside-San Bernardino County portion of the planning area overlapped another prominent Native American group, the Serrano, whose traditional homeland was centered in the San Bernardino Mountains, including the slopes and lowlands on the northern and southern flanks of the mountains and extending eastward as far as present-day Twentynine Palms.

Depending on the natural environment in which they were located, native groups adopted different types of subsistence economy, although they were all based on gathering, hunting, and/or fishing. As a result, ancient occupation sites in valleys and foothills often contain portable mortars and pestles along with large projectile points, suggesting a reliance on fleshy nut foods and, to a lesser extent, large game animals. Sites found in the more arid areas in inland Southern California often contain fragments of flat slab metates and plano-convex scrapers along with numerous projectile points, suggesting a reliance on seed resources, plant pulp, and smaller game animals. Temporary use sites tended to be clustered around bay/estuary environments and intermontane drainages such as the Santa Ana River.

The Gabrielino came into contact with the Spanish as early as 1542, during the expedition of Juan Rodríguez Cabrillo. In the early Spanish period, several Indian villages or rancherías were known to be present amid the foothills and valleys on the southern slopes of the San Gabriel and San Bernardino Mountains. Beginning in 1769, the Spaniards took steps to colonize Gabrielino territory. In the process, most of the Gabrielino people were incorporated into Mission San Gabriel and other missions in Southern California.

Due to their location further inland and mostly at higher elevations, Spanish influence on Serrano lifeways was minimal until the 1810s, when an asistencia affiliated with Mission San Gabriel was

established in present-day Loma Linda, on the southern edge of the Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the San Bernardino Mountains were also moved to the nearby missions.

Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrielino and Serrano populations dwindled rapidly. By 1900, the Gabrielino had almost ceased to exist as a culturally identifiable group, according to the leading ethnohistoric accounts. The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations. In modern times, there has been a renaissance of Native American activism and cultural revitalization among the Gabrielino and the Serrano. Tribal members today are keenly aware of archaeological sites and places of special cultural significance and maintain a high level of interest in how these sites are affected and managed.

4.4.2.3 History

In the early and mid-1770s, Francisco Garcés's exploration and the subsequent Juan Bautista de Anza expedition marked the first times when Europeans set foot in the Chino Basin area. Despite these early visits, for the next 40 years the Inland Empire region received little impact from the Spanish colonization activities in Alta California, which were concentrated mainly along the coastline. Following the establishment of Mission San Gabriel in 1771, the area became nominally a part of the vast landholdings of that mission.

After gaining independence from Spain in 1821, the Mexican government began to dismantle the mission system through the process of secularization, whereby former mission landholdings throughout Alta California were divided and granted to prominent citizens in the territory. Between 1838 and 1846, several large private ranchos were created in and around the Chino Basin, including Santa Ana del Chino, Cucamonga, Jurupa, La Sierra (Sepulveda), La Sierra (Yorba), El Rincon, and San José.

During the 1830s-1850s, the grantees and subsequent owners of some of these ranchos became the first non-natives to settle in or near the planning area. Among them were Ygnacio Palomares and Ricardo Vejar in present-day Pomona, Tiburcio Tapia in Rancho Cucamonga, Juan Bandini in Norco-Eastvale, Raimundo Yorba in the Prado Basin, and Isaac Williams in Chino. As elsewhere in Southern California during the Rancho Period, cattle raising was the most prevalent economic activity on these ranchos until the influx of American settlers eventually brought an end to this now-romanticized lifestyle during the second half of the 19th century.

In the 1880s, spurred by the completion of the competing Southern Pacific and Santa Fe railways, a land boom swept through much of Southern California. A large number of towns, surrounded by irrigated agricultural land, were laid out in the inland valleys before the end of the 19th century, including many in the planning area. For the rest of the 19th century and much of the 20th, the inland region remained rural in character, with agriculture as its main livelihood. After the successful introduction of the navel orange in the mid-1870s, the Chino Basin area became an important part of Southern California's prosperous citrus industry.

As the area was gradually settled and developed, the different communities acquired distinctive economic and social characteristics. For example, Chino became known as the dairy capital of Southern California, the present-day Rancho Cucamonga area established an identity through vineyard cultivation and winemaking, while Fontana earned a distinction for poultry, hog, and rabbit raising. Nevertheless, as in other parts of the Inland Empire, citrus cultivation remained

the most important agricultural pursuit in the Chino Basin through the rest of the historic period. In 1888 and 1891, respectively, Pomona and Ontario became the first incorporated cities in the planning area.

By the mid-20th century, the forces of industrialization and urbanization began to alter the cultural landscape in the area, a change particularly well-illustrated by the establishment of the Kaiser Steel Mill in Fontana in the early 1940s. After the end of the Second World War, rapid urban expansion in the Los Angeles Basin spurred an exodus of displaced dairy farmers to the southern portion of the planning area, which contributed greatly to the establishment of milk as the leading agricultural product in both San Bernardino and Riverside Counties. In recognition of the importance of its agricultural economy, the County of San Bernardino officially designated this dairy-dominated area as an agricultural preserve.

Starting in the 1990s, however, the Chino Basin agricultural preserve was incrementally dismantled, losing the majority of its dairies and other agricultural enterprises to the ever-increasing demand for new housing. As elsewhere in Southern California, residential and associated commercial developments have now assumed a dominant role in regional growth. As a result, the cities and communities in the planning area have essentially merged into one metropolitan area over the past few decades.

4.4.3 Sensitivity Assessment

4.4.3.1 Historical/Archaeological Resources

As a part of the cultural resource investigations for the DEIR, existing records at the appropriate repositories were consulted to identify relative concentrations of known cultural resources within the planning area. Known cultural resources are those that have been previously identified through inclusion in one or more of the following inventories: National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, California Points of Historic Interest, California Historical Resources Inventory, and the various local registers.

For the planning area, this information is maintained at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC) of the California Historical Resources Information System. Located on the campuses of California State University, Fullerton, and University of California, Riverside, SCCIC and EIC are the official cultural resource records repositories for the Counties of Los Angeles and San Bernardino and for the County of Riverside, respectively.

Records searches at SCCIC and EIC indicate that roughly half of the planning area has been surveyed in the past for cultural resources and that most of these studies were concentrated in areas where urban/suburban development activities accelerated after environmental regulations were implemented in the 1970s or along major transportation corridors and other linear features of infrastructure, such as power transmission lines.

As a result of these studies, approximately 60 sites and 40 isolates—localities with fewer than three artifacts—of prehistoric origin have been reported to SCCIC and EIC, along with several hundred built-environment features, archaeological sites, and isolates of historical origin. Representing the cumulative findings of the past studies, the spatial distribution of these known cultural resources provides some insight for assessing the potential for similar resources to be present in the vicinity and helps identify areas of heightened sensitivity.

4.4.3.1.1 Prehistoric Archaeological Resources

The records search results show that the almost all of the prehistoric sites and isolates previously identified within the planning area occur in relatively concentrated clusters near sheltered areas near the base of hills or on elevated terraces, hills, and finger ridges near reliable sources of water. This distribution pattern is corroborated by the ethnographic literature that identifies such settings as the preferred settlement environment among Native Americans of the Inland Empire region. The presence of these known prehistoric sites and isolates suggest a heightened probability for similar cultural remains to be encountered in subsurface deposits at these locations. Areas that have not been surveyed, but where sites can be reasonably expected to be found typically include those on terraces or in foothills overlooking any streams or springs. Within the planning area, the areas of heightened sensitivity includes the relatively undeveloped areas along the bases of the San Gabriel, San Bernardino, and Jurupa mountains and the Chino Hills near the Prado Basin, in the upper reaches of the mountain creeks (such as San Antonio Creek, Cucamonga/Day Creek, and San Sevaine Creek), and along the Santa Ana River.

The level, unprotected valley floor of the Chino Basin was likely used mainly for resource procurement, travel, and occasional camping during these activities. Without any reliable water sources within easy reach, most of the valley floor would not have offered a favorable setting for long-term settlement in prehistoric times. Furthermore, these areas have been subject to extensive and sometimes repeated development activities over the past 150 years, especially since the mid-20th century, and the ground surface has been heavily disturbed, thus reducing the sensitivity for subsurface cultural remains from the prehistoric period.

In summary, the geomorphologic setting and the extent of past ground disturbances suggest that most of the valley floor at lower elevations in the planning area is unlikely to contain potentially significant archaeological deposits of prehistoric origin. Existing archaeological records at SCCIC and EIC appear to support this overall sensitivity assessment.

4.4.3.1.2 Historic-Period Archaeological Resources and Built-Environment Features

Records at SCCIC and EIC demonstrate that throughout the planning area there is significant potential for encountering historic-period cultural resources dating at least to the late 19th century, and in some cases as early as the 1830s. Not surprisingly, known historic-period sites are noticeably concentrated around early settlements, such as the downtown areas of the various communities, and along major transportation routes. The distribution complements the demonstrated pattern of development over the past 200 years, as demonstrated by the shifting land uses discussed above and by historical maps and aerial photographs of the Chino Basin area.

The older urban cores of the communities in the planning area, therefore, generally demonstrate higher levels of sensitivity than large tracts of formerly rural land used in agriculture and dairy production, such as those being increasingly developed into suburban residential neighborhoods, warehouse complexes, and shopping centers in recent decades. Common sites to be expected include essentially all types of buildings and structures from the late 19th and to the mid-20th centuries, structural remains, historic landscapes, refuse deposits, irrigation works, and other infrastructure features such as power transmission lines, roads, and railroads.

While most of the roads in the older neighborhoods are now more than 50 years old, typically they are unlikely to be considered historically significant due to the lack of integrity resulting from modern upgrading and maintenance. Some of the roads, however, deserve special attention in this respect in light of their unique historic association and design character, such as Euclid

Avenue, Foothill Boulevard (formerly U.S. Route 66), Valley Boulevard (formerly U.S. Route 70/99), Mission Boulevard (formerly U.S. Route 60), and Baseline Road/Avenue, which is notable more as the physical representation of the San Bernardino Baseline than for the road itself.

4.4.3.2 Paleontological Resources

A recent map showing the surface geology in the planning area is presented in **Figure 4.4-1**. On the map, the bright, multi-colored areas to the north, west, and southeast represent the nearby mountains and hills. The geologic formations in those areas generally consist of granitic and other intrusive crystalline rocks of all ages or Cretaceous and Pre-Cretaceous metamorphic formations of sedimentary and volcanic origin, which have a low sensitivity of containing paleontological resources. The dark brown areas in the planning areas (**Figure 4.4-1**) indicate the presence of artificial fill soil on the surface, which also has a low sensitivity for paleontological resources. Additionally, sediments within the Santa Ana River channel and its flood plain, consisting of young and very young wash deposits, are very low in sensitivity. Any paleontological resources that may be found in these sediments would have been transported from some other location and, as such, would not have any contextual integrity.

The vast majority of the planning area is covered by Young Alluvial Fan Deposits (the grayish *Qyf3* and *Qyf3a* and the yellowish *Qyf1*, *Qyf4*, *Qyf5*, *Qf*, and *Qf2* in **Figure 4.4-1**) and Young aeolian deposits (the greenish-yellow *Qye*). The aeolian, or wind-blown, deposits are not likely to contain any significant paleontological resources. The Young Alluvial Fan Deposits may date from the Late Pleistocene to the Early Holocene. The younger, Holocene sediments (less than 11,700 years old) in this geologic unit are generally present on the surface, and are not old enough to contain significant paleontological resources. The thickness of this Holocene alluvium is expected to vary significantly in different parts of the planning area, and older, paleontologically sensitive Pleistocene alluvium may underly these younger surficial sediments. Excavations in these soils, therefore, may reach the paleontologically sensitive soils below the recent alluvium and impact significant paleontological resources.

There are a few small areas in the planning area where Very Old Alluvial Fan Deposits, dating to the Early Pleistocene Epoch, are present on the surface. These sediments typically have a high potential to contain nonrenewable paleontological resources and are considered to be highly sensitive for paleontological resources. Similar deposits elsewhere in Southern California have yielded scientifically significant fossils of plants and animals from the Pleistocene Epoch, including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison. Consequently, the potential of finding vertebrate fossils where Pleistocene-age alluvial sediments are encountered is moderate to high. Based on the mapped surface geology and/or previous fossil finds, conditions favorable for fossil preservation occur within the planning area at the following five locations:

- A small area near the Rancho Cucamonga Creek, north of Foothill Boulevard (*Qvof₁*).
- Close to the Santa Ana River, southwest of Van Buren Boulevard and the Jurupa Mountains (*Qoa_a*, *Qof*, *Qof_{1a}*, *Qvoa_a*, *Qvo_{3a}*, and *Qvof_a*).
- Non-igneous portions of the Jurupa Mountains, specifically two areas on the north side (*Qvof₁* and *Qvof₃*).
- In Chino Hills, north of Chino Hills Parkway and west of State Route 71 (*Qvof_a*).
- Areas in and around the Prado Basin, generally east of State Route 71, west of Hellman Avenue, north of the Santa Ana River, and south of Merrill Avenue. This large area of older alluvium from the Pleistocene Epoch (*Qvof_a*, *Qvo_a*, and *Qvof*) is assigned high paleontological sensitivity beginning at the surface, particularly on the terraces adjacent

to the Prado Dam and the non-ponded areas behind the dam. During previous studies, the Natural History Museum of Los Angeles County (NHMLAC) and the San Bernardino County Museum (SBCM) identified a fossil vertebrate locality from sediment lithologies similar to those that may occur as subsurface deposits at this location. Both museums consider the Prado Dam area to be of high paleontological sensitivity.

4.4.4 Regulatory Setting

The cultural resources component of this RDSEIR is prepared to address planned water supply, wastewater treatment, and recycled water management activities in the Chino Basin, including construction of new facilities and associated structures, modification to existing facilities, pipeline installation, and other earth-moving operations. The location of potential projects range between well-defined to relatively uncertain at this time, but the various components will occur in commercial, industrial, and residential areas in the communities within the planning area.

Activities requiring excavation or movement of soil material at any location within the planning area have potential to adversely affect cultural resources. In most cases, however, pipelines will be installed along existing roadways and public rights-of-way where development has already occurred, thus the chances of uncovering previously unidentified cultural resources are diminished. During desalter, well, and basin construction, the chances of encountering cultural resources are greater than along existing roadways, but the actual potential of discovery at each location is substantially different and highly site-specific.

The impact assessment presented below focuses on physical changes to the landscape at a project site and any potential adverse impacts these changes may have on any historical, archeological, or paleontological resources that exist at the site. For purposes of the impacts, it is assumed that all projects will be approved and implemented as proposed and described in the Project Description in this document.

4.4.4.1 Federal

National Historic Preservation Act

Cultural resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 300101 et seq.), and the implementing regulations, Protection of Historic Properties (36 Code of Federal Regulations [CFR] Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an “undertaking” (e.g., issuing a federal permit), the NHPA (54 U.S.C. 306108) requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). Under the NHPA, properties of traditional religious and cultural importance to a Tribe are eligible for inclusion in the NRHP (54 U.S.C. 302706). Also, under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

National Register of Historic Places

The National Register of Historic Places (National Register) was established by the NHPA of 1966, as “an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment” (Code of Federal Regulations

[CFR] 36 Section 60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, State, and local levels. In the context of the Project, which does not involve any historical-period structures, the following National Register criteria are given as the basis for evaluating archaeological resources.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance” (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

4.4.4.2 State

The State implements the NHPA through its Statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a Statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State’s jurisdictions.

California Register of Historical Resources

The California Register of Historical Resources (California Register) is “an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change.” (California Public Resources Code § 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (California Public Resources Code § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated with the lives of persons important in our past;

- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

(California Public Resources Code § 5024.1[c].)

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Individual historical resources.
- Historical resources contributing to the significance of an historic district under criteria adopted by the commission.
- Historical resources identified as significant in historical resources surveys, if the survey meets the criteria listed in subdivision (g).
- Historical resources and historic districts designated or listed as city or county landmarks or historic properties or districts pursuant to any city or county ordinance, if the criteria for designation or listing under the ordinance have been determined by the office to be consistent with California Register criteria adopted by the commission.
- Local landmarks or historic properties designated under any municipal or county ordinance.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have Statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the county Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the State or within a large geographic region (Northern, Central, or Southern California);

- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

Under CEQA (Public Resources Code [PRC] Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. State CEQA Guidelines Section 15064.5(a) defines a historical resource as: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

As described by PRC Section 21084.1 and Section 15064.5 of the State CEQA Guidelines, should a project cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (State CEQA Guidelines Sections 15064.5(b)(1) and 15064.5(b)(4)).

Archaeological resources are defined in CEQA Section 21083.2, which states that a “unique” archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Unique archaeological resources as defined in Section 21083.2 may require reasonable efforts to preserve resources in place (Section 21083.2(b)). If preservation in place is not feasible, mitigation measures shall be required. Additionally, the State CEQA Guidelines state that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA Guidelines Section 15064.5(c)(4)).

California Health and Safety Code Section 7050.5, 7051, and 7054

California Health and Safety Code Section 7050.5 requires, in the event human remains are discovered, that all ground disturbances must cease and the County Coroner must be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin by the Coroner, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction. Health and Safety Code Section 7051 provides criminal penalties for any person that removes human remains without authority, and Section 7054 establishes that interring human remains except as provided is a misdemeanor.

California Public Resources Code Section 5097.98 and 15064.5(e)

Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Paleontological Resources

Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

4.4.4.3 Local

The Chino Basin area encompasses unincorporated county land (San Bernardino County and Riverside County) and nine incorporated cities (Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland). Each of these jurisdictions has its own independent General Plan and municipal code that pertain to cultural resources. Future projects under this RDSEIR will be analyzed at the program-level to assess the applicability of all local general plan and municipal code policies.

4.4.5 Thresholds of Significance

4.4.5.1 Historic and Archaeological Resources

The California Environmental Quality Act (CEQA) establishes that a project that may cause a substantial adverse change in the significance of a “historical resource” or a “tribal cultural resource” is a project that may have a significant effect on the environment (PRC §21084.1-2). Similarly, Appendix G to the CEQA Guidelines (Title 14 CCR App. G, Sec. V(c)) require that public agencies in the State of California determine whether a proposed project would “directly or indirectly destroy a unique paleontological resource” during the environmental review process.

According to PRC §5020.1(j), “historical resource” includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.” More specifically, CEQA guidelines state that the term “historical resources” applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (Title 14 CCR §15064.5(a)(1)-(3)).

Regarding the proper criteria of historical significance, the CEQA Guidelines mandate that “a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources” (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

4.4.5.2 Significance Thresholds

The thresholds analyzed in this section are derived from Appendix G of the CEQA Guidelines, and are used to determine the level of potential effect. The significance determination is based on the recommended criteria set forth in Section 15064.5 of the CEQA Guidelines. For analysis purposes, implementation of the OBMPU would have a significant effect on cultural resources if it is determined that the project would:

- a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5.?
- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5.?
- c) Disturb any human remains, including those interred outside of formal cemeteries?

Additionally, this section further analyzes significance threshold d) from the CEQA Guidelines related to Geology and Soils. Geology and Soils impacts were discussed in the Initial Study—provided as **Subchapter 8.2** of this document—and the significance determinations have not changed for this RDSEIR. For analysis purposes, implementation of the OBMPU would have a significant effect on paleontological resources if the Project would:

- d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

4.4.6 Potential Impacts

Based on the sensitivity assessment presented in the sections above, implementation of specific projects in the planning area could encounter historical resources and cause a significant impact on them. All future OBMPU projects that may impact historical resources in the planning area shall be subject to focused studies that cover the entire area of potential effects for each project, including any significant indirect effects.

Cultural resources are highly specific to location. Because the location for many OBMPU projects is unknown at this time, or if known, site-specific investigation has not yet begun because the proposed project is at a conceptual level of planning, the cultural resources evaluation focuses on the level of sensitivity for different areas of the Chino Basin. Cultural resources apply to prehistoric or archaeological materials and historical resources. Under these two broad categories the analysis below presents the types of impacts that can result from OBMPU implementation, not site-specific impacts. As dictated by the findings above, multiple phases of studies may be necessary to properly identify and evaluate potential cultural resources, mitigate project effects on any significant resources, and protect buried resources against inadvertent disturbances. Without these protections, a significant impact to historical and other cultural resources could occur. Thus, this is a prospective impact forecast because the specific location of facilities is at present unknown and analysis of site-specific cultural resource impacts can only occur once a site is identified (CEQA Guidelines §§15144, 15145).

Each PE category and the corresponding facilities for each PE were analyzed under each threshold to determine the types of impacts that can result from OBMPU implementation.

4.4.6.1 a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in 15064.5.?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Since the proposed Project is at the programmatic level, specific locations for the proposed wells have not been have yet to be determined. As such, impacts to specific historical resources are speculative. A site may be selected that contains previously unknown and unrecorded historical resources either above ground, or those that may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique aboveground or buried historical resources are discovered or uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant historical resources, a specific project could be designed such that a significant impact to unknown historical resources could occur.

Therefore, projects under Project Category 1 could have significant impacts under the abovementioned thresholds.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as Project Category 1. This is because, similar to well development, specific locations for the proposed conveyance and ancillary facilities have not been have yet to be determined. As such, impacts to specific historical resources are speculative. Previously unknown and unrecorded historical resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried historical resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant historical resources, a specific project could be designed such that a significant impact to unknown historical resources could occur.

Therefore, projects under Project Category 2 could have significant impacts under the abovementioned thresholds.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts related to the installation of Storage Basins and Recharge facilities would be the same as Project Category 1 and 2. This is because, similar to well development, specific locations for the proposed flood MAR facilities and MS4 compliance facilities have not been have yet to be determined. Additionally, the modifications to the known storage basin sites have not yet been defined in enough detail to determine the level of impact development of such facilities may have on historic resources. As such, impacts to specific historical resources are speculative. Previously unknown and unrecorded historical resources may be unearthed during excavation and grading

activities for individual projects. If previously unknown potentially unique buried historical resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant historical resources, a specific project could be designed such that a significant impact to unknown historical resources could occur.

The proposed expansion of the safe storage capacity in support of the OBMPU Project would not result in any visible above ground impacts beyond those infrastructure facilities associated with OBMPU implementation outlined under Project Categories 1 and 2 as previously described. As such, no historical or archaeological resources would be impacted by implementing the proposed increase in safe storage capacity.

Therefore, projects under Project Category 3 could have significant impacts under the abovementioned thresholds.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this RDSEIR.

Impacts would be the same as Project Categories 1 through 3. This is because, similar to well development, specific locations for the proposed AWPf, groundwater treatment at or near well sites and new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities have not been have yet to be determined. Additionally, similar to the storage basin development, the modifications to the WFA Agua de Lejos Treatment Plant and Chino Desalters have not yet been defined in enough detail to determine the level of impact development at such facilities may have on historic resources. As such, impacts to specific historical resources are speculative. Previously unknown and unrecorded historical resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique historical resources are uncovered during excavation or construction, significant impacts could occur.

Therefore, projects under Project Category 4 could have significant impacts under the abovementioned thresholds.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation must be implemented to avoid a significant impact to historical resources as a result of site selection that could result in substantial deterioration of the historical integrity of a historical resource.

In the 2000 OBMP PEIR identified one mitigation measure to minimize impacts to historical resources, Mitigation Measure **4.14-6**. This mitigation measure was intended to provide options for minimizing impacts to historical resources through actions such as surveys, funding historical neighborhood revitalization, developing programs for enhancing public appreciation of historical resources, and redesigning the project to avoid impacting historical resources. This mitigation measure is repeated below, as it remains a viable means by which to protect and preserve historical resources that might be impacted by implementation of future projects under the OBMPU.

4.14-6 *Based solely upon this level of investigation and at this stage of project planning, it would be premature to propose specific mitigation measures. However, certain options can be presented presupposing a general level of knowledge regarding impacts. These options can be utilized to avoid impacts upon the cultural resources - the preferred result - or to lessen adverse effects. It should be emphasized that these options are not the only ones that may be applied. As such, these measures are not recommended as conditions of Project approval but are included for the Authority's consideration and implementation as appropriate.*

- a. Conduct a comprehensive historic building survey which is integrated with economic development programs;*
- b. Adopt a preservation ordinance and create a preservation board;*
- c. Ensure other planning programs, plans, and ordinances are compatible to the historic preservation goals and policies;*
- d. Direct existing funding sources and loan programs to historic neighborhoods in need of revitalization;*
- e. Provide incentives and direction encouraging preservation and revitalization; and*
- f. Develop ongoing programs for enhancing public appreciation of historic resources.*
- g. Project Redesign*

A proposed project may be redesigned in either of two ways:

- (1) Outside of site boundaries, thus avoiding impact to the site; or*
- (2) Restricting impacts to those areas of a site where previous impacts have already destroyed the integrity and research potential.*

Other options may also apply and may include capping of the site, relocation of structures, and integration of extant buildings into project design.

Where a future OBMPU project is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow-on cultural resources report (Phase I Cultural Resources Investigation). However, mitigation below addresses the requirement that future OBMPU projects within existing facilities that have been totally disturbed and that require State funding must complete a Phase I Cultural Resources Investigation because the State requires such studies to be completed in order to be eligible for State funding.

CUL-1: *Cultural Mitigation Level 1. Where a future discretionary project requiring additional CEQA review is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow on cultural resources report (Phase I Cultural Resources Investigation) unless the Implementing Agency is seeking State funding, in which case the Implementing Agency must prepare a Phase I Cultural Resources Investigation to satisfy State CEQA-plus requirements.*

Where a Phase I Cultural Resources Investigation is not required, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:

- Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. An archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.***

Mitigation Measure **CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, unless the Implementing Agency is seeking State funding for the project. This is because highly disturbed sites would no longer contain any historical resources of any value due to past disturbances of any such resources. Furthermore, Mitigation Measure **CUL-1** would require the Implementing Agency to adhere to procedures pertaining treatment of historical and other cultural resources that may be accidentally discovered during earthmoving activities.

Future OBMPU Projects that are located within undisturbed areas, regardless of whether the Implementing Agency intends to seek State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. Further mitigation measures are provided below that address the potential for multiple phases of studies that may be necessary to properly identify and evaluate potential cultural resources for a given OBMPU Project.

CUL-2: Cultural Mitigation Level 2. Where a future discretionary project requiring additional CEQA review is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, the agency implementing the OBMPU project shall complete an appropriate cultural resources report(s) (Phase I, II, III, and/or IV Cultural Resources Investigation) regardless of whether the Implementing Agency is seeking State funding.

Where a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given OBMPU project:

1. Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate:

- Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet;***
- Historical background research, geoarchaeological profile analysis, and paleontological literature review;***
- Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups;***
- Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions;***
- Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases.***

2. Phase II (Evaluation): If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in

accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:

- Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals;*
- In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation;*
- Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples;*
- Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted.*

3. Phase III (Mitigation): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:

- Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation;*
- Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public;*
- Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question.*

4. Phase IV (Monitoring): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate, as put forth in MMS TCR-1 through TCR-3.

Mitigation Measure **CUL-2** would ensure that future OBMPU Projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. This mitigation measure includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation

is provided in the event that significant cultural resources are located within a given OBMPU Project site.

Mitigation Measure **CUL-3** would ensure that, after each phase of the studies required by mitigation measure **CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information in the OBMPU Project area.

CUL-3: Cultural Report Submission to Information Centers. *After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared by the Implementing Agency and submitted to South Central Coastal Information Center (SCCIC), Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM), as appropriate and in addition to the Implementing Agency for the project, for permanent documentation and easy references by future researchers.*

In light of the probability for the involvement of federal funding or permits, it is anticipated that many future projects will require consultation with—and concurrence from—the California State Historic Preservation Officer (SHPO) regarding the adequacy of research procedures implemented during project-specific cultural resources studies and the appropriateness of the findings and conclusions under Section 106 of the National Historic Preservation Act. Given the extended timeframe of OBMPU implementation and the large number of projects it will entail, the local agencies participating in the OBMPU will, through mitigation provided below, collectively establish a programmatic agreement with SHPO to stipulate a set of mutually accepted guidelines on research procedures and the types of potential cultural resources that may be excluded from further consideration before OBMPU Projects are implemented.

It can be anticipated that projects proposed under OBMPU may involve modifications to or may otherwise encounter common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. The aforementioned programmatic agreement would outline the proper treatment of such properties in future project-specific studies, which will greatly streamline the design and completion of such studies, facilitate the SHPO review process, and minimize potential project delays.

CUL-4: Early SHPO Consultation. *Prior to commencement of construction of OBMPU related facilities, the Watermaster and IEUA shall confer with the Watermaster and Watermaster Stakeholders to establish a programmatic agreement with SHPO that will stipulate a set of mutually accepted guidelines that address research procedures and the types of potential cultural resources that may be excluded from further consideration before OBMPU projects are implemented, such as common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Once this agreement has been made with SHPO, Watermaster shall retain the agreement in the Project file, and shall ensure that all Stakeholders are given copies of the agreement for reference on future OBMPU projects. For OBMPU projects that are in development prior to an*

agreement with SHPO, all types of cultural resources shall be considered by the professionals assessing historical resources within the project footprint; regardless, the steps provided in MM CUL-2 shall be followed to assess and minimize impacts to sensitive cultural resources within a given site.

Finally, Mitigation Measure **CUL-4** would set a precedent for future OBMPU Projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. This precedent would stipulate beforehand a set of mutually accepted guidelines on research procedures and the types of potential cultural resources that may be excluded from further consideration. This programmatic agreement would ease future collaborations with SHPO for OBMPU Projects, thereby ensuring resources are properly treated and ensuring efficiency for future development.

The net result of the implementation of Mitigation Measures **4.14-6** and **CUL-1** through **CUL-4**, is that a finding of less than significant adverse impact to cultural resources is appropriate.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As the Chino Basin area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains many historical resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resources resource sites, thereby resulting in a significant cumulative impact to cultural resources.

The potential construction impacts of the OBMPU, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact specific to historical, archaeological, and paleontological resources. Therefore, the project's cumulative effects to specific historical resources would be cumulatively considerable and cumulative impacts would be potentially significant.

Mitigation Measures:

Implementation of Mitigation Measures **4.14-6** and **CUL-1** through **CUL-4** would, as discussed above, minimize OBMPU contributions to cumulative historical resource impacts to a level of less than significant and therefore, through the implementation of Mitigation Measures **4.14-6** and **CUL-1** through **CUL-4**, the OBMPU's contribution to cumulative historical resource impacts would be less than cumulatively considerable.

Level of Significance After Mitigation: Less Than Significant

4.4.6.2 b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5.?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and

groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Since the proposed Project is at the programmatic level, specific locations for the proposed wells have not been have yet to be determined. As such, impacts to specific archaeological resources are speculative. Previously unknown and unrecorded archaeological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for archaeological resources, a specific project could be installed such that a significant impact to unknown archaeological resources could occur.

Therefore, projects under Project Category 1 could have significant impacts under the abovementioned thresholds.

Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as Project Category 1. This is because, similar to well development, specific locations for the proposed conveyance and ancillary facilities have not been have yet to be determined. As such, impacts to specific archaeological resources are speculative. Previously unknown and unrecorded archaeological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological or paleontological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for archaeological resources, a specific project could be installed such that a significant impact to unknown archaeological resources could occur.

Therefore, projects under Project Category 2 could have significant impacts under the abovementioned thresholds.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts related to the installation of Storage Basins and Recharge facilities would be the same as Project Category 1 and 2. This is because, similar to well development, specific locations for the proposed flood MAR facilities and MS4 compliance facilities have not been have yet to be determined. Additionally, the modifications to the known storage basin sites have not yet been defined in enough detail to determine the level of impact development of such facilities may have on archaeological resources. As such, impacts to specific archaeological resources are speculative. Previously unknown and unrecorded archaeological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for archaeological resources, a specific project could be installed such that a significant impact to unknown archaeological resources could occur.

The proposed expansion of the safe storage capacity in support of the OBMPU Project would not result in any visible above ground impacts beyond those infrastructure facilities associated with OBMPU implementation outlined under Project Categories 1 and 2 as previously described. As such, no archaeological resources would be impacted by implementing the proposed increase in safe storage capacity.

Therefore, projects under Project Category 3 could have significant impacts under the abovementioned thresholds.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this RDSEIR.

Impacts would be the same as Project Categories 1 through 3. This is because, similar to well development, specific locations for the proposed AWPf, groundwater treatment at or near well sites and new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities have not been have yet to be determined. Additionally, similar to the storage basin development, the modifications to the WFA Agua de Lejos Treatment Plant and Chino Desalters have not yet been defined in enough detail to determine the level of impact development at such facilities may have on archaeological resources. As such, impacts to specific archaeological resources are speculative. Previously unknown and unrecorded archaeological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for archaeological resources, a specific project could be installed such that a significant impact to unknown archaeological resources could occur.

Therefore, projects under Project Category 4 could have significant impacts under the abovementioned thresholds.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measures **CUL-1** through **CUL-3** is required.*

Mitigation must be implemented to avoid a significant impact to archaeological resources as a result of site selection that could result in destruction or alteration of an archaeological resource.

In the 2000 OBMP PEIR identified five mitigation measures to minimize impacts to archaeological resources, Mitigation Measures **4.14-1** through **4.14-5**. These mitigation measure have been refined as OBMP Projects have been put forth, to better fit the current circumstances of the Stakeholders of the OBMPU. This includes updating these measures to reflect the requirements to obtain funds from the State Revolving Fund, and grants through State and Federal Programs. As such, these measures have been consolidated into Mitigation Measures **CUL-1** and **CUL-2**, below.

Where a future OBMPU project is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow-on cultural resources report (Phase I Cultural Resources Investigation). However, mitigation below addresses the requirement that future OBMPU projects within existing facilities that have been totally disturbed and that require State funding must complete a Phase I Cultural Resources Investigation because the State requires such studies to be completed in order to be eligible for State funding.

Mitigation Measure **CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, unless the Implementing Agency is seeking State funding for the project. This is because highly disturbed sites would no longer contain any archaeological resources of any value due to past disturbances of any such resources. Furthermore, Mitigation Measure **CUL-1** would require the Implementing Agency to adhere to procedures pertaining treatment of archaeological and other cultural resources that may be accidentally discovered during earthmoving activities.

Future OBMPU Projects that are located within undisturbed areas, regardless of whether the Implementing Agency intends to seek State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. Further mitigation measures are provided below that address the potential for multiple phases of studies that may be necessary to properly identify and evaluate potential cultural resources for a given OBMPU Project.

Mitigation Measure **CUL-2** would ensure that future OBMPU Projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. This mitigation measure includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation

is provided in the event that significant cultural resources are located within a given OBMPU Project site.

Mitigation Measure **CUL-3** would ensure that, after each phase of the studies required by mitigation measure **CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information in the OBMPU Project area. The net result of the implementation of Mitigation Measures **CUL-1** through **CUL-3**, is that a finding of less than significant adverse impact to archaeological resources is appropriate.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As the Chino Basin area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains many archaeological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resources resource sites, thereby resulting in a significant cumulative impact to cultural resources.

The potential construction impacts of the OBMPU, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact specific to historical, archaeological, and paleontological resources. Therefore, the project's cumulative effects to specific archaeological resources would be cumulatively considerable and cumulative impacts would be potentially significant.

Mitigation Measures:

Implementation of Mitigation Measures **CUL-1** through **CUL-3** would, as discussed above, minimize OBMPU contributions to cumulative archaeological resource impacts to a level of less than significant and therefore, through the implementation of Mitigation Measures **CUL-1** through **CUL-3**, the OBMPU's contribution to cumulative archaeological resource impacts would be less than cumulatively considerable.

Level of Significance After Mitigation: Less Than Significant

4.4.6.3 c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Combined Project Categories

Since the proposed project is at the programmatic level, specific project locations and design elements have yet to be finalized for a majority of the OBMPU Projects. Given the large size of the Chino Basin, there is a potential that a given OBMPU Project site could be located in a sensitive area. As such, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be inadvertently damaged, which could result in a significant impact. Implementation of the proposed project would comply with provisions

of State law regarding discovery of human remains, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. If human remains are accidentally exposed during site grading, Section 7050.5 of the California Health and Safety Code requires a contractor to immediately stop work in the vicinity of the discovery and notify the County Coroner. The Coroner must then determine whether the remains are human and if such remains are human, the Coroner must determine whether the remains are or appear to be of a Native American origin. If deemed potential Native American remains, the Coroner contacts the Native American Heritage Commission (NAHC) to identify the most likely affected tribe and/or most likely descendant (MLD). Until the landowner has conferred with the MLD, the Watermaster or Implementing Agency shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities consider the possibility of multiple burials. Since this process is mandatory, no additional mitigation is required to ensure that the impacts to human remains will be less than significant.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Less Than Significant

The Chino Basin area is largely urbanized with residential, commercial, and industrial development, though many areas still exist that have not historically been disturbed at depth, such as agricultural sites. As the area continues to develop, it is possible, but unlikely, that construction activities could impact unknown human remains. However, since the treatment of human resources is governed by Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, the cumulative potential to impact human remains would be less than significant. Therefore, the implementation of the project would result in less than cumulatively considerable impacts to human remains.

Level of Significance After Mitigation: Less Than Significant

4.4.6.4 d) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?¹

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

¹ As noted above in Section 4.4.5, this threshold further analyzes significance threshold f) from the CEQA Guidelines related to Geology and Soils.

Since the proposed Project is at the programmatic level, specific locations for the proposed wells have not been have yet to be determined. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. Based on the varied types of soils located throughout the Chino Basin with a potential to support paleontological resources, it is possible that a future OBMPU facility may be installed within a site that has high sensitivity for paleontological resources. As such, if previously unknown potentially unique buried paleontological resources are uncovered during excavation or construction, significant impacts thereof could occur. Additionally, without researching a site and screening the site for potentially significant known potential for paleontological resources, a specific project could be installed such that a significant impact to unknown paleontological resources could occur.

Therefore, projects under Project Category 1 could have significant impacts under the above-mentioned thresholds.

Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as Project Category 1. This is because, similar to well development, specific locations for the proposed conveyance and ancillary facilities have not been have yet to be determined. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. Based on the varied types of soils located throughout the Chino Basin with a potential to support paleontological resources, it is possible that a future OBMPU facility may be installed within a site that has high sensitivity for paleontological resources. As such, if previously unknown potentially unique buried paleontological resources are uncovered during excavation or construction, significant impacts thereof could occur. Additionally, without researching a site and screening the site for potentially significant known potential for paleontological resources, a specific project could be installed such that a significant impact to unknown paleontological resources could occur.

Therefore, projects under Project Category 2 could have significant impacts under the above-mentioned thresholds.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts related to the installation of Storage Basins and Recharge facilities would be the same as Project Category 1 and 2. This is because, similar to well development, specific locations for the proposed flood MAR facilities and MS4 compliance facilities have not been have yet to be determined. Additionally, the modifications to the known storage basin sites have not yet been defined in enough detail to determine the level of impact development of such facilities may have on paleontological resources. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried paleontological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for paleontological resources, a specific project could be installed such that a significant impact to unknown paleontological resources could occur.

The proposed expansion of the safe storage capacity in support of the OBMPU project would not result in any visible above ground impacts beyond those infrastructure facilities associated with OBMPU implementation outlined under Project Categories 1 and 2 as previously described. As such, no paleontological resources would be impacted by implementing the proposed increase in safe storage capacity.

Therefore, projects under Project Category 3 could have significant impacts under the abovementioned thresholds.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this RDSEIR.

Impacts would be the same as Project Categories 1 through 3. This is because, similar to well development, specific locations for the proposed AWWP, groundwater treatment at or near well sites and new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities have not been have yet to be determined. Additionally, similar to the storage basin development, the modifications to the WFA Agua de Lejos Treatment Plant and Chino Desalters have not yet been defined in enough detail to determine the level of impact development at such facilities may have on paleontological resources. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried paleontological resources are uncovered during excavation or construction, significant impacts could occur. Additionally, without researching a site and screening the site for potentially significant known potentials for paleontological resources, a specific project could be installed such that a significant impact to unknown paleontological resources could occur.

Therefore, projects under Project Category 4 could have significant impacts under the above-mentioned thresholds.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measures **CUL-1** through **CUL-3** is required.*

Mitigation must be implemented to avoid a significant impact to paleontological resources as a result of site selection that could result in destruction or alteration of a paleontological resource.

In the 2000 OBMP PEIR identified one mitigation measure to minimize impacts to archaeological resources, Mitigation Measure **4.14-5**. This mitigation measure has been refined as OBMP Projects have been put forth, to better fit the current circumstances of the Stakeholders of the OBMPU. This includes updating these measures to reflect the requirements to obtain funds from the State Revolving Fund, and grants through State and Federal Programs. As such, these measures have been consolidated into Mitigation Measures **CUL-1** and **CUL-2**, below.

Mitigation Measure **CUL-1** would require site-specific studies to identify potentially significant historical, archaeological, and paleontological resources. Additional studies would minimize potential impacts to paleontological resources. Where a future OBMPU project is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow-on cultural resources report (Phase I Cultural Resources Investigation). However, mitigation below addresses the requirement that future OBMPU projects within existing facilities that have been totally disturbed and that require State funding must complete a Phase I Cultural Resources Investigation because the State requires such studies to be completed in order to be eligible for State funding.

Mitigation Measure **CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, unless the Implementing Agency is seeking State funding for the project. This is because highly disturbed sites would no longer contain any paleontological resources of any value due to past disturbances of any such resources. Furthermore, Mitigation Measure **CUL-1** would require the Implementing Agency to adhere to procedures pertaining treatment of paleontological and other cultural resources that may be accidentally discovered during earthmoving activities.

Future OBMPU Projects that are located within undisturbed areas, regardless of whether the Implementing Agency intends to seek State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. Further mitigation measures are provided below that address the potential for multiple phases of studies that may be necessary to properly identify and evaluate potential cultural resources for a given OBMPU Project.

Mitigation Measure **CUL-2** would ensure that future OBMPU Projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow-on Phase I Cultural Resources Investigation, which would investigate the potential for historical, archaeological, and paleontological resources to occur within a given project site. This mitigation measure includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation

is provided in the event that significant cultural resources are located within a given OBMPU project site.

Mitigation Measure **CUL-3** would ensure that, after each phase of the studies required by mitigation measure **CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information in the OBMPU Project area.

The net result of the implementation of Mitigation Measures **CUL-1** through **CUL-3**, is that a finding of less than significant adverse impact to paleontological resources is appropriate.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As the Chino Basin area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains many paleontological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resources resource sites, thereby resulting in a significant cumulative impact to cultural resources.

The potential construction impacts of the OBMPU, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact specific to historical, archaeological, and paleontological resources. Therefore, the project's cumulative effects to specific paleontological resources would be cumulatively considerable and cumulative impacts would be potentially significant.

Mitigation Measures:

Implementation of Mitigation Measures **CUL-1** through **CUL-3** would, as discussed above, minimize OBMPU contributions to cumulative paleontological resource impacts to a level of less than significant and therefore, through the implementation of Mitigation Measures **CUL-1** through **CUL-3**, the OBMPU's contribution to cumulative paleontological resource impacts would be less than cumulatively considerable.

Level of Significance After Mitigation: Less Than Significant

4.4.7 Avoidance, Minimization and Mitigation Measures

4.4.7.1 2000 OBMPU PEIR Mitigation Measures

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable, or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measure carried forward from the 2000 OBMP PEIR is Mitigation Measures **4.14-6**, and the text for 2000 OBMP PEIR Mitigation Measures **4.14-1** through **4.14-5** has been modified and updated, as identified in the analysis presented under **Subsection 4.4.6, Potential Impacts**.

2000 OBMP PEIR Mitigation Measures **4.14-1** through **4.14-5** pertain to archaeological resources, with 2000 OBMP PEIR Mitigation Measure **4.14-5** pertaining also to paleontological resources. These measures lay out the procedures to assessing impacts to such resources and managing any such resources that are discovered as a result of the assessment procedures. These mitigation measure have been refined as OBMP Projects have been put forth, to better fit the current circumstances of the Stakeholders of the OBMPU. This includes updating these measures to reflect the requirements to obtain funds from the State Revolving Fund, and grants through State and Federal Programs. As such, these measures have been consolidated into Mitigation Measures **CUL-1** and **CUL-2**. Therefore, 2000 OBMP PEIR Mitigation Measures **4.14-1** through **4.14-5** are no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.14-1** through **4.14-5** are no longer applicable for the purposes of the OBMPU.

4.4.7.2 Applicable Project Mitigation Measures

The following mitigation measures from the 2000 OBMP PEIR have been abstracted and are repeated below for reference:

4.14-6 *Based solely upon this level of investigation and at this stage of project planning, it would be premature to propose specific mitigation measures. However, certain options can be presented presupposing a general level of knowledge regarding impacts. These options can be utilized to avoid impacts upon the cultural resources - the preferred result - or to lessen adverse effects. It should be emphasized that these options are not the only ones that may be applied. As such, these measures are not recommended as conditions of Project approval but are included for the Authority's consideration and implementation as appropriate.*

- a. Conduct a comprehensive historic building survey which is integrated with economic development programs;*
- b. Adopt a preservation ordinance and create a preservation board;*
- c. Ensure other planning programs, plans, and ordinances are compatible to the historic preservation goals and policies;*
- d. Direct existing funding sources and loan programs to historic neighborhoods in need of revitalization;*
- e. Provide incentives and direction encouraging preservation and revitalization; and*
- f. Develop ongoing programs for enhancing public appreciation of historic resources.*
- g. Project Redesign*

A proposed project may be redesigned in either of two ways:

- (1) Outside of site boundaries, thus avoiding impact to the site; or*
- (2) Restricting impacts to those areas of a site where previous impacts have already destroyed the integrity and research potential.*

Other options may also apply and may include capping of the site, relocation of structures, and integration of extant buildings into project design.

The following mitigation measures are specific to this OBMPU RDSEIR:

CUL-1: *Cultural Mitigation Level 1. Where a future discretionary project requiring additional CEQA review is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the OBMPU project will not be required to complete a follow on cultural resources report (Phase I Cultural Resources Investigation) unless*

the Implementing Agency is seeking State funding, in which case the Implementing Agency must prepare a Phase I Cultural Resources Investigation to satisfy State CEQA-plus requirements.

Where a Phase I Cultural Resources Investigation is not required, the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:

- Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the Implementing Agency's onsite inspector. An archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.*

CUL-2: **Cultural Mitigation Level 2.** *Where a future discretionary project requiring additional CEQA review is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, the agency implementing the OBMPU project shall complete the appropriate cultural resources report(s) (Phase I, II, III, and/or IV Cultural Resources Investigation) regardless of whether the Implementing Agency is seeking State funding.*

Where a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given OBMPU project:

1. Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project area shall include the following research procedures, as appropriate:

- Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet;*
- Historical background research, geoarchaeological profile analysis, and paleontological literature review;*
- Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area, pertinent local government agencies, and local historic preservation groups;*
- Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions;*
- Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases.*

2. Phase II (Evaluation): If cultural resources are encountered in a project area, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:

- Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals;*
- In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation;*
- Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as*

surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples;

- *Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted.*

3. Phase III (Mitigation): *For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the “cultural resources” field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:*

- *Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation;*
- *Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public;*
- *Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question.*

4. Phase IV (Monitoring): *At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate, as put forth in MMs TCR-1 through TCR-3.*

CUL-3: *Cultural Report Submission to Information Centers.* *After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared by the Implementing Agency and submitted to South Central Coastal Information Center (SCCIC), Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM), as appropriate and in addition to the Implementing Agency for the project, for permanent documentation and easy references by future researchers.*

CUL-4: *Early SHPO Consultation.* *Prior to commencement of construction of OBMPU related facilities, the Watermaster and IEUA shall confer with the Watermaster and Watermaster Stakeholders to establish a programmatic agreement with SHPO that will stipulate a set of mutually accepted guidelines that address research procedures and the types of potential cultural resources that may be excluded from further consideration before OBMPU projects are implemented, such as common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Once this agreement has been made with SHPO, Watermaster shall retain the agreement in the Project file, and shall ensure that all Stakeholders are given copies of the agreement for reference on*

future OBMPU projects. For OBMPU projects that are in development prior to an agreement with SHPO, all types of cultural resources shall be considered by the professionals assessing historical resources within the project footprint; regardless, the steps provided in MM CUL-2 shall be followed to assess and minimize impacts to sensitive cultural resources within a given site.

4.4.8 Unavoidable Adverse Impacts

Based on the information presented above, all potential cultural resource impacts, including paleontological resources, would be avoided or otherwise limited, and the preceding forecast demonstrates that impacts can be mitigated to a less than significant impact level. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to cultural resources, including paleontological resources, as broadly defined in this Subchapter, from implementing the project as proposed, and the project's potential impacts on cultural resource impacts will be less than significant.

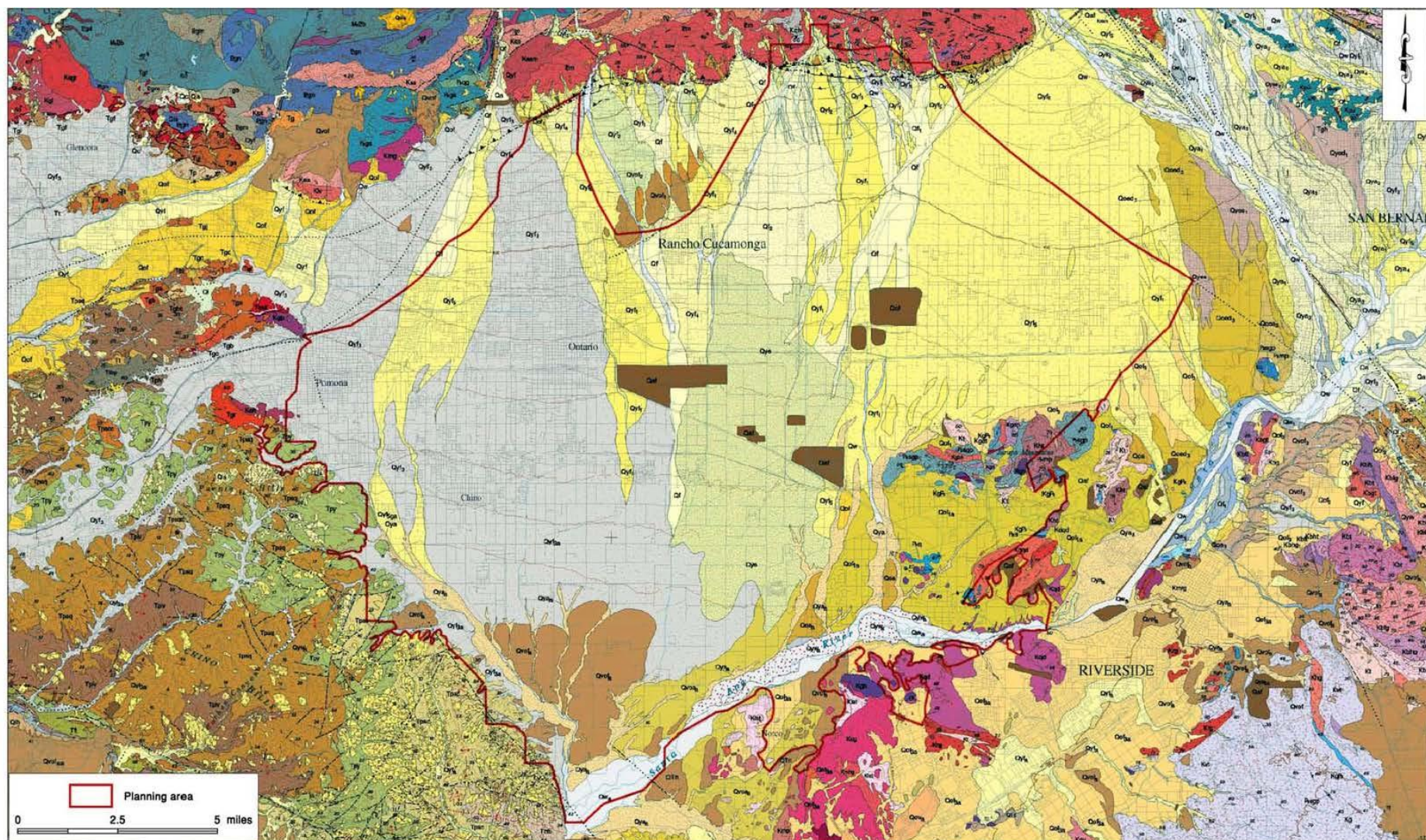


Figure 1. Surface geology in the planning area. Source: D.M. Morton and F.K. Miller: Geologic Map of the San Bernardino and Santa Ana 30' x 60' Quadrangles, California (U.S. Geological Survey 2006).

FIGURE 4.4-1

4.5 ENERGY

4.5.1 Introduction

The *Optimum Basin Management Program Update Energy Analysis Chino Basin Watermaster* dated May 31, 2023 (EA) was prepared by Urban Crossroads to evaluate the potential impacts to energy associated with construction and operation of the facilities proposed as part of the OBMPU RDSEIR. A copy of the EA is provided as Appendix 5 of Volume 2 of this RDSEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.

The analysis contained in the 2000 OBMP PEIR, while still applicable in ways described herein, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated. Not only have regulations changed, but the energy demands and regulations pertaining to energy efficiency have evolved since the 2000 OBMP PEIR was certified. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations.

IEUA, in coordination with the Watermaster, has prepared this RDSEIR to evaluate the potential significant environmental impacts that may result from implementing the OBMPU. The OBMPU is anticipated to be implemented over a horizon of about 20 years—2020 through 2040. The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities supporting the 9 Program Elements that make up the OBMPU. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities.

A detailed description of the construction and operational activities associated with implementation of the OBMPU is included in the **Chapter 3, Project Description** of this RDSEIR.

This document is a focused RDSEIR for the above-described Project and all of the standard issues related to energy identified in Appendix G of the State CEQA Guidelines are evaluated. The issues pertaining to Energy will be discussed below as set forth in the following framework:

- 4.5.1 Introduction
- 4.5.2 Existing Conditions
- 4.5.3 Regulatory Setting
- 4.5.4 Thresholds of Significance
- 4.5.5 Environmental Consequences
- 4.5.6 Avoidance, Minimization and Mitigation Measures
- 4.5.7 Cumulative Impacts
- 4.5.8 Unavoidable Significant Adverse Impacts

No comments were received at the scoping meeting or during the NOP Comment Period that pertained to Energy.

All references pertaining to this Subchapter are located within the EA which is provided as Appendix 5 of Volume 2 of this RDSEIR.

4.5.2 Existing Conditions

This section provides an overview of the existing energy conditions in the Project area and region.

4.5.2.1 Overview

The most recent data for California's estimated total energy consumption is from 2017 and natural gas consumption is from 2020, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates in 2021 and included:¹

- As of 2020, approximately 6,923 trillion British Thermal Units (BTU) of energy were consumed
- As of 2020, approximately 524 million barrels of petroleum
- As of 2021, approximately 2,101 billion cubic feet of natural gas
- As of 2021, approximately 1 million short tons of coal

According to the EIA, in 2021 U.S. petroleum consumption comprised about 77% of all transportation energy use, excluding fuel consumed for aviation and most marine vessels. In 2021, about 249,790 million gallons (or about 5.95 million barrels) of finished petroleum products were consumed in the U.S., an average of about 684 million gallons per day (or about 16 million barrels per day). In 2021, California consumed approximately 12,157 million gallons of motor gasoline (33.31 million per day) and approximately 3,541 million gallons of diesel fuel (9.7 million per day). The most recent data provided by the EIA for energy use in California by demand sector is from 2020 and is reported as follows:

- Approximately 34.0% transportation
- Approximately 24.6% industrial
- Approximately 21.8% residential
- Approximately 19.6% commercial

According to the EIA, California used approximately 247,250 gigawatt hours of electricity in 2021. By sector in 2021, residential uses utilized 36.5% of the State's electricity, followed by 43.9% for commercial uses, 19.2% for industrial uses, and 0.3% for transportation. Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building.

According to the EIA, California used approximately 200,871 million therms of natural gas in 2021. In 2021 (the most recent year for which data is available), by sector, industrial uses utilized 33% of the State's natural gas, followed by 30% used as fuel in the electric power sector, 21% from residential, 11% from commercial, 1% from transportation uses and the remaining 3% was utilized for the operations, processing, and production of natural gas itself. While the supply of natural gas in the U.S. and production in the lower 48 states has increased greatly since 2008, California produces little, and imports 90% of its supply of natural gas.

¹US Energy Information Administration, 2023. California State Energy Profile
<https://www.eia.gov/state/print.php?sid=CA> (Accessed 07/19/23)

In 2021, total system electric generation for California was 277,764 gigawatt hours (GWh). California's massive electricity in-State generation system generated approximately 194,127 GWh which accounted for approximately 70% of the electricity it uses; the rest was imported from the Pacific Northwest (12%) and the U.S. Southwest (18%). Natural gas is the main source for electricity generation at 50.2% of the total in-State electric generation system power as shown in **Table 4.5-1**.

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- In 2021, California was the seventh-largest producer of crude oil among the 50 states, and, as of January 2021, it ranked third in crude oil refining capacity.
- California is the largest consumer of jet fuel and second-largest consumer of motor gasoline among the 50 states and, the State accounted for 15% of the nation's jet fuel consumption and 10% of motor gasoline consumption in 2020.
- In 2019, California was the second-largest total energy consumer among the states, but its per capita energy consumption was less than in all other states except Rhode Island, due in part to its mild climate and its energy efficiency programs.
- In 2021, California was the nation's top producer of electricity from solar, geothermal, and biomass energy. The State was fourth in the nation in conventional hydroelectric power generation, down from second in 2019, in part because of drought and increased water demand.
- In 2021, California was the fourth-largest electricity producer in the nation, but the State was also the nation's second-largest consumer of electricity, and in 2020, it received about 30% of its electricity supply from generating facilities outside of California, including imports from Mexico.

As indicated below, California is one of the nation's leading energy producing states, and California's per capita energy use is among the nation's most efficient. Given the nature of the Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the uses planned for the Project.

**Table 4.5-1
TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2021)**

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix (GWh)	Total California Power Mix
Coal	303	0.2%	181	7,788	7,969	9.5%	8,272	3.0%
Natural Gas	97,431	50.2%	45	7,880	7,925	9.5%	105,356	37.90%
Oil	37	0.0%	-	-	-	0.0%	37	0.0%
Other (Waste Heat/Petroleum Coke)	382	0.2%	68	15	83	0.1%	465	0.2%
Nuclear	16,477	8.5%	524	8,756	9,281	11.1%	25,758	9.3%
Large Hydro	12,036	6.2%	12,042	1,578	13,620	16.3%	25,656	9.2%
Unspecified	-	0.0%	8,156	10,731	18,887	22.6%	18,887	6.8%
Total Thermal and Non-Renewables	126,666	65.2%	21,017	36,748	57,764	6910.0%	184,431	66.4%

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix (GWh)	Total California Power Mix
Biomass	5,381	2.8%	864	26	890	1.1%	6,271	2.3%
Geothermal	11,116	5.7%	192	1,906	2,098	2.5%	13,214	4.8%
Small Hydro	2,531	1.3%	304	1	304	0.4%	2,835	1.0%
Solar	33,260	17.1%	220	5,979	6,199	7.4%	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	16,381	19.6%	31,555	11.4%
Total Renewables	67,461	34.8%	11,555	14,317	25,872	3090.0%	93,333	33.6%
SYSTEM TOTALS	194,127	100.0%	32,572	51,064	83,636	100.0%	277,764	100.0%

Source: CECs 2021 Total System Electric Generation

4.5.2.2 Electricity

Electricity use was calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.² The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station (San Onofre). While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies revealed the extent to which the South California Air Basin (SCAB) and the San Diego Air Basin (SDAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (IEPR) after a collaborative process with other energy agencies, utilities, and air districts. Similarly, the subsequent 2022 IEPR provides information and policy recommendations on advancing a clean, reliable, and affordable energy system.

Electricity is currently provided to the Project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons in 15 counties and 180 incorporated cities, within a service area encompassing approximately 50,000 square miles. Based on SCE's 2020 Power Content Label Mix, SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.

California's electricity industry is an organization of traditional utilities, private generating companies, and State agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO) is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability and directing uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure

² The Energy Analysis was prepared after the AQIA. As such, the most current model of CalEEMod was utilized in support of the Energy Analysis. The two models ultimately return energy forecasts for development projects, but the new model utilizes different methodologies to achieve the end energy forecast.

that enough power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities.

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, utilities file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most important, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Tables 4.5-2 identifies SCE's specific proportional shares of electricity sources in 2021. As indicated in **Table 4.5-2**, the 2021 SCE Power Mix has renewable energy at 31.4% of the overall energy resources. Geothermal resources are at 5.7%, wind power is at 10.2%, large hydroelectric sources are at 2.3%, solar energy is at 14.9%, and coal is at 0%.

**Table 4.5-2
SCE 2018 POWER CONTENT MIX**

Energy Resources	2018 SCE Power Mix
<i>Eligible Renewable</i>	31.4%
Biomass & waste	0.1%
Geothermal	5.7%
Small Hydroelectric	0.5%
Solar	14.9%
Wind	10.2%
<i>Coal</i>	0.0%
<i>Large Hydroelectric</i>	2.3%
<i>Natural Gas</i>	22.3%
<i>Nuclear</i>	9.2%
<i>Other</i>	0.2%
Unspecified Sources of power*	34.6%
Total	100%

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

4.5.2.3 Natural Gas

The following summary of natural gas customers and volumes, supplies, delivery of supplies, storage, service options, and operations is excerpted from information provided by the California Public Utilities Commission (CPUC).

"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

California's natural gas utilities provide service to over 11 million gas meters. SoCalGas and PG&E provide service to about 5.9 million and 4.3 million customers, respectively, while SDG&E provides service to over 800, 000 customers. In 2018, California gas utilities forecasted that they would deliver about 4740 million cubic feet per day (MMcfd) of gas to their customers, on average, under normal weather conditions.

The overwhelming majority of natural gas utility customers in California are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

A significant amount of gas (about 19%, or 1131 MMcfd, of the total forecasted California consumption in 2018) is also directly delivered to some California large volume consumers, without being transported over the regulated utility pipeline system. Those customers, referred to as "bypass" customers, take service directly from interstate pipelines or directly from California producers.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, i.e., they receive deliveries of gas from SoCalGas and in turn deliver that gas to their own customers. (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Similarly, West Coast Gas, a small gas utility, is a wholesale customer of PG&E. Some other wholesale customers are municipalities like the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California gas utilities are Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Mojave Pipeline, and Tuscarora. Another pipeline, the North Baja - Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, and authorizes rates for that service, the California Public Utilities Commission may participate in FERC regulatory proceedings to represent the interests of California natural gas consumers.

The gas transported to California gas utilities via the interstate pipelines, as well as some of the California-produced gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered to the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large volume noncore customers take natural gas delivery directly off the high-pressure backbone and local transmission pipeline systems, while core customers and other noncore customers take delivery off the utilities' distribution pipeline systems. The state's natural gas utilities operate over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines.

Bypass customers take most of their deliveries directly off the Kern/Mojave pipeline system, but they also take a significant amount of gas from California production.

PG&E and SoCalGas own and operate several natural gas storage fields that are located within their service territories in northern and southern California, respectively. These storage fields, and four independently owned storage utilities - Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage - help meet peak seasonal and daily natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. PG&E is a 25% owner of the Gill Ranch Storage field. These storage fields provide a significant amount of infrastructure capacity to help meet California's natural gas requirements, and without these storage fields, California would need much more pipeline capacity in order to meet peak gas requirements.

Prior to the late 1980s, California regulated utilities provided virtually all natural gas services to all their customers. Since then, the Commission has gradually restructured the California gas industry in order to give customers more options while assuring regulatory protections for those customers that wish to, or are required to, continue receiving utility-provided services.

The option to purchase natural gas from independent suppliers is one of the results of this restructuring process. Although the regulated utilities procure natural gas supplies for most core customers, core customers have the option to purchase natural gas from independent natural gas marketers, called "core transport agents" (CTA). Contact information for core transport agents can be found on the utilities' web sites. Noncore customers, on the other hand, make natural gas supply arrangements directly with producers or with marketers.

Another option resulting from the restructuring process occurred in 1993, when the Commission removed the utilities' storage service responsibility for noncore customers, along with the cost of this service from noncore customers' transportation rates. The Commission also encouraged the development of independent storage fields, and in subsequent years, all the independent storage fields in California were established. Noncore customers and marketers may now take storage service from the utility or from an independent storage provider (if available), and pay for that service, or may opt to take no storage service at all. For core customers, the Commission assures that the utility has adequate storage capacity set aside to meet core requirements, and core customers pay for that service.

In a 1997 decision, the Commission adopted PG&E's "Gas Accord", which unbundled PG&E's backbone transmission costs from noncore transportation rates. This decision gave customers and marketers the opportunity to obtain pipeline capacity rights on PG&E's backbone transmission pipeline system, if desired, and pay for that service at rates authorized by the Commission. The Gas Accord also required PG&E to set aside a certain amount of backbone transmission capacity in order to deliver gas to its core customers. Subsequent Commission decisions modified and extended the initial terms of the Gas Accord. The "Gas Accord" framework is still in place today for PG&E's backbone and storage rates and services and is now simply referred to as PG&E Gas Transmission and Storage (GT&S).

In a 2006 decision, the Commission adopted a similar gas transmission framework for Southern California, called the "firm access rights" system. SoCalGas and SDG&E implemented the firm access rights (FAR) system in 2008, and it is now referred to as the backbone transmission system (BTS) framework. As under the PG&E backbone transmission system, SoCalGas backbone transmission costs are unbundled from noncore transportation rates. Noncore customers and marketers may obtain, and pay for, firm backbone transmission capacity at various receipt points on the SoCalGas system. A certain amount of backbone transmission capacity is obtained for core customers to assure meeting their requirements.

Many if not most noncore customers now use a marketer to provide for several of the services formerly provided by the utility. That is, a noncore customer may simply arrange for a marketer to procure its supplies, and obtain any needed storage and backbone transmission capacity, in order to assure that it will receive its needed deliveries of natural gas supplies. Core customers still mainly rely on the utilities for procurement service, but they have the option to take procurement service from a CTA. Backbone transmission and storage capacity is either set aside or obtained for core customers in amounts to assure very high levels of service.

In order properly operate their natural gas transmission pipeline and storage systems, PG&E and SoCalGas must balance the amount of gas received into the pipeline system and delivered to customers or to storage fields. Some of these utilities' storage capacity is dedicated to this service, and under most circumstances, customers do not need to precisely match their deliveries with their consumption. However, when too much or too little gas is expected to be delivered into the utilities' systems, relative to the amount being consumed, the utilities require customers to more precisely match up their deliveries with their consumption. And, if customers do not meet certain delivery requirements, they could face financial penalties. The utilities do not profit from these financial penalties - the amounts are then returned to customers as a whole. If the utilities find that they are unable to deliver all the gas that is expected to be consumed, they may even call for a curtailment of some gas deliveries. These curtailments are typically required for just the largest, noncore customers. It has been many years since there has been a significant curtailment of core customers in California."

As indicated in the preceding discussions, natural gas is available from a variety of in-State and out-of-State sources and is provided throughout the State in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

4.5.2.4 Transportation Energy Resources

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. The Department of Motor Vehicles (DMV) identified 36.2 million registered vehicles in California (Department of Motor Vehicles, 2021), and those vehicles consume an estimated 17.2 billion gallons of fuel each year³. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 396,616 lane miles, more than 26.6 million passenger vehicles and light trucks, and almost 9.0 million medium- and heavy-duty vehicles. While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. California is the second-largest consumer of petroleum products, after Texas, and accounts for 10% of the nation's total consumption. The State is the largest U.S. consumer of motor gasoline and jet fuel, and 85% of the petroleum consumed in California is used in the transportation sector.

California accounts for less than 1% of total U.S. natural gas reserves and production. As with crude oil, California's natural gas production has experienced a gradual decline since 1985. In 2019, about 37% of the natural gas delivered to consumers went to the State's industrial sector,

³ Fuel consumptions estimated utilizing information from EMFAC2021.

and about 28% was delivered to the electric power sector. Natural gas fueled more than two-fifths of the State's utility-scale electricity generation in 2019. The residential sector, where two-thirds of California households use natural gas for home heating, accounted for 22% of natural gas deliveries. The commercial sector received 12% of the deliveries to end users and the transportation sector consumed the remaining 1%.

4.5.3 Regulatory Setting

Federal and State agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. On the State level, the CPUC and the CEC are two agencies with authority over different aspects of energy. Relevant federal and State energy-related laws and plans are summarized below.

4.5.3.1 Federal

4.5.3.1.1 Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

4.5.3.1.2 The Transportation Equity Act for the 21st Century (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

4.5.3.2 California Regulations

4.5.3.2.1 Integrated Energy Policy Report (IEPR)

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code §25301[a]). The CEC prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2022 IEPR was adopted February 2023, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2022 IEPR introduces a new

framework for embedding equity and environmental justice at the CEC and the California Energy Planning Library which allows for easier access to energy data and analytics for a wide range of users. Additionally, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition and distributed energy resources are topics discussed within the 2022 IEPR.

4.5.3.2.2 State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies several strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled (VMT) and accommodate pedestrian and bicycle access.

4.5.3.2.3 California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2022 version of Title 24 was adopted by the CEC and will be effective on January 1, 2023. The 2022 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting standards for nonresidential buildings.

The CEC anticipates that the implementation of the 2022 California Energy Code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons over the years in which it will be implemented. The Project would be required to comply with the applicable standards in place at the time building permit document submittals are made. These require, among other items:

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documenta-

tion that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.

- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
- Water Closets. The effective flush volume of all water closets shall not exceed
 - 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed
 - 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).

- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2)

4.5.3.2.4 AB 1493 Pavley Regulations And Fuel Efficiency Standards

California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Under this legislation, CARB adopted regulations to reduce GHG emissions from non-commercial passenger vehicles (cars and light-duty trucks). Although aimed at reducing GHG emissions, specifically, a co-benefit of the Pavley standards is an improvement in fuel efficiency and consequently a reduction in fuel consumption.

4.5.3.2.5 California's Renewable Portfolio Standard (RPS)

First established in 2002 under Senate Bill (SB) 1078, California's Renewable Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable resources to 33% of total retail sales by 2020.

4.5.3.2.6 Clean Energy and Pollution Reduction Act Of 2015 (SB 350)

In October 2015, the Legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

4.5.3.2.7 100 Percent Clean Energy Act of 2018 (SB 100)

In September 2018, the Legislature approved, and the Governor signed SB 100, which builds on the targets established in SB 1078 and SB 350. Most notably, SB 100 sets a goal of powering all retail electricity sold in California with renewable and zero-carbon resources. Additionally, SB 100 updates the interim renewables target from 50% to 60% by 2030.

4.5.3.2.8 Executive Order N-79-20 and Advanced Clean Cars II

On August 25, 2022 CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that between 2026 and 2040, the regulation would reduce GHG emissions by a cumulative 395 million metric tons, equivalent to reducing petroleum use by 915 million barrels.

4.5.4 Thresholds of Significance

Per Appendix F of the *State CEQA Guidelines*, the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas, and oil; and
- Increasing reliance on renewable energy sources.

In compliance with Appendix G of the *State CEQA Guidelines*, this report analyzes the Project's anticipated energy use to determine if the Project would:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

4.5.4.1 Methodology

Information from the CalEEMod Version 2020.4.0 outputs for the *Air Quality Impact Analyses* (AQIA; Appendix 2a) was utilized in this analysis, detailing Project-related construction equipment, transportation energy demands, and facility energy demands.

4.5.4.1.1 Construction Duration

The construction scenario that was modeled is shown in **Table 4.2-6**, which has been extracted from **Subchapter 4.2, Air Quality**. The "Per Year" column represents the number of a given facility that could be installed in one year, with these assumptions reflecting a reasonable "worst case" assumption for each given facility. The "Per Day" column represents the number of a given facility that could be constructed on the worst-case day of the given facilities' construction activity on a given day within the parameters of the number of facilities that could occur within the "worst case" year. The "Total to be Constructed" column is indicative of the total number of each facility type that is proposed to be developed under the OBMPU, and as described under **Subsection 3.4.2, Summary of All Facilities**, in **Chapter 3, Project Description**.

Table 4.2-6
CONSTRUCTION SCENARIO MODELED

	Per day	Per Year	Total to be Constructed
Project Category 1			
ASR and Monitoring Wells	2	32	207
In Line Flow Meter	1	110	400
Extensometer	1	1	3
Well Destruction	1	2	5
Project Category 2			
Pipelines (LF)	2	100,000	620,000
Booster Pump Stations	1	5	18
Water Storage Reservoirs	1	3	14
Project Category 3			
Storage Basins with Haul	1	2	4
Storage Basin Modification	1	1	2
Project Category 4			

	Per day	Per Year	Total to be Constructed
Upgrade Existing WTP	1	1	1
Advanced Water Purification Facility	1	1	1
Groundwater Treatment at Well Sites	1	5	20
New Regional Groundwater Treatment Facility	1	1	4
Improve Existing Groundwater Treatment Facilities	1	1	1

The Construction Duration provided below represents a portrait of the “worst case” year over the course of OBMPU facility implementation. As such, the “worst case” year construction scenario that was modeled is reflected in **Table 4.5-3** below. It is anticipated that the “worst case” year under the OBMPU would occur in the near-term future, as Stakeholders are anticipated to utilize this RDSEIR in support of grant funding for various projects proposed under this Program. Note that the Construction Scenario that is presented in **Table 4.2-6**, above, reflects a reasonable assumption for a “worst case” year under the OBMPU. It is assumed that this “worst case” year would not occur for multiple years, but given the opportunities to utilize this RDSEIR for future grant funding opportunities, and the level of detailed analysis presented herein, it is expected that the Parties may construct a larger number of facilities in the first few years following the possible certification of this RDSEIR, with fewer numbers of each project type anticipated to be implemented over the year 5-20 year horizon of the implementation of the OBMPU.

Therefore, the “worst case” year of construction was assumed to begin in the year 2024. As diesel equipment progressively becomes cleaner due to phasing out of older equipment and procurement of newer equipment with improved emissions technology, and through the implementation of laws and regulations discussed above in Section 4.5.4, Regulatory Setting above, a start date in the future would demonstrate lower pollutant emissions. Therefore, assuming construction begins in 2024 represents a worst-case scenario. Given this, the construction schedule utilized in the analysis, shown in **Table 4.5-3**, represents a “worst-case” analysis scenario. The duration of the “worst-case” year construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*.

**Table 4.5-3
CONSTRUCTION DURATION**

Category	Construction Activity	Start Date	End Date	Days
Well Development and Monitoring Devices	ASR and Monitoring Wells			
	Grading	01/30/2024	02/18/2024	20
	Building Construction	02/25/2024	03/08/2024	10
	Well Monitoring Device Installation			
	Building Construction	02/20/2024	02/20/2024	1
	Extensometer Installation			
	Building Construction	02/08/2024	02/16/2024	5
Well Development and Monitoring Devices	Well Destruction			
	Demolition	02/12/2024	03/22/2024	30
Conveyance Facilities and Ancillary Facilities	Pipe Installation			
	Demo Roadway & Trench	01/30/2024	02/18/2024	20
	Install Pipe	02/25/2024	03/08/2024	10
	Backfill and Pave	02/25/2024	03/08/2024	10
	Booster Station			
	Grading	02/16/2024	02/22/2024	5
	Building Construction	02/28/2024	06/18/2024	80
	Reservoir			
	Grading	01/01/2024	01/12/2024	10
	Foundation Construction	02/01/2024	03/06/2024	25
	Reservoir Construction	04/01/2024	08/16/2024	100
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities			
	Grading	02/21/2024	06/11/2024	80
	Compacting/Top Soil	07/01/2024	10/18/2024	80
	Storage Basins Modifications			
	Grading	02/22/2024	05/15/2024	60
	Upgrades	05/16/2024	09/04/2024	80
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant			
	Building Construction	01/01/2024	12/31/2024	262
	New Advanced Water Purification Facility			
	Grading	01/01/2024	02/23/2024	40
	Building Construction	03/01/2024	05/22/2025	320
	Groundwater Treatment at Well Sites			
	Grading	02/20/2024	03/18/2024	20
	Building Construction	03/20/2024	05/14/2024	40
	New Regional Groundwater Treatment			
	Grading	01/01/2024	02/23/2024	40
	Building Construction	02/29/2024	08/14/2024	120
	Improve Existing Groundwater Treatment Facilities			
	Building Construction	Cranes	1	4
		Forklifts	1	6
		Tractors/Loaders/Backhoes	1	8

4.5.4.1.2 Construction Equipment

Table 4.5-4 summarizes the equipment fleets and durations modeled for each construction activity.

**Table 4.5-4
CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Project Category 1: Well Development and Monitoring Devices

ASR and Monitoring Wells 0.5 acres	
Well Drilling 20 days 24/7	1 drill rig
	1 pump
	10 workers
Well Equipping	1 crane
	1 generator
	1 welder
	1 forklift
	10 workers
	1 concrete delivery per day
	1 vendor delivery per day

Well Monitoring Device Installation*	
1 day	40-mile round trip per device

*flow meters and transducer data loggers

Extensometer Installation	
Installation 7 days	1 truck mounted crane*
	5 workers

*used to lower into the well casing

Well Destruction 0.5 acres	
Demolition 6 weeks	1 crane
	1 loader/backhoe
	1 mixer
	1 concrete pump
	5 workers
	2 vendor trips per day

Project Category 2: Conveyance Facilities and Ancillary Facilities

Pipeline Installation <1 acre per day	
Demo Roadway and Trench 5 weeks	1 excavator
	1 backhoe
	1 concrete saw
	6 signal boards
	14-person crew
	10 haul trips
Install Pipeline 15 weeks	1 crane
	2 forklifts
	2 loader/backhoes
	6 signal boards
	14-person crew
	1 daily vendor delivery
Backfill and Pave 5 weeks	1 compactor
	1 paver
	1 roller
	2 loader/backhoes
	6 signal boards
	14-person crew

Booster Pump Station 1 acre per day	
Grading 5 days	1 excavator
	2 loader/backhoes backhoe
	6 signal boards
	5-person crew
Construction 4 months	1 crane
	2 forklifts
	2 loader/backhoes
	2 welders
	5-person crew
	6 vendor deliveries

Water Storage Reservoirs 5 acres per day	
Grading 10 days	1 excavator
	2 dozers
	1 loader/backhoe
	1 scraper
	12-person crew
Foundation 25 days	1 crane
	1 forklift
	1 loader/backhoe
	12-person crew
	2 vendor deliveries
Construction 5 months	1 crane
	1 forklift
	1 loader/backhoe
	4 welders
	1 stress tower
	1 aerial lift
	12-person crew
	6 vendor deliveries

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands

New Storage Basins/Flood Facilities 5 acres/day	
Grading and Soil Haul 4 months	2 excavators
	2 dozers
	2 scrapers
	2 crawler tractors
	2 loader/backhoes
	20-person crew
	100 dump trips/day 30 miles rt
	10 delivery trucks/day
Compacting/Top Soil 4 months	1 roller
	2 tampers
	2 loader/backhoes
	20-person crew

Storage Basin Modifications	
Grading 3 months	1 dozer
	1 grader
	1 excavator
	1 water truck
	1 loader/backhoe
	6-person crew
Compacting/Top Soil 4 months	6 delivery trucks/day
	1 roller
	2 tampers
	2 loader/backhoes
	6-person crew

Project Category 4: Desalters and Water Treatment Facilities

Upgrade Existing Recycled WTP	
Upgrade 12 months	1 crane
	1 loader
	1 forklift
	15-person crew
	10 delivery trucks/day

Advanced Water Purification Facility 10 acres/day	
Grading and Soil Haul 2 months	1 grader
	1 dozer
	1 scraper
	2 loader/backhoes
	15-person crew
Construction and Equipping 16 months	2 cranes
	3 forklifts
	4 welders
	1 aerial lift
	2 loader/backhoes
	15-person crew
	10 delivery trucks/day

Groundwater Treatment at Well Sites 1 acre/day	
Grading 1 month	1 dozer
	2 loader/backhoes
	5-person crew
Construction and Equipping 2 months	1 crane
	2 forklifts
	2 welders
	5-person crew
	10 delivery trucks/day

New Regional Groundwater Treatment 2-acres	
Demo/Grading 2 months	2 excavators
	1 dozer
	2 loader/backhoes
	10-person crew
Construction and Equipping 16 months	1 crane
	1 concrete pump
	1 mixer
	2 forklifts
	2 welders
	2 loader/backhoes
	10-person crew
	10 delivery trucks/day

Improve Existing Groundwater Treatment Facilities existing footprint	
Upgrade 4 months	1 crane
	1 loader
	1 forklift
	10-person crew
	10 delivery trucks/day

*all crews modeled with 40 miles of round trip travel

4.5.4.2 CalEEMod

The California Air Pollution Control Officers Association (CAPCOA) in conjunction with other California air districts, including the SCAQMD, released this version of CalEEMod, version 2020.4.0.⁴ The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage. Consistent with the AQIA provided as Appendix 2a of Volume 2 of this DSEIR, CalEEMod2020.4.0 has been used to determine the proposed Project's anticipated transportation and facility energy demands. Outputs from the annual model runs are provided in Appendix 4.1 to the EA.

4.5.4.3 Emissions Factors Model

On May 2, 2022, the EPA approved the 2021 version of the Emissions FACtor model (EMFAC2021) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources. This energy study utilizes the different fuel types for each vehicle class from the annual EMFAC2021 emission inventory in order to derive the average vehicle fuel economy which is then used to determine the estimated annual fuel consumption associated with vehicle usage during Project construction and operational activities. For purposes of the analysis, the 2024 and 2025 analysis years were utilized to determine the average vehicle fuel economy used throughout the duration of the Project. Output from the EMFAC2021 model runs is provided in Appendix 4.2 to the EA.

4.5.5 Environmental Consequences

Would the Project:

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**
- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

In addition, CEQA Guidelines Section 15162.2(b) requires that the analysis of energy use "should include the project's energy use for all project phases and components, including transportation-related energy, during construction and operation. In addition to building code compliance, other relevant considerations may include, among others, the project's size, location, orientation, equipment use and any renewable energy features that could be incorporated into the project. (Guidance on information that may be included in such an analysis is presented in Appendix F.) This analysis is subject to the rule of reason and shall focus on energy use that is caused by the project."

⁴ CalEEMod Version 2020.40.0 was utilized in support of this analysis as it was the approved version at the time the emissions were estimated. CalEEMod Version 2022, the most current version of CalEEMod was, at the time the Air Quality Impact Analysis was modeled, in draft form. The two models ultimately return emissions forecasts for development projects, but the new model utilizes different methodologies to achieve the end emissions forecast.

CONSTRUCTION ENERGY DEMANDS

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project.

Construction Power Cost

The total Project construction power costs is the summation of the products of the area (sf) by the construction duration and the typical power cost.

Project Construction Power Cost

The *2023 National Construction Estimator* identifies a typical power cost per 1,000 sf of construction per month of \$2.50, which was used to calculate the Project's total construction power cost.

As shown on **Table 4.5-5**, the total power cost of the on-site electricity usage during the construction of the Project is estimated to be approximately \$15,344.01.

**Table 4.5-5
CONSTRUCTION POWER COST**

Category	Land Use	Power Cost (per 1,000 SF)	Size (1,000 SF)	Construction Duration (months)	Power Cost
Well Development and Monitoring Devices	ASR and Monitoring Wells	\$2.50	52.272	2	\$261.36
	Well Monitoring Device Installation				
	Extensometer Installation				
	Well Destruction				
Conveyance Facilities and Ancillary Facilities	Pipeline Installation		265.716	5	\$3,321.45
	Booster Station				
	Reservoir				
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities		261.360	7	\$4,573.80
	Storage Basin Modifications				
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant		574.992	5	\$7,187.40
	New Advanced Water Purification Facility				
	Groundwater Treatment at Well Sites				
	New Regional Groundwater Treatment				
	Improve Existing Groundwater Treatment Facilities				
CONSTRUCTION POWER COST					\$15,344.01

Construction Electricity Usage

The total Project construction electricity usage is the summation of the products of the power cost (estimated in **Table 4.5-6**) by the utility provider cost per kilowatt hour (kWh) of electricity.

Project Construction Electricity Usage

The SCE's general service rate schedule were used to determine the Project's electrical usage. As of March 1, 2023, SCE's general service rate is \$0.13 per kilowatt hours (kWh) of electricity

for general services. As shown on **Table 4.5-6**, the total electricity usage from on-site Project construction related activities is estimated to be approximately 121,826 kWh.

**Table 4.5-6
CONSTRUCTION ELECTRICITY USAGE**

Category	Land Use	Cost per kWh	Project Construction Electricity Usage (kWh)
Well Development and Monitoring Devices	ASR and Monitoring Wells	\$0.13	2,075
	Well Monitoring Device Installation		
	Extensometer Installation		
	Well Destruction		
Conveyance Facilities and Ancillary Facilities	Pipeline Installation		26,371
	Booster Station		
	Reservoir		
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities		36,314
	Storage Basin Modifications		
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant		57,066
	New Advanced Water Purification Facility		
	Groundwater Treatment at Well Sites		
	New Regional Groundwater Treatment		
	Improve Existing Groundwater Treatment Facilities		
CONSTRUCTION ELECTRICITY USAGE			121,826

Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction.

Project Construction Equipment Fuel Consumption

Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in **Table 4.5-7**.

**Table 4.5-7
CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES**

Category	Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells								
	Grading	20	Bore/Drill Rigs	221	1	24	0.50	2,652	2,867
			Pumps	84	1	24	0.74	1,492	1,613
	Building Construction	10	Cranes	231	1	4	0.29	268	145
			Forklifts	89	1	6	0.20	107	58
			Generator Sets	84	1	6	0.74	373	202
			Welders	46	1	6	0.45	124	67

Category	Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption (gallons)
	Well Monitoring Device Installation								
	Building Construction	1	Air Compressors	78	1	1	0.48	37	2
	Extensometer Installation								
	Building Construction	5	Cranes	231	1	4	0.29	268	72
	Well Destruction								
	Demolition	30	Cement and Mortar Mixers	9	1	6	0.56	30	49
			Cranes	231	1	4	0.29	268	435
			Pumps	84	1	4	0.74	249	403
Tractors/Loaders /Backhoes			97	1	6	0.37	215	349	
Conveyance Facilities and Ancillary Facilities	Pipe Installation								
	Demo Roadway & Trench	25	Concrete/Industrial Saws	81	1	8	0.73	473	639
			Excavators	158	1	6	0.38	360	487
			Signal Boards	6	6	8	0.82	236	319
			Tractors/Loaders /Backhoes	97	1	6	0.37	215	291
	Install Pipe	75	Cranes	231	1	4	0.29	268	1,086
			Forklifts	89	2	6	0.20	214	866
			Signal Boards	6	6	8	0.82	236	957
			Tractors/Loaders /Backhoes	97	2	8	0.37	574	2,328
	Backfill and Pave	25	Pavers	130	1	7	0.42	382	516
			Plate Compactors	8	1	7	0.43	24	33
			Rollers	80	1	7	0.38	213	288
			Signal Boards	6	6	8	0.82	236	319
			Tractors/Loaders /Backhoes	97	2	6	0.37	431	582
	Booster Station								
	Grading	5	Rubber Tired Dozers	247	1	8	0.40	790	214
			Tractors/Loaders /Backhoes	97	2	8	0.37	574	155
	Building Construction	80	Cranes	231	1	4	0.29	268	1,159
			Forklifts	89	2	6	0.20	214	924
			Tractors/Loaders /Backhoes	97	2	8	0.37	574	2,483
			Welders	46	2	6	0.45	248	1,074
Conveyance Facilities and Ancillary Facilities	Reservoir								
	Grading	10	Excavators	158	1	6	0.38	360	195
			Rubber Tired Dozers	247	2	6	0.40	1,186	641

Category	Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption (gallons)
			Tractors/Loaders /Backhoes	97	1	7	0.37	251	136
			Scrapers	367	1	6	0.48	1,057	571
	Foundation Construction	25	Cranes	231	1	4	0.29	268	362
			Forklifts	89	1	6	0.20	107	144
			Tractors/Loaders /Backhoes	97	1	8	0.37	287	388
	Reservoir Construction	100	Aerial Lifts	63	1	6	0.31	117	633
			Cranes	231	2	4	0.29	536	2,897
			Forklifts	89	1	6	0.20	107	577
			Tractors/Loaders /Backhoes	97	1	8	0.37	287	1,552
			Welders	46	4	6	0.45	497	2,685
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities								
	Grading	80	Crawler Tractors	212	2	6	0.43	1,094	4,730
			Excavators	158	2	7	0.38	841	3,635
			Rubber Tired Dozers	247	2	8	0.40	1,581	6,836
			Scrapers	367	2	6	0.48	2,114	9,141
			Tractors/Loaders /Backhoes	97	2	6	0.37	431	1,862
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities								
	Compacting/ Top Soil	80	Plate Compactors	8	2	7	0.43	48	208
			Rollers	80	2	7	0.38	426	1,840
			Tractors/Loaders /Backhoes	97	2	8	0.37	574	2,483
	Storage Basins Modifications								
	Grading	60	Excavators	158	1	4	0.38	240	779
			Graders	187	1	4	0.41	307	995
			Rubber Tired Dozers	247	1	4	0.40	395	1,282
			Tractors/Loaders /Backhoes	97	1	8	0.37	287	931
			Off-Highway Trucks	402	1	4	0.38	611	1,982
	Upgrades	80	Rollers	80	1	8	0.38	243	1,052
			Tractors/Loaders /Backhoes	97	2	7	0.37	502	2,173
			Plate Compactors	8	1	7	0.43	24	104
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant								
	Building Construction	262	Cranes	231	1	4	0.29	268	3,795
			Forklifts	89	1	4	0.20	71	1,008

Category	Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption (gallons)
			Tractors/Loaders /Backhoes	97	1	4	0.37	144	2,033
	New Advanced Water Purification Facility								
	Grading	40	Graders	187	1	7	0.41	537	1,160
			Rubber Tired Dozers	247	2	8	0.40	1,581	3,418
			Tractors/Loaders /Backhoes	97	2	8	0.37	574	1,242
Desalters and Water Treatment Facilities	New Advanced Water Purification Facility								
	Grading	40	Crawler Tractors	212	2	6	0.43	1,094	2,365
			Scrapers	367	1	6	0.48	1,057	2,285
	Building Construction	320	Cranes	231	2	4	0.29	536	9,270
			Forklifts	89	3	8	0.20	427	7,389
			Tractors/Loaders /Backhoes	97	2	7	0.37	502	8,691
			Welders	46	4	8	0.45	662	11,458
			Aerial Lifts	63	1	7	0.31	137	2,365
	Groundwater Treatment at Well Sites								
	Grading	20	Rubber Tired Dozers	247	1	6	0.40	593	641
			Tractors/Loaders /Backhoes	97	2	7	0.37	502	543
	Building Construction	40	Cranes	231	1	4	0.29	268	579
			Forklifts	89	2	6	0.20	214	462
			Welders	46	2	6	0.45	248	537
	New Regional Groundwater Treatment								
	Grading	40	Rubber Tired Dozers	247	1	8	0.40	790	1,709
			Tractors/Loaders /Backhoes	97	1	7	0.37	251	543
			Excavators	158	2	7	0.38	841	1,817
	Building Construction	120	Cement and Mortar Mixers	9	1	4	0.56	20	131
			Cranes	231	1	6	0.29	402	2,607
			Pumps	84	1	4	0.74	249	1,613
Desalters and Water Treatment Facilities	New Regional Groundwater Treatment								
	Building Construction	120	Forklifts	89	2	6	0.20	214	1,386
			Tractors/Loaders /Backhoes	97	2	7	0.37	502	3,259
			Welders	46	2	6	0.45	248	1,611
	Improve Existing Groundwater Treatment Facilities								
	80	Cranes	231	1	4	0.29	268	1,159	

Category	Construction Activity	Duration (Days)	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Fuel Consumption (gallons)
	Building Construction		Forklifts	89	1	6	0.20	107	462
			Tractors/Loaders /Backhoes	97	1	8	0.37	287	1,242
TOTAL CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)									148,576

The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower hour per gallon (hp-hr-gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines. For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the Project area and region⁵. As presented in **Table 4.5-7**, Project construction activities would consume an estimated 148,576 gallons of diesel fuel. Project construction would represent a “single-event” diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

Construction Worker Fuel Estimates

With respect to estimated VMT for the Project, the construction worker trips would generate an estimated 693,642 VMT during construction. Based on CalEEMod methodology, it is assumed that 50% of all worker trips are from light-duty-auto vehicles (LDA), 25% are from light-duty-trucks (LDT1⁶), and 25% are from light-duty-trucks (LDT2⁷). Data regarding Project related construction worker trips were based on CalEEMod defaults utilized within the AQGHGIA.

Vehicle fuel efficiencies for LDA, LDT1, and LDT2 were estimated using information generated within the 2021 version of the EMFAC developed by CARB. EMFAC2021 is a mathematical model that was developed to calculate emission rates, fuel consumption, and VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources. EMFAC2021 was run for the LDA, LDT1, and LDT2 vehicle class within the San Bernardino South Coast sub-area for the 2024 and 2025 calendar years. Data from EMFAC2021 is shown in Appendix 4.2 of the EA. **Tables 4.5-8 through 4.5-10** provide estimated annual fuel consumption resulting from Project construction worker trips. Based on **Tables 4.5-8 through 4.5-10**, it is estimated that 25,126 gallons of fuel will be consumed related to construction worker trips during full construction of the Project.

It should be noted that construction worker trips would represent a “single-event” gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

⁵ Based on Appendix A of the CalEEMod User’s Guide, Construction consists of several types of off-road equipment. Since the majority of the off-road construction equipment used for construction projects are diesel fueled, CalEEMod assumes all of the equipment operates on diesel fuel.

⁶ Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

⁷ Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

**Table 4.5-8
CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES LDA**

Category	Construction Activity	Duration (Days)	Worker (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells						
	Grading	20	5	14.7	1,470	31.57	47
	Building Construction	10	5	14.7	735	31.57	23
	Well Monitoring Device Installation						
	Building Construction	1	1	40	40	31.57	1
	Extensometer Installation						
	Building Construction	5	3	40	600	31.57	19
	Well Destruction						
	Demolition	30	5	14.7	2,205	31.57	70
Conveyance Facilities and Ancillary Facilities	Pipe Installation						
	Demo Roadway & Trench	20	7	6.9	966	31.57	31
	Install Pipe	10	7	6.9	483	31.57	15
	Backfill and Pave	10	7	6.9	483	31.57	15
	Booster Station						
	Grading	5	3	40	600	31.57	19
	Building Construction	80	3	40	9,600	31.57	304
	Reservoir						
	Grading	10	7	40	2,800	31.57	89
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities						
	Grading	80	10	40	32,000	31.57	1,014
	Compacting/Top Soil	80	10	40	32,000	31.57	1,014
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant						
	Building Construction	262	8	40	83,840	31.57	2,655
	New Advanced Water Purification Facility						
	Grading	40	8	40	12,800	31.57	405
	Building Construction	320	8	40	102,400	31.57	3,212
	Groundwater Treatment at Well Sites						
	Grading	20	3	40	2,400	31.57	76
	Building Construction	40	3	40	4,800	31.57	152
	New Regional Groundwater Treatment						
	Grading	40	5	40	8,000	31.57	253
	Building Construction	120	5	40	24,000	31.57	760
	Improve Existing Groundwater Treatment Facilities						
	Building Construction	80	5	40	16,000	31.57	507
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION – LDA							10,681

**Table 4.5-9
CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES LDT1**

Category	Construction Activity	Duration (Days)	Worker (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells						
	Grading	20	3	14.7	882	24.59	36
	Building Construction	10	3	14.7	441	24.59	18
	Well Monitoring Device Installation						
	Building Construction	1	1	40	40	24.59	2
	Extensometer Installation						
	Building Construction	5	2	40	400	24.59	16
	Well Destruction						
	Demolition	30	3	14.7	1,323	24.59	54
Conveyance Facilities and Ancillary Facilities	Pipe Installation						
	Demo Roadway & Trench	20	4	6.9	552	24.59	22
	Install Pipe	10	4	6.9	276	24.59	11
	Backfill and Pave	10	4	6.9	276	24.59	11
	Booster Station						
	Grading	5	2	40	400	24.59	16
	Building Construction	80	2	40	6,400	24.59	260
	Reservoir						
	Grading	10	4	40	1,600	24.59	65
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities						
	Grading	80	5	40	16,000	24.59	651
	Compacting/Top Soil	80	5	40	16,000	24.59	651
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant						
	Building Construction	262	4	40	41,920	24.59	1,705
	New Advanced Water Purification Facility						
	Grading	40	4	40	6,400	24.59	260
	Building Construction	320	4	40	51,200	24.59	2,068
	Groundwater Treatment at Well Sites						
	Grading	20	2	40	1,600	24.59	65
	Building Construction	40	2	40	3,200	24.59	130
	New Regional Groundwater Treatment						
	Grading	40	3	40	4,800	24.59	195
	Building Construction	120	3	40	14,400	24.59	586
	Improve Existing Groundwater Treatment Facilities						
	Building Construction	80	3	40	9,600	24.59	390
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION – LDT1							7,213

**Table 4.5-10
CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES LDT2**

Category	Construction Activity	Duration (Days)	Worker (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells						
	Grading	20	3	14.7	882	24.51	36
	Building Construction	10	3	14.7	441	24.51	18
	Well Monitoring Device Installation						
	Building Construction	1	1	40	40	24.51	2
	Extensometer Installation						
	Building Construction	5	2	40	400	24.51	16
	Well Destruction						
Conveyance Facilities and Ancillary Facilities	Demolition	30	3	14.7	1,323	24.51	54
	Pipe Installation						
	Demo Roadway & Trench	20	4	6.9	552	24.51	23
	Install Pipe	10	4	6.9	276	24.51	11
	Backfill and Pave	10	4	6.9	276	24.51	11
	Booster Station						
	Grading	5	2	40	400	24.51	16
	Building Construction	80	2	40	6,400	24.51	261
Storage Basins, Recharge Facilities, and Storage Bands	Reservoir						
	Grading	10	4	40	1,600	24.51	65
	New Storage Basins/Flood Facilities						
Desalters and Water Treatment Facilities	Grading	80	5	40	16,000	24.51	653
	Compacting/Top Soil	80	5	40	16,000	24.51	653
	Upgrade Existing Recycled WTP Plant						
	Building Construction	262	4	40	41,920	24.51	1,711
	New Advanced Water Purification Facility						
	Grading	40	4	40	6,400	24.51	261
	Building Construction	320	4	40	51,200	25.24	2,070
	Groundwater Treatment at Well Sites						
	Grading	20	2	40	1,600	24.51	65
	Building Construction	40	2	40	3,200	24.51	131
	New Regional Groundwater Treatment						
	Grading	40	3	40	4,800	24.51	196
	Building Construction	120	3	40	14,400	24.51	588
	Improve Existing Groundwater Treatment Facilities						
	Building Construction	80	3	40	9,600	24.51	392
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION – LDT2							7,232

Construction Vendor/Hauling Fuel Estimates

With respect to estimated VMT, the construction vendor trips (vehicles that deliver materials to the site during construction) would generate an estimated 567,686 VMT along area roadways for the Project over the duration of construction activity. It is assumed that 50% of all vendor trips are from medium-heavy duty trucks (MHDT), 50% of vendor trips are from heavy-heavy duty trucks (HHDT), and 100% of all hauling trips are from HHDTs. These assumptions are consistent with the CalEEMod defaults utilized within the within the AQIA. Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2021. EMFAC2021 was run for the MHDT and HHDT vehicle classes within the San Bernardino South Coast sub-area for the 2024 and 2025 calendar years. Data from EMFAC2021 is shown in Appendix 4.2 of the EA.

Based on **Tables 4.5-11 through 4.5-13**, it is estimated that 90,014 gallons of fuel will be consumed related to construction vendor and hauling trips during full construction of the Project.

It should be noted that construction vendor and hauling trips would represent a “single-event” gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

**Table 4.5-11
CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – MHDT**

Category	Construction Activity	Duration (Days)	Vendor (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells						
	Grading	20	1	50	1,000	8.32	120
	Building Construction	10	1	50	500	8.32	60
	Well Destruction						
	Demolition	30	1	6.9	207	8.32	25
Conveyance Facilities and Ancillary Facilities	Booster Station						
	Building Construction	80	3	20	4,800	8.32	577
	Reservoir						
	Foundation Construction	25	1	6.9	173	8.32	21
	Reservoir Construction	100	3	6.9	2,070	8.32	249
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities						
	Compacting/Top Soil	80	5	30	12,000	8.32	1,443
	Storage Basin Modifications						
	Grading	60	3	40	7,200	8.32	866
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant						
	Building Construction	262	5	40	52,400	8.32	6,301
	New Advanced Water Purification Facility						
	Building Construction	102	5	30	15,300	8.43	1,814
	Groundwater Treatment at Well Sites						
	Building Construction	40	5	6.9	1,380	8.32	166
Desalters and Water	New Regional Groundwater Treatment						
	Building Construction	120	5	30	18,000	8.32	2,164

Category	Construction Activity	Duration (Days)	Vendor (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Treatment Facilities	Improve Existing Groundwater Treatment Facilities						
	Building Construction	80	3	6.9	1,656	8.32	199
TOTAL CONSTRUCTION VENDOR FUEL CONSUMPTION – MHDT							14,006

**Table 4.5-12
CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES – HHDT**

Category	Construction Activity	Duration (Days)	Vendor (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Well Development and Monitoring Devices	ASR and Monitoring Wells						
	Grading	20	1	50	1,000	6.03	166
	Building Construction	10	1	50	500	6.03	83
	Well Destruction						
	Demolition	30	1	6.9	207	6.03	34
Conveyance Facilities and Ancillary Facilities	Booster Station						
	Building Construction	80	3	20	4,800	6.03	797
	Reservoir						
	Foundation Construction	25	1	6.9	173	6.03	29
	Reservoir Construction	100	3	6.9	2,070	6.03	344
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities						
	Compacting/Top Soil	80	5	30	12,000	6.03	1,992
	Storage Basin Modifications						
	Grading	60	3	40	7,200	6.03	1,195
Desalters and Water Treatment Facilities	Upgrade Existing Recycled WTP Plant						
	Building Construction	262	5	40	52,400	6.03	8,697
	New Advanced Water Purification Facility						
	Building Construction	102	5	30	15,300	6.13	2,496
	Groundwater Treatment at Well Sites						
	Building Construction	40	5	6.9	1,380	6.03	229
	New Regional Groundwater Treatment						
	Building Construction	120	5	30	18,000	6.03	2,987
	Improve Existing Groundwater Treatment Facilities						
	Building Construction	80	3	6.9	1,656	6.03	275
TOTAL CONSTRUCTION VENDOR FUEL CONSUMPTION – HHDT							19,323

**Table 4.5-13
CONSTRUCTION HAULING FUEL CONSUMPTION ESTIMATES – HHDT**

Category	Construction Activity	Duration (Days)	Hauling (Trips/Day)	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Conveyance Facilities and Ancillary Facilities	Pipe Installation						
	Demo Roadway & Trench	20	1	40	800	6.03	133
	Booster Station						
	Grading	5	20	20	2,000	6.03	332
Storage Basins, Recharge Facilities, and Storage Bands	New Storage Basins/Flood Facilities						
	Grading	80	100	30	240,000	6.03	39,832
	Storage Basins Modifications						
	Grading	60	60	40	144,000	6.03	23,899
TOTAL CONSTRUCTION HAULING FUEL CONSUMPTION – HHDT							64,196

Construction Energy Efficiency/Conservation Measures

The equipment used for Project construction would conform to CARB regulations and California emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

The Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations and best available control measures (BACM). More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. To this end, “grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling.” In this manner, construction equipment operators are informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by County building officials, and/or in response to citizen complaints.

Indirectly, construction energy efficiencies and energy conservation would be achieved for the proposed development through energy efficiencies realized from bulk purchase, transport and use of construction materials.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

OPERATIONAL ENERGY DEMANDS

In terms of operational energy demands, the proposed Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements. Operational energy demands are analyzed at a general level, rather than through generation of specific operational energy demand calculations as with construction energy demands, above. While construction energy demand can be estimated utilizing basic assumptions that apply to the whole of the types of OBMPU facilities that are being proposed, operational energy demands cannot be estimated utilizing these same assumptions for the reasons outlined in **Subchapter 4.2**. These are: (1) For certain types of facilities that are being proposed as part of the OBMPU, the IEUA and Watermaster have not collected sufficient data to predict operational energy demands, and as such, for facilities such as ASR wells, the energy required is dependent on several factors (how deep the well is drilled, the type of equipment required to operate the well, where the water is delivered to/from, etc.), that cannot be known until project-level design has been completed; (2) The exact design, type and size of facilities that are considered appurtenances—such as booster pump stations, reservoirs, etc.—defined under Project Category 2: Conveyance Facilities and Related Infrastructure, have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (3) The exact scope and type of new groundwater treatment facilities, and regional groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (4) the proposed upgrades to the Chino Desalters, to the WFA Agua de Lejos Treatment Plant, and to existing groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; and finally, (5) and finally, until a specific project is proposed at the design level, it is not known what source of energy will be utilized to operate said facility, which renders determining the energy-related operational emissions a speculative matter given that energy is anticipated to be increasingly generated by alternative sources over the 20-year planning horizon for the OBMPU. Ultimately, the OBMPU proposes a range of facilities, the project-level design for which has not yet been defined such that previous data gathered by the Watermaster, IEUA, and stakeholders could be utilized to generate a Program-specific operational energy demand calculation. The proposed Project does not include any known substantive new stationary or mobile sources of emissions, and therefore, by its very nature, will

not generate substantive amounts of energy demand from Project operations beyond that which can be accommodated through existing infrastructure, or through the installation and creation of project specific or Program wide alternative energy projects. For example, future OBMPU facilities could include a solar array and battery component to accommodate the energy demands for a given facility, or, as has been implemented by IEUA, future OBMPU facilities could incorporate wind turbines to power larger facilities. Furthermore, Stakeholder agencies, as part of implementation of their individual Climate Action Plans, may implement larger scale alternative energy projects (such as: solar array fields with batter storage, wind farms, and organic waste [wastewater byproducts] biodigesters that generate renewable natural gas) to accommodate the energy demanded by existing and future water and wastewater infrastructure under their individual jurisdictions.

The Project does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going energy demands. While it is anticipated that the Project would require intermittent maintenance, such maintenance would be minimal requiring a negligible amount of traffic trips on an annual basis.

Furthermore, as described in the GHG Assessment prepared by Urban Crossroads and provided as Appendix 7, Volume 2, while the proposed Project's operational energy demands cannot be quantified for the reasons set forth above, they can be qualitatively discussed and analyzed by comparing the embedded energy intensity of the water that would be supplied to the Basin by the facilities proposed under the OBMPU with other potential water sources, such as importing water from the California State Water Project or the Colorado River.

Numerous studies have analyzed the intersection of energy and water, including a recent study, "The Future of California's Water-Energy Climate Nexus" (Sept. 9, 2021) (Water-Energy Nexus Report), prepared by the nonprofit organization Next 10.⁸

The Water-Energy Nexus Report aimed to update prior estimates of water-related energy and GHG emissions in California and builds on numerous prior studies, such as work prepared for the California Public Utilities Commission, California Energy Commission, and others. The Water-Energy Nexus Report developed an assessment of the energy and GHG footprint related to water use in California in hopes of identifying opportunities associated with reducing water-related energy use and in turn, GHG emissions.

Based on the energy intensity shown in Table 4 of the Water-Energy Nexus Report (**Table 4.6-5** of Subchapter 4.6), reliance on local sources of water is significantly less energy intensive than relying on imported water from either the State Water Project (3,280 kWh/af) or the Colorado River (2,115 kWh/af). Even the most energy-intensive local source—recycled (indirect potable) treatment plus recycled water conveyance ($1,218 + 364 = 1,582$ kWh/af)⁹—by far the most energy-intensive local water source—is 25% less energy intensive than Colorado River water and more than 50% less than State Water Project water. Other sources of local supply included in the proposed Project, such as groundwater pumping (647 kWh/af), are 70% to 80% less energy intensive than imported water.

⁸ Next 10, September 2021. The Future of California Water-Energy Nexus
https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

⁹ To get an accurate understanding of the energy intensity of recycled water sources, one must add the energy required for recycled water generation to conveyance.

Qualitatively, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River. The offset in Project specific and cumulative energy demands by storing water in the Basin, rather than importing water to meet demand, would minimize energy demands from the proposed OBMPU such that there would be no significant operational impact associated with energy demands.

SUMMARY

Construction Energy Demands

The estimated power cost of on-site electricity usage during the construction of the Project is assumed to be approximately \$15,344.01. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be approximately 121,826 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 148,578 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. BACMs inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by city or county building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the Project would result in the estimated fuel consumption of 25,126 gallons of fuel. Additionally, fuel consumption from construction hauling and vendor trips (MHDTs and HHDTs) will total approximately 90,14 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved using bulk purchases, transport and use of construction materials. The 2022 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements. As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Operational Energy Demands

Ultimately, the OBMPU proposes a range of facilities, the project-level design for which has not yet been defined such that previous data gathered by the Watermaster, IEUA, and stakeholders could be utilized to generate a Program-specific operational energy demand calculation. However, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River. The offset in Project specific and cumulative energy demands by storing water in the Basin, rather than importing water to meet demand, would minimize energy demands from the proposed OBMPU such that there would be no significant operational impact associated with energy demands. As supported by the preceding discussions, the Project's operational energy consumption would not be considered inefficient, wasteful, or

otherwise unnecessary, particularly given the net reduction in energy demands from utilizing local water sources, in lieu of potential use of imported water, as a result of implementing the proposed OBMPU.

CONCLUSION

Energy Impact-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

As supported by the preceding analyses, Project construction would not result in the inefficient, wasteful or unnecessary consumption of energy. In fact, the proposed Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements which would result in a more efficient process and consequently reduce a wasteful use of energy. The energy demands of the Project can be accommodated within the context of available resources and energy delivery systems, which may also include the incorporation of renewable energy generation and/or storage equipment depending on the nature of the OBMPU facility and local constraints. Additionally, as the grid moves towards carbon neutrality and renewable sources of energy, even for facilities where incorporation of renewable energy generation and/or storage features are not feasible, the Project will automatically incorporate these energy sources by way of state regulatory schemes and the state's long-term climate goals and strategies. Further, as the jurisdictions in the Chino Basin begin to implement their own initiatives, including but not limited to their own Climate Action Plans (CAP), this will further push the Project towards meeting the state's goals. Finally, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive, the Project will offset energy requirements that would otherwise have occurred absent implementation of the Project. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

Significance Conclusion Before Mitigation: Less Than Significant

Energy Impact-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

The Project includes construction activity and associated improvements and would not obstruct a state or local plan for renewable energy or energy efficiency. As discussed above, the Project will be powered by electricity from the grid, and will therefore be more energy efficient and rely on renewable energy as the grid moves towards more efficiency and renewable energy sources.

Construction

As discussed above, the proposed Project would result in energy consumption through the combustion of fossil fuels in construction vehicles, worker commute vehicles, and construction equipment, and the use of electricity for temporary buildings, lighting, and other sources. California Code of Regulations Title 13, Sections 2449 and 2485, limit idling from both on- road and off-road diesel-powered equipment and are enforced by the ARB. The proposed Project would comply with these regulations. California's Renewable Portfolio Standard (RPS) establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly,

the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. By using newer and electrified construction equipment as it is phased in pursuant to requirements under AB 197 and similar law, policies and programs, the Project will be aligned with applicable plans and policies and would therefore be consistent with the California's RPS and 2022 Scoping Plan. There are no policies at the local level applicable to energy conservation specific to the construction phase. Thus, it is anticipated that construction of the proposed Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, construction-related consistency with energy efficiency and renewable energy standards would be less than significant.

Operation

The proposed Project would comply with these regulations. The California RPS establishes a goal of renewable energy for local providers to be 44 percent by 2040. Similarly, the State is promoting renewable energy targets to meet the 2022 Scoping Plan greenhouse gas emissions reductions. Operational electricity demand will decline as renewable and carbon neutral energy sources make up a larger and larger percentage of power on the grid in compliance with state's plans, policies, and regulations. Thus, the Project will be aligned with applicable plans and policies and would therefore be consistent with the California's RPS and 2022 Scoping Plan.

The Project would be designed and constructed in accordance with the latest adopted energy efficiency standards, which are based on the California Title 24 energy efficiency standards. Title 24 standards include a broad set of energy conservation requirements that apply to the structural, mechanical, electrical, and plumbing systems in a building. For example, the Title 24 Lighting Power Density requirements define the maximum wattage of lighting that can be used in a building based on its square footage. Title 24 standards are widely regarded as the most advanced energy efficiency standards, would help reduce the amount of energy required for lighting, water heating, and heating and air conditioning in buildings and promote energy conservation.

Furthermore, by reducing the demand for importing water, which is energy intensive, the Project will offset energy demands that would otherwise have occurred absent implementation of the Project. Compliance with the aforementioned mandatory measures would ensure that future development projects would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing energy use or increasing the use of renewable energy. Therefore, operational energy efficiency and renewable energy standards consistency impacts would be less than significant.

Significance Conclusion Before Mitigation: Less Than Significant

4.5.6 Avoidance, Minimization and Mitigation Measures

4.5.6.1 2000 OBMPU PEIR Mitigation Measures

No mitigation measures were identified in the 2000 OBMP PEIR under the "Energy" impact discussion. However, several mitigation measures that would be applicable to the Energy impact analysis herein were identified in the Utilities and Service Systems subchapter. While no mitigation measures are required to ensure a less than significant impact under any issue under Energy, mitigation measures designed to reduce energy consumption from construction and operation of the OBMPU are identified in the 2000 OBMP PEIR. The mitigation measures carried forward from the 2000 OBMP PEIR include Mitigation Measures **4.13-1**, and **4.13-3** through

4.13-5. 2000 OBMP PEIR include Mitigation Measures **4.13-2** and **4.13-6** are no longer applicable, as described in greater detail below.

2000 OBMP PEIR includes Mitigation Measure **4.13-2** requiring adherence to CCR Title 24, which is a mandatory requirement by which the Project must adhere. As 2000 OBMP PEIR include Mitigation Measure **4.13-2** enforces regulatory requirements, it is no longer applicable to this analysis.

2000 OBMP PEIR includes Mitigation Measure **4.13-6** pertaining to natural gas installation, and requires that such installation occur in accordance with the natural gas purveyor, and includes heating/energy efficiency measures. This mitigation measure is no longer applicable because it requires the enforcement of regulations that have become standard through CCR Title 24 Part 6: California's Energy Efficiency Standards, the CBC and California Green Code. As 2000 OBMP PEIR Mitigation Measure **4.13-6** enforces regulatory requirements, it is no longer applicable to this analysis.

Thus, 2000 OBMP PEIR Mitigation Measures **4.13-2** and **4.13-6** are no longer applicable for the purposes of the OBMPU.

4.5.6.2 Applicable Project Mitigation Measures

As discussed above, the following mitigation measures from the 2000 OBMP PEIR have been abstracted:

- 4.13-1** *Developers in the proposed Project Area should coordinate with SCE and other power companies regarding the location and phasing of required on-site electrical facilities.*
- 4.13-3** *Onsite electrical lines should be installed underground.*
- 4.13-4** *Project planners and architects should consult with SCE regarding current energy conservation techniques.*
- 4.13-5** *Project planners and architects should also consider the use of energy-efficient architecture and landscape design concepts which will work to reduce the long-term demands for fossil fuels. Such measures should include the following:*
 - *Architectural planning and design, to the extent feasible, should take full advantage of such concepts as natural heating and/or cooling through sun and wind exposure and solar energy collection system opportunities when practical; and*
 - *Landscape design should be tailored, where feasible, to the use requirements of individual structures, with the intent to minimize heat gain in summer, maximize heat gain in winter, and promote air circulation for heating and cooling purposes.*

While no mitigation measures are required to ensure a less than significant impact under any issue under Energy, mitigation measures designed to reduce energy consumption from construction and operation of the OBMPU are identified in **Subchapters 4.2, Air Quality, and 4.6, Greenhouse Gas**, of this RDSEIR (Mitigation Measures **GHG-1** and **GHG-2**, and **AQ-1** and **AQ-3**, specifically address this issue). The following mitigation measures are specific to this OBMPU RDSEIR:

- GHG-1** ***GHG Reduction Measures During Construction.** Implementing Agencies shall implement all feasible GHG reduction measures during construction. These may include, but should*

not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:

- ***Use alternative fuels for construction equipment***
- ***Use electric and hybrid construction equipment***
- ***Limit construction equipment idling beyond regulation requirements***
- ***Institute a heavy-duty off-road vehicle plan***
- ***Implement a construction vehicle inventory tracking system***

This mitigation measure includes a requirement for use of alternative fuels for construction equipment, and use of electric or hybrid construction equipment, which would contribute to preventing wasteful and inefficient consumption of energy. Furthermore, the limitation of construction equipment idling would reduce overall energy consumption, and would reduce the potential for wasteful and inefficient energy consumption to occur during construction of future OBMPU projects. Thus, while this mitigation measure is intended to reduce GHG emissions, energy and GHG emissions are inextricably connected because energy consumption results in GHG emissions at the source at which the energy is procured.

GHG-2 GHG Reduction Measures During Operation. Implementing Agencies shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:

- ***Exceed Title 24 Building energy efficiency standards***
- ***Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems***
- ***Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle***

The above mitigation measure would promote energy efficiency to the maximum extent feasible during operations through exceeding stringent Title 24 Building energy efficiency standards, procuring 100 percent renewable energy from Edison, and use of electric or hybrid vehicles at the corporate level, and promotion of the use of electric or hybrid vehicles at the private citizen level.

AQ-1: Tier Four Equipment. All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.

The above mitigation measure would require the use of Tier 4 rated equipment for construction equipment greater than 100 horsepower. The use of Tier 4 rated equipment in this instance, would result in increased efficiency of construction equipment, when compared to the average energy efficiency of standard construction equipment.

AQ-3: Exhaust Emissions Control

- ***Utilize well-tuned off-road construction equipment.***
- ***Establish a preference for contractors using Tier 3 or better rated heavy equipment.***
- ***Enforce 5-minute idling limits for both on-road trucks and off-road equipment***

The above mitigation measure would enforce 5-minute idling limits and use of well-tuned equipment, which would ensure wasteful use of energy to operate construction equipment does not occur. No additional mitigation measures are recommended or required. With implementation of the above mitigation measures, and compliance with federal and State regulations pertaining

to energy conservation, the proposed OBMPU is anticipated to have a less than significant impact on energy demand and resources.

4.5.7 Cumulative Impacts

Cumulative

Energy Impact-1: *Result in cumulatively significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.*

Cumulative development in the Chino Basin would increase demand for energy resources. Cumulative operational energy demands are analyzed at a general level, rather than through generation of specific operational energy demand calculations as with construction energy demands, above. While construction energy demand can be estimated utilizing basic assumptions that apply to the whole of the types of OBMPU facilities that are being proposed, operational energy demands cannot be estimated utilizing these same assumptions for the reasons outlined in **Subchapter 4.2 and 4.5**. Based on the energy intensity shown in Table 4 of the Water-Energy Nexus Report¹⁰ (**Table 4.6-5 in Subchapter 4.6, Greenhouse Gas**), reliance on local sources of water is significantly less energy intensive than relying on imported water from either the State Water Project or the Colorado River. Even the most energy-intensive local source is 25% less energy intensive than Colorado River water and more than 50% less than State Water Project water. Other sources of local supply included in the proposed Project, such as groundwater pumping, are 70% to 80% less energy intensive than imported water, with correspondingly lower GHG emissions. Thus, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River, which would minimize energy demands from the proposed OBMPU such that there would be no significant operational impact associated with energy demands.

However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require increasingly more efficient appliances and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue improving through implementation of the existing Pavley regulations under AB 1493, and implementation of the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy would reduce per capita vehicle miles traveled in the Chino Basin. Cumulative development in the Chino Basin will also be required to be consistent with applicable provisions of local General Plans related to energy efficiency and renewable energy as well as the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy. Furthermore, as shown in the tables below, the percentage of Statewide electricity and natural gas consumption attributed to San Bernardino and Riverside Counties (approximately 11.7 percent and 8.3 percent, respectively) is equal to or lower than the counties' proportion of the statewide population (approximately 11.7 percent¹¹). Additionally, the energy demands of the Project may also include the incorporation of renewable

¹⁰ Next 10, September 2021. The Future of California Water-Energy Nexus

https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

¹¹ According to the SCAG Local Profiles for 2021, the population of San Bernardino and Riverside Counties, when combined is 4,616,143 persons. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 07/20/23). According to the California Department of Finance, the California population was about 39,370,000 million in 2021. <https://dof.ca.gov/forecasting/demographics/e-2-california-county-population-estimates-and-components-of-change-by-year/> (accessed 07/20/23).

energy generation and/or storage equipment depending on the nature of the OBMPU facility and local constraints. As the grid moves towards carbon neutrality and renewable sources of energy, even for facilities where incorporation of renewable energy generation and/or storage features are not feasible, the Project will automatically incorporate these energy sources by way of state regulatory schemes and the state's long-term climate goals and strategies. Therefore, because the overall electricity and natural gas (energy) usage is below or on average the same as the Statewide average, and because the net reduction in energy demands from utilizing local water sources, in lieu of potential use of imported water, as a result of implementing the proposed OBMPU, the Project's energy demand is not anticipated to contribute to a significant cumulative impact related to the wasteful, inefficient, and unnecessary consumption of energy would not occur.

Table 4.5-14
2021 ELECTRICITY CONSUMPTION

Energy Type	Riverside and San Bernardino Counties (GWh)	Southern California Edison (GWh)	California (GWh)	Proportion of Southern California Edison Consumption	Proportion of Statewide Consumption
Electricity	32,947	81,129	280,734	40.6%	11.7%

GWh = gigawatt-hours

Source: CEC, 2023. "California Energy Consumption Database." <http://ecdms.energy.ca.gov/> (accessed 07/20/23).

Table 4.5-15
2021 NATURAL GAS CONSUMPTION

Energy Type	Riverside and San Bernardino Counties (millions of US therms)	SoCalGas (millions of US therms)	California (millions of US therms)	Proportion of SoCalGas Consumption	Proportion of Statewide Consumption
Natural Gas	992	5,100	11,922	19.5%	8.3%

Source: CEC, 2023. "California Energy Consumption Database." <http://ecdms.energy.ca.gov/> (accessed 07/20/23).

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

Cumulative

Energy Impact-2: *Cumulative conflicts with or obstruction a state or local plan for renewable energy or energy efficiency.*

Cumulative Impact Analysis

Cumulative growth in the SCE service area would affect regional energy demand. SCE energy demand planning is based on future growth predictions from the General Plans of local jurisdictions. For this reason, development consistent with the applicable General Plan would also be consistent with SCE demand planning. Cumulative development within the SCE service area is not anticipated to result in a significant impact in terms of impacting energy supplies because the majority of cumulative projects would be consistent with their respective General Plans and the growth anticipated by SCE. The OBMPU would ensure the management of the Chino Basin water supply, and implementing agencies would serve water supply needs for existing and

planned water demand and would not result in or accommodate unplanned growth. Therefore, as the OBMPU would not result in or accommodate unplanned growth outside of the limits of applicable General Plans and regional plans, the OBMPU would not result in cumulative energy impacts.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

4.5.8 Unavoidable Significant Adverse Impacts

With adherence to local General Plan policies, State and federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the proposed Project's potential energy cumulative and Program-specific impacts would be less than significant. While no mitigation measures are required to ensure a less than significant impact under any issue under Energy, mitigation measures designed to reduce energy consumption from construction and operation of the OBMPU are identified in **Subchapters 4.2, Air Quality, and 4.6, Greenhouse Gas**, of this RDSEIR (Mitigation Measures **GHG-1** and **GHG-2**, and **AQ-1** and **AQ-3**, specifically address this issue), and were identified under the 2000 OBMP PEIR through Mitigation Measures **4.13-1**, and **4.13-3** through **4.13-5**.

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4.6 GREENHOUSE GASES / GLOBAL CLIMATE CHANGE

4.6.1 Introduction

The *2020 Optimum Basin Management Program Update Greenhouse Gas Assessment* dated September 26, 2023 was prepared by Urban Crossroads to evaluate the potential impacts to greenhouse gas emissions and regulatory compliance thereof associated with construction and operation of the facilities proposed as part of the Optimum Basin Management Program Update (OBMPU, Project, or Program) RDSEIR. A copy of the Greenhouse Gas (GHG) Assessment (GHG Assessment) is provided as Appendix 7 of Volume 2 of this RDSEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.¹

The analysis contained in the 2000 OBMP PEIR, while still applicable, must be updated to reflect the current conditions of the Basin. The greenhouse gas subchapter was not part of the 2000 OBMP PEIR because it was not an individualized topic required under CEQA at that time. Furthermore, while carbon monoxide (a GHG precursor), was modeled as part of the 2000 OBMP PEIR, analysis of greenhouse gases and their emissions were not part of the purview of the 2000 OBMP PEIR.

The OBMPU is anticipated to be implemented over a planning horizon of 20 years, 2020 - 2040. The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities supporting the 9 Program Elements that make up the OBMPU. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Project Category 4: Desalters and Water Treatment Facilities.

A detailed description of the construction and operational activities associated with implementation of the OBMPU is included in the Project Description, Chapter 3 of this RDSEIR.

This document is a RDSEIR for the above-described project and all of the standard issues related to air quality identified in Appendix G of the State CEQA Guidelines. The issues pertaining to GHG will be discussed below as set forth in the following framework:

- 4.6.1 Introduction
- 4.6.2 Climate Change Setting
- 4.6.3 Regulatory Setting
- 4.6.4 Thresholds of Significance
- 4.6.5 Potential Impacts
- 4.6.6 Avoidance, Minimization and Mitigation Measures
- 4.6.7 Cumulative Impacts
- 4.6.8 Unavoidable Significant Adverse Impacts

¹ A previous air quality impact analysis was prepared for this project, reflecting the 2020 Project Description for the OBMPU. Much of the regulatory setting, air quality setting, and background data found in this report is relevant to this RDSEIR and some text from this report has been abstracted in this Subchapter. This report can be found at the following link: https://files.ceqanet.opr.ca.gov/259133-3/attachment/UN4edlmIEwwGdBpoFUkdUjm69bVTqBr1tgPpm7_20HPQd6ESpjHvjUkYsI0OiyAGhNC16A6wBajEKM BV0 (accessed 08/04/23)

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No comments were received at the scoping meeting or during the NOP Comment Period that pertain to Greenhouse Gas.

4.6.2 Climate Change Setting

4.6.2.1 Introduction to Global Climate Change (GCC)

GCC is defined as the change in average meteorological conditions on the earth with respect to historic temperature, precipitation, and storms. The majority of climate scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of greenhouse gases (GHGs) in the earth's atmosphere, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases, which have the effect of trapping heat in the atmosphere. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Program evaluated in this RDSEIR cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, this Subchapter will evaluate the potential for the proposed Program to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

4.6.2.2 Global Climate Change Defined

Global temperatures are regulated by naturally occurring atmospheric gases such as water vapor, CO₂, N₂O, CH₄, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the earth's average temperature would be approximately 61 degrees Fahrenheit (°F) cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature over the past 200 years.

4.6.2.3 Greenhouse Gases

4.6.2.3.1 GHGs and Health Effects

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties as discussed in **Table 4.6-1**. For the purposes of this analysis, emissions of CO₂, CH₄, and N₂O were evaluated (see **Table 4.6-1** later in this report) because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

Table 4.6-1
CRITERIA POLLUTANTS

Greenhouse Gases	Description	Sources	Health Effects
Water	Water is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to	The main source of water vapor is evaporation from the oceans (approximately 85%). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to water vapor at this time. It should be noted however that when some pollutants react with water vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through water vapor.

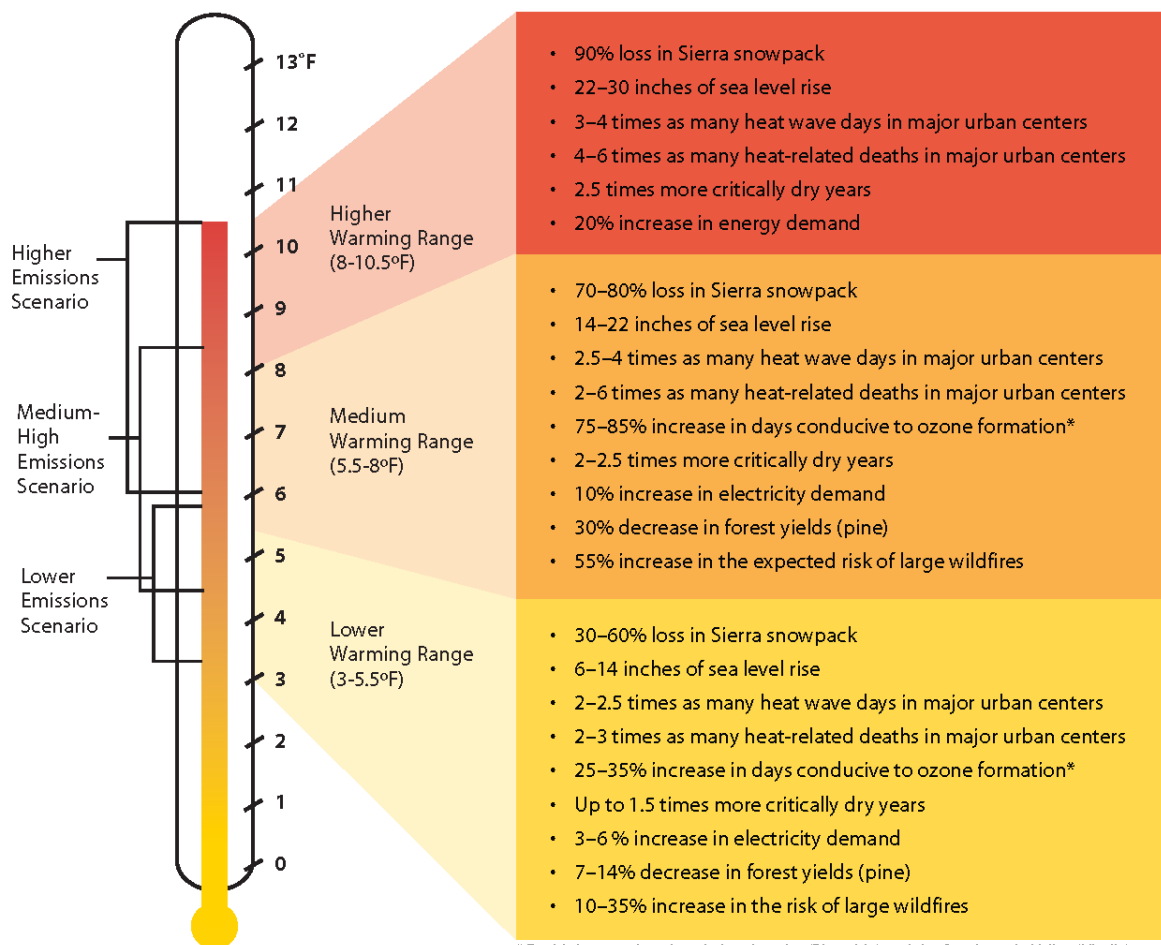
Greenhouse Gases	Description	Sources	Health Effects
	absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up).		
CO ₂	CO ₂ is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO ₂ concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30%. Left unchecked, the concentration of CO ₂ in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources.	CO ₂ is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO ₂ is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks.	Outdoor levels of CO ₂ are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO ₂ can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO ₂ in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period.
CH ₄	CH ₄ is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO ₂ and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH ₄ has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the	CH ₄ is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH ₄ can cause asphyxiation, loss of consciousness, headache

Greenhouse Gases	Description	Sources	Health Effects
		plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH ₄ . Other anthropocentric sources include fossil-fuel combustion and biomass burning.	and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N ₂ O	N ₂ O, also known as laughing gas, is a colorless GHG. Concentrations of N ₂ O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N ₂ O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (17).	N ₂ O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage).
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (18).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.

Greenhouse Gases	Description	Sources	Health Effects
	global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), chloroform (CHF ₃), 1,1,1,2-tetrafluoroethane (CH ₂ FCF), and 1,1-difluoroethane (CH ₃ CF ₂). Prior to 1990, the only significant emissions were of CHF ₃ . CH ₂ FCF emissions are increasing due to its use as a refrigerant.		
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF ₄) and hexafluoroethane (C ₂ F ₆). The EPA estimates that concentrations of CF ₄ in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF ₆	SF ₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (19). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.
Nitrogen Trifluoride (NF ₃)	NF ₃ is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI) indicates that NF ₃ has a 100-year GWP of 17,200 (20).	NF ₃ is used in industrial processes and is produced in the manufacturing of semiconductors, Liquid Crystal Display (LCD) panels, types of solar panels, and chemical lasers.	Long-term or repeated exposure may affect the liver and kidneys and may cause fluorosis (21).

The potential health effects related directly to the emissions of CO₂, CH₄, and N₂O as they relate to development projects, such as the proposed Project, are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas. **Exhibit 4.6-1** presents the potential impacts of global warming.

Exhibit 4.6-1
Summary of Projected Global Warming Impact, 2070-2099 (as compared with 1961-1990)



* For high ozone locations in Los Angeles (Riverside) and the San Joaquin Valley (Visalia)

Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

4.6.2.4 Global Warming Potential

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO₂ is utilized as the reference gas for GWP, and thus has a GWP of 1. CO₂ equivalent (CO₂e) is a term used for describing the difference GHGs in a common unit. CO₂e signifies the amount of CO₂ which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at **Table 4.6-2**. As shown in the table below, GWP for the 2nd Assessment Report², the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for

² United Nations, 2023. Global Warming Potentials (IPCC Second Assessment Report).
<https://unfccc.int/process/transparency-and-reporting/greenhouse-gas-data/greenhouse-gas-data-unfccc/global-warming-potentials> (accessed 07/23/23)

CO₂ to 23,900 for SF₆ and GWP for the IPCC's 5th Assessment Report³ range from 1 for CO₂ to 23,500 for SF₆.

Table 4.6-2
GWP AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	GWP (100-year time horizon)		
		2 nd Assessment Report	4 th Assessment Report	5 th Assessment Report
CO ₂	See*	1	1	1
CH ₄	12.4	21	25	28
N ₂ O	121	310	298	265
HFC-23	222	11,700	14,800	12,400
HFC-134a	13.4	1,300	1,430	1,300
HFC-152a	1.5	140	124	138
SF ₆	3,200	23,900	22,800	23,500
NF ₃	740	-	17,200	16,100

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

4.6.2.5 Greenhouse Gas Emissions Inventory

4.6.2.5.1 Global

Worldwide anthropogenic GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2017. Based on the latest available data, the sum of these emissions totaled approximately 29,216,501 gigagram (Gg) CO₂e⁴ as summarized on **Table 4.6-3**.

4.6.2.5.2 United States

As noted in **Table 4.6-3**, the United States, as a single country, was the number two producer of GHG emissions in 2021. Note that for China and India utilize data from 2020 as this is the most current data available.

Table 4.6-3
TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION⁵

	GHG Emissions (kt CO ₂ e)
China	12,300,200
United States	6,340,228
European Union (28-member countries)	3,468,394
India	3,170,000

³ IPCC, 2014. IPCC Fifth Assessment Report. <https://www.ipcc.ch/assessment-report/ar5/> (accessed 07/23/23)

⁴ The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUC F). For countries without 2017 data, the United Nations' Framework Convention on Climate Change (UNFCCC) data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014.

⁵ Used https://di.unfccc.int/time_series data for Annex I countries. Consulted the CAIT Climate Data Explorer in <https://www.climatewatchdata.org> site to reference Non-Annex I countries of China and India.

	GHG Emissions (kt CO ₂ e)
Russian Federation	2,156,599
Japan	1,168,094
Total	28,768,440

4.6.2.5.3 State of California

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls but is still a substantial contributor to the United States (U.S.) emissions inventory total.⁶ The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2020 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2019 GHG emissions period, California emitted an average 369.2 million metric tons of CO₂e per year (MMT CO₂e/yr) or 418,100 Gg CO₂e (6.26% of the total United States GHG emissions).⁷

4.6.2.6 Effects of Climate Change in California

4.6.2.6.1 Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35% under the lower warming range to 75 to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

4.6.2.6.2 Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90%. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which

⁶ World Resources Institute, 2023. Climate Analysis Indicator Tool (CAIT). [Online] <http://cait.wri.org> (accessed 05/31/23)

⁷ CARB, 2023. 2000-2020 GHG Inventory (2022 Edition). <https://ww2.arb.ca.gov/ghg-inventory-data> (accessed 07/23/23)

remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

4.6.2.6.3 Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25% of the water supply needed. Although higher CO₂ levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

4.6.2.6.4 Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90% due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

4.6.3 Regulatory Setting

4.6.3.1 International

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

4.6.3.1.1 IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

4.6.3.1.2 United Nation's Framework Convention on Climate Change (Convention)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

4.6.3.1.3 International Climate Change Treaties

The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP). Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make “nationally determined contributions” (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and “progress made in implementing and achieving” their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will “represent a progression” beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing \$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address “loss and damage” resulting from climate change, which explicitly will not “involve or provide a basis for any liability or compensation;”
- Require parties engaging in international emissions trading to avoid “double counting;” and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.

4.6.3.2 National

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

4.6.3.2.1 GHG Endangerment

In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the United States Supreme Court (U.S. Court) found that four GHGs, including CO₂, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor

vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.

Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section “Clean Vehicles” below. After a lengthy legal challenge, the U.S. Court declined to review an Appeals Court ruling that upheld the EPA Administrator’s findings.

4.6.3.2.2 Clean Vehicles

Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards would cut CO₂ emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012. The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO₂ in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks (HDT) and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20% reduction in CO₂ emissions and fuel consumption by the 2018 model year. For HDT and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10% reduction for gasoline vehicles and a 15% reduction for diesel vehicles by the 2018 model year (12 and 17% respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle

standards would achieve up to a 10% reduction in fuel consumption and CO₂ emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022-2025 GHG standards are not appropriate and should be revised. This Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022-2025 light-duty vehicles. On August 2, 2018, the NHTSA in conjunction with the EPA, released a notice of proposed rulemaking, the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks* (SAFE Vehicles Rule). The SAFE Vehicles Rule was proposed to amend exiting Corporate Average Fuel Economy (CAFE) and tailpipe CO₂ standards for passenger cars and light trucks and to establish new standards covering model years 2021 through 2026. As of March 31, 2020, the NHTSA and EPA finalized the SAFE Vehicle Rule which increased stringency of CAFE and CO₂ emissions standards by 1.5% each year through model year 2026.

4.6.3.2.3 Mandatory Reporting of GHGs

The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

4.6.3.2.4 New Source Review

The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule “tailors” the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

“This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the CAA, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016.”

The EPA estimates that facilities responsible for nearly 70% of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation’s largest GHG emitters—power plants, refineries, and cement production facilities.

4.6.3.2.5 Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units

As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO₂ for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts (MW) would be required to meet an output-based standard of 1,000 pounds (lbs) of CO₂ per MW-hour (MWh), based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016 the U.S. Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO₂ standards. The Clean Power Plan was officially repealed on June 19, 2019, when the EPA issued the final Affordable Clean Energy rule (ACE). Under ACE, new state emission guidelines were established that provided existing coal-fired electric utility generating units with achievable standards.'

4.6.3.2.6 Cap-and-Trade

Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the N₂O Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO₂ emissions from power plants, auctions CO₂ emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008 and in 2020 has retained all participating states.

The Western Climate Initiative (WCI) partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15% below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015. While the WCI has yet to publish whether it has successfully reached the 2020 emissions goal initiative set in 2007, SB 32, requires that California, a major partner in the WCI, adopt the goal of reducing statewide GHG emissions to 40% below the 1990 level by 2030.

4.6.3.2.7 SmartWay Program

The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components:

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.

4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HDTs will have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10% or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.
- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

4.6.3.2.8 Executive Order 13990

On January 20, 2021, Federal agencies were directed to immediately review, and take action to address, Federal regulations promulgated and other actions taken during the last 4 years that conflict with national objectives to improve public health and the environment; ensure access to clean air and water; limit exposure to dangerous chemicals and pesticides; hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; reduce greenhouse gas emissions; bolster resilience to the impacts of climate change; restore and expand our national treasures and monuments; and prioritize both environmental justice and employment.

4.6.3.3 California

4.6.3.3.1 Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

4.6.3.3.2 SB 1368

California SB 1368 adds Sections 8340 and 8341 to the Public Utilities Code (effective January 1, 2007) with the intent “to prevent long-term investments in power plants with GHG emissions in excess of those produced by a combined-cycle natural gas power plant” with the aim of “reducing emissions of GHGs from the state’s electricity consumption, not just the state’s electricity production.” SB 1368 provides a mechanism for reducing the GHG emissions of electricity providers, both in-state and out-of-state, thereby assisting CARB in meeting its mandate under AB 32, the Global Warming Solutions Act of 2006.

4.6.3.3.3 AB 32

The California State Legislature enacted AB 32, which required that GHGs emitted in California be reduced to 1990 levels by the year 2020 (this goal has been met⁸). GHGs as defined under AB 32 include CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The CARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

“Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.”

4.6.3.3.4 SB 375

On September 30, 2008, SB 375 was signed by Governor Schwarzenegger. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40% of the total GHG emissions in California. SB 375 states, “Without improved land use and transportation policy, California would not be able to achieve the goals of AB 32.” SB 375 does the following: it (1) requires metropolitan planning organizations (MPOs) to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

SB 375 requires MPOs to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses CEQA streamlining as an incentive to encourage residential projects, which help achieve AB 32 goals to reduce GHG emissions. Although SB 375 does not prevent CARB from adopting additional regulations, such actions are not anticipated in the foreseeable future.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

⁸ Based upon the 2019 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2017 GHG emissions period, California emitted an average 424.1 MMTCO₂e. This is less than the 2020 emissions target of 431 MMTCO₂e.

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).

Incorporates the MMs required by an applicable prior environmental document.

4.6.3.3.5 AB 1493 - Pavley Fuel Efficiency Standards

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program (LEV III) or the Advanced Clean Cars (ACC) program. The ACC program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for MY 2017 through 2025. The regulation will reduce GHGs from new cars by 34% from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid EV and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California. On March 9, EPA reinstated California's authority under the Clean Air Act to implement its own GHG emission standards for cars and light trucks, which other states can also adopt and enforce. With this authority restored, EPA will continue partnering with states to advance the next generation of clean vehicle technologies.

4.6.3.3.6 Clean Energy and Pollution Reduction Act of 2015 (SB 350)

In October 2015, the legislature approved, and Governor Jerry Brown signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for EV charging stations. Provisions for a 50% reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33% to 50% by 2030, with interim targets of 40% by 2024, and 25% by 2027.
- Double the energy efficiency in existing buildings by 2030. This target would be achieved through the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator (ISO) to develop more regional electrify transmission markets and to improve accessibility in these markets, which would facilitate the growth of renewable energy markets in the western United States.

4.6.3.3.7 SB 32

On September 8, 2016, Governor Brown signed SB 32 and its companion bill, AB 197. SB 32 requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80% below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature.

4.6.3.3.8 2017 CARB Scoping Plan

In November 2017, CARB released the Final 2017 Scoping Plan Update (2017 Scoping Plan), which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan reflects the 2030 target of a 40% reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks, and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH₄ emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO₂e for the year 2030, which corresponds to a 40% decrease in 1990 levels by 2030.

California's climate strategy would require contributions from all sectors of the economy, including the land base, and would include enhanced focus on zero and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH₄, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries would further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the *2017 Scoping Plan* framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing zero-emission vehicles (ZEV) buses and trucks.
- LCFS, with an increased stringency (18% by 2030).
- Implementing SB 350, which expands the RPS to 50% RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH₄ and HCF emissions by 40% and anthropogenic black carbon emissions by 50% by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20% reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the *2017 Scoping Plan* acknowledges that:

"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."

In addition to the statewide strategies listed above, the *2017 Scoping Plan* also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO₂e (MTCO₂e) or less per capita by 2030 and 2 MTCO₂e or less per

capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidence-based bright-line numeric thresholds—consistent with the 2017 *Scoping Plan* and the State’s long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and MMs that avoid or minimize project emissions to the degree feasible; or a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate. According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that by 2030, emissions could range from 211 to 428 MTCO₂e per year (MTCO₂e/yr), indicating that “even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40% below the 1990 level [of SB 32].” CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State’s 80% reduction goal by 2050, various combinations of policies could allow California’s cumulative emissions to remain very low through 2050.

4.6.3.3.9 2022 CARB Scoping Plan

On December 15, 2022, CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) (38). The 2022 Scoping Plan builds on the 2017 Scoping Plan as well as the requirements set forth by AB 1279, which directs the state to become carbon neutral no later than 2045. To achieve this statutory objective, the 2022 Scoping Plan lays out how California can reduce GHG emissions by 85% below 1990 levels and achieve carbon neutrality by 2045. The Scoping Plan scenario to do this is to “deploy a broad portfolio of existing and emerging fossil fuel alternatives and clean technologies, and align with statutes, Executive Orders, Board direction, and direction from the governor.” The 2022 Scoping Plan sets one of the most aggressive approaches to reach carbon neutrality in the world. Unlike the 2017 Scoping Plan, CARB no longer includes a numeric per capita threshold and instead advocates for compliance with a local GHG reduction strategy (CAP) consistent with CEQA Guidelines section 15183.5.

The key elements of the 2022 CARB Scoping Plan focus on transportation - the regulations that will impact this sector are adopted and enforced by CARB on vehicle manufacturers and outside the jurisdiction and control of local governments. As stated in the Plan’s executive summary:

“The major element of this unprecedented transformation is the aggressive reduction of fossil fuels wherever they are currently used in California, building on and accelerating carbon reduction programs that have been in place for a decade and a half. That means rapidly moving to zero-emission transportation; electrifying the cars, buses, trains, and trucks that now constitute California’s single largest source of planet-warming pollution.”

“[A]pproval of this plan catalyzes a number of efforts, including the development of new regulations as well as amendments to strengthen regulations and programs already in place, not just at CARB but across state agencies.”

Under the 2022 Scoping Plan, the State will lead efforts to meet the 2045 carbon neutrality goal through implementation of the following objectives:

- Reimagine roadway projects that increase VMT in a way that meets community needs and reduces the need to drive.
- Double local transit capacity and service frequencies by 2030.

- Complete the High-Speed Rail (HSR) System and other elements of the intercity rail network by 2040.
- Expand and complete planned networks of high-quality active transportation infrastructure.
- Increase availability and affordability of bikes, e-bikes, scooters, and other alternatives to light-duty vehicles, prioritizing needs of underserved communities.
- Shift revenue generation for transportation projects away from the gas tax into more durable sources by 2030.
- Authorize and implement roadway pricing strategies and reallocate revenues to equitably improve transit, bicycling, and other sustainable transportation choices.
- Prioritize addressing key transit bottlenecks and other infrastructure investments to improve transit operational efficiency over investments that increase VMT.
- Develop and implement a statewide transportation demand management (TDM) framework with VMT mitigation requirements for large employers and large developments.
- Prevent uncontrolled growth of autonomous vehicle (AV) VMT, particularly zero-passenger miles.
- Channel new mobility services towards pooled use models, transit complementarity, and lower VMT outcomes.
- Establish an integrated statewide system for trip planning, booking, payment, and user accounts that enables efficient and equitable multimodal systems.
- Provide financial support for low-income and disadvantaged Californians' use of transit and new mobility services.
- Expand universal design features for new mobility services.
- Accelerate infill development in existing transportation-efficient places and deploy strategic resources to create more transportation-efficient locations.
- Encourage alignment in land use, housing, transportation, and conservation planning in adopted regional plans (RTP/SCS and RHNA) and local plans (e.g., general plans, zoning, and local transportation plans).
- Accelerate production of affordable housing in forms and locations that reduce VMT and affirmatively further fair housing policy objectives.
- Reduce or eliminate parking requirements (and/or enact parking maximums, as appropriate) and promote redevelopment of excess parking, especially in infill locations.
- Preserve and protect existing affordable housing stock and protect existing residents and businesses from displacement and climate risk.

Included in the 2022 Scoping Plan is a set of Local Actions (Appendix D to the 2022 Scoping Plan) aimed at providing local jurisdictions with tools to reduce GHGs and assist the state in meeting the ambitious targets set forth in the 2022 Scoping Plan. Appendix D to the 2022 Scoping Plan includes a section on evaluating plan-level and project-level alignment with the State's Climate Goals in CEQA GHG analyses. In this section, CARB identifies several recommendations and strategies that should be considered for new development in order to determine consistency with the 2022 Scoping Plan. Notably, this section is focused on Residential and Mixed-Use Projects, in fact CARB states in Appendix D (page 4): "...focuses primarily on climate action plans (CAPs) and local authority over new residential development. It does not address other land use types (e.g., industrial) or air permitting."

Additionally on Page 21 in Appendix D, CARB states: "The recommendations outlined in this section apply only to residential and mixed-use development project types. California currently faces both a housing crisis and a climate crisis, which necessitates prioritizing recommendations

for residential projects to address the housing crisis in a manner that simultaneously supports the State's GHG and regional air quality goals. CARB plans to continue to explore new approaches for other land use types in the future." As such, it would be inappropriate to apply the requirements contained in Appendix D of the 2022 Scoping Plan to any land use types other than residential or mixed-use residential development

4.6.3.3.10 Cap-and-Trade

The 2017 Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program would help put California on the path to meet its goal of achieving a 40% reduction in GHG emissions from 1990 levels by 2030. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap would be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from regulated entities by more than 16% between 2013 and 2020, and by an additional 40% by 2030. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and would decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25,000 MTCO₂e/yr must comply with the Cap-and-Trade Program. Triggering of the 25,000 MTCO₂e/yr "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" for each MTCO₂e of GHG they emit. There also are requirements to surrender compliance instruments covering 30% of the prior year's compliance obligation by November of each year.

The Cap-and-Trade Program provides a firm cap, which provides the highest certainty of achieving the 2030 target. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the *First Update to the Climate Change Scoping Plan*:

"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative."

The Cap-and-Trade Program covers approximately 80% of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported.

4.6.3.3.11 Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order S-3-05

Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80% below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07 (LCFS)

The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020. The CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical

technical information, simplify and streamline program operations, and enhance enforcement. On November 16, 2015 the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

In 2018, the CARB approved amendments to the regulation, which included strengthening the carbon intensity benchmarks through 2030 in compliance with the SB 32 GHG emissions reduction target for 2030. The amendments included crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

Executive Order S-13-08

Executive Order S-13-08 states that “climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California’s economy, to the health and welfare of its population and to its natural resources.” Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy (CNRA 2009) was adopted, which is the “...first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States.” Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15

On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40% below 1990 levels by 2030. The Governor’s executive order aligns California’s GHG reduction targets with those of leading international governments ahead of the U.N. Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40% below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of MMTCO₂e. The Order also requires the state’s climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order B-55-18 and SB 100

SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25% of retail sales of electricity are required to be from renewable sources by December 31, 2016, 33% by December 31, 2020, 40% by December 31, 2024, 45% by December 31, 2027, and 50% by December 31, 2030. SB 100 raises California’s RPS requirement to 50% renewable resources target by December 31, 2026, and to achieve a 60% target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieve 44% of retail sales by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California EPA (CalEPA), the California Department of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Executive Order N-79-20 and Advanced Clean Cars II

On August 25, 2022 CARB approved the Advanced Clean Cars II rule, which codifies the goals set out in Executive Order N-79-20 and establishes a year-by-year roadmap such that by 2035, 100% of new cars and light trucks sold in California will be zero-emission vehicles. Under this regulation, automakers are required to accelerate deliveries of zero-emission light-duty vehicles, beginning with model year 2026. CARB estimates that the regulation would reduce GHG emissions from light-duty vehicles by 50% by 2040, and that from 2026 to 2040, GHG emissions would be reduced by a cumulative 395 million metric tons.

4.6.3.3.10 California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 20 CCR Sections 1601 Et Seq. – Appliance Efficiency Regulations

The Appliance Efficiency Regulations regulate the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles (RV) or other mobile equipment (CEC 2012).

Title 24 CCR Part 6 – California Energy Code

The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods.

Title 24 CCR Part 11 – California Green Building Standards Code

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons. The Program would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items.

Nonresidential Mandatory Measures

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle

- parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
 - Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
 - EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty electric vehicle supply equipment for warehouses, grocery stores, and retail stores.
 - Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
 - Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
 - Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
 - Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
 - Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor- mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
 - Outdoor potable water uses in landscaped areas. Nonresidential developments shall

comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).

- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

CARB Refrigerant Management Program

CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

Tractor-Trailer GHG Regulation

The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors MY 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

Phase I and 2 Heavy-Duty Vehicle GHG Standards

In September 2011, CARB has adopted a regulation for GHG emissions from HDTs and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the [Heavy-Duty Tractor-Trailer GHG Regulation](#)), and in-use fleet retrofit requirements such as the [Truck and Bus Regulation](#). The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements began with MY 2014 with stringency levels increasing through MY 2018. The rule organizes truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for medium-duty trucks (MDT) and HDT vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later MY HDT vehicles, including trailers. The EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MDT and HDT vehicles may be pursued.

SB 97 and the CEQA Guidelines Update

Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states “(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a).”

In 2012, Public Resources Code Section 21083.05 was amended to state:

“The Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption, to incorporate new information or criteria established by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.”

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the *CEQA Guidelines* for implementing CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

Section 15064.4 was added to the *CEQA Guidelines* and states that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively insignificant compared to statewide, national, or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

4.6.3.4 Regional

The project is within the South Coast Air Basin (SCAB), which is under the jurisdiction of the SCAQMD.

4.6.3.4.1 SCAQMD

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for an applicable exemption under CEQA. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, it would move to Tier 2.
- Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan or climate action plan. The GHG reduction plan must meet the minimum requirements further detailed in the interim guidance, which include compliance with AB 32 GHG reduction goals, analysis under CEQA, inclusion of GHG inventory tracking and monitoring provisions, and others. If the project is consistent with the qualifying local GHG reduction plan, project impacts related to GHG emissions are not significant. If the project is not consistent with a local GHG reduction plan, if there is no approved local GHG reduction plan, or if the local GHG reduction plan does not include all of the required components, the project would move to Tier 3.
- Tier 3 establishes screening significance thresholds and is the primary tier the SCAQMD Board uses for determining the significance of project impacts related to GHG emissions when it is the lead agency. The SCAQMD has set a screening significance threshold of 10,000 MT of CO₂e per year for determining whether a stationary source project would have a less-than-significant cumulative GHG impact. The threshold recommended for new residential or commercial projects is 3,000 MT of CO₂e per year.
- Tier 4 provides three compliance options for the lead agency based on performance standards. These include: reducing Business-As-Usual (BAU) emissions by a certain percentage, which is currently undefined; achieving early compliance with AB 32 through early implementation of CARB's Scoping Plan Measures; and establishing sector-based performance standards. If the performance standards or the compliance options in Tier 4 cannot be achieved, a project's GHG emissions would be considered significant.
- Tier 5 includes off-site mitigation to reduce a project's GHG emissions to below the applicable screening threshold.⁹

⁹ SCAQMD, 2008. "Board Meeting Agenda No. 31: Interim CEQA Greenhouse Gas (GHG) Significance Threshold." October. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2) (accessed 05/31/23)

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO₂ concentrations at 450 ppm, thus stabilizing global climate.

If the project includes stationary sources of emissions (such as emergency backup generators), SCAQMD permits may be required for construction and operation. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the project requires a stationary permit, it would be subject to the applicable SCAQMD regulations. Permitted equipment would be subject to applicable SCAQMD rules and regulations. SCAQMD Regulation XXVII addresses climate change with the following rules:

- Rule 2700 provides definitions of key terms and background information on global warming potential of various gases.
- Rule 2701 establishes the SoCal Climate Solutions Exchange, a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG reductions within SCAQMD's jurisdiction.
- Rule 2702 establishes a GHG Reduction Program under which SCAQMD funds projects through contracts in response to requests for proposals or purchase reductions from other parties.

4.6.3.4.2 2020 California Department of Water Resources Climate Action Plan¹⁰

The Climate Action Plan is the California Department of Water Resources' (DWR) guide to addressing climate change in the programs, projects, and activities over which it has authority. The Climate Action Plan is divided into three phases to address mitigation, adaptation, and consistency in the analysis of climate change. Phase I is the GHG Emissions Reduction Plan, which lays out DWR's GHG emissions reduction goals for the near-term (present to 2030) and long-term (2030 to 2045). Phase II is the Climate Change Analysis Guidance, which develops a framework and guidance for consistent incorporation and alignment of the analysis of climate change impacts in DWR's project and program planning activities. Phase III, the Climate Change Vulnerability Assessment, describes, evaluates, and quantifies the vulnerabilities of DWR's assets in business to potential climate change impacts. Phase III also includes an Adaptation Plan to help prioritize resiliency efforts. DWR's GHG emission reduction targets are consistent with State targets, and the near-term goal is to reduce GHG emissions to at least 60 percent below 1990 levels by 2030. The long-term goals for 2045 are to supply 100 percent of electricity load with zero-carbon resources and achieve carbon neutrality.

DWR's Phase I GHG Emissions Reduction Plan sets construction emissions thresholds to distinguish between typical construction projects and "extraordinary construction projects." Typical construction projects can rely on the Climate Action Plan for streamlined CEQA review. Extraordinary construction projects are not eligible for streamlined review if the project emits more than 25,000 MT of CO₂e in total during the construction phase of the project, or if the project emits more than 12,500 MT of CO₂e in any single year of construction. These thresholds represent the level of GHG emissions that, by themselves, could potentially adversely affect DWR's ability to achieve its GHG emissions reduction goals. DWR notes that these construction emissions thresholds are not established as thresholds of significance for CEQA purposes and should not be considered to constitute a determination by DWR that these thresholds are generally applicable as thresholds of significance for CEQA purposes. To demonstrate consistency with DWR's Climate Action Plan, projects must complete a series of steps, including quantifying GHG

¹⁰ DWR, 2020. "Climate Action Plan." <https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan> (accessed 05/31/23)

emissions from the project using DWR internal guidance, incorporating all project-level GHG emissions reduction measures listed in Chapter VI of the Climate Action Plan (or explaining why measures that have not been incorporated do not apply to the project), determining that the project does not conflict with DWR's ability to implement any of the specific project-level GHG emissions reduction measures listed in Chapter VI, and obtaining additional review if the project would increase energy demands of the State Water Project (SWP) system by 15 gigawatts per year or more. Required project-level GHG emissions reduction measures focus on implementation of best management practices and compliance with existing regulations. The reduction measures aim to reduce GHG emissions from construction projects by minimizing fuel use by construction equipment, reducing fuel consumption for transportation of construction materials, reducing the amount of landfill material, and reducing emissions from the production of cement.

4.6.3.5 Local

4.6.3.5.1 Local Climate Action Plans

The following Cities and Counties (with Unincorporated Area) that fall within the Chino Basin have adopted Climate Actions Plans; the links to the plans are embedded in the text:

- [City of Chino Climate Action Plan](#)
- [City of Claremont Sustainable City Plan](#)
- [City of Fontana Climate Action Plan](#)
- [City of Ontario Climate Action Plan](#)
- [City of Pomona Green Plan](#)
- [Rancho Cucamonga Climate Action Plan](#)
- [County of Riverside Climate Action Plan](#)
- [San Bernardino County Regional Greenhouse Gas Reduction Plan](#)

These Plans were created in accordance with AB 32, which established a greenhouse gas limit for the state of California. The Plans seek to create an inventory of GHG gases and develop jurisdiction specific GHG reduction measures and baseline information that could be used by each jurisdiction.

4.6.3.5.2 IEUA Climate Change Action Plan¹¹

IEUA has voluntarily reported and verified its GHG emissions since 2013 and adopted a Climate Change Action Plan (CCAP) in 2019, which sets GHG emission reduction goals. IEUA aims to balance regional sustainability efforts with environmentally conscious energy management strategies to identify projects and objectives that holistically address climate change efforts. The CCAP's GHG reduction goals are listed below:

- Reduce GHGs to AB 32 Levels: IEUA will follow AB 32 standards using the oldest emission baseline data available to reduce GHG levels to 2007 levels by 2020, 40 percent below 2007 levels by 2030, and 80 percent below 2007 levels by 2050.
- Strive toward Carbon Neutrality: IEUA's current renewable portfolio is capable of meeting approximately 50 percent of the agency-wide power needs. Increasing this capacity will reduce IEUA's impact on climate change and enhance environmental sustainability.
- Report GHG Emissions: IEUA will continue to report GHG emissions across all facilities to The Climate Registry. Rather than focusing on lowering IEUA's direct GHG emissions, potential projects will be evaluated on their potential to reduce global GHG emissions.

¹¹ IEUA, 2019. *Climate Change Action Plan*. <https://www.ieua.org/wp-content/uploads/2019/01/2019-IEUA-Climate-Change-Action-Plan-with-Appendices.pdf> (accessed 05/31/23)

- **Increase Energy Efficiency:** Optimizing facility processes and retrofitting equipment can result in less power demand on the electrical grid.
- **Reduce Methane Emissions:** IEUA will strive toward optimizing resource recovery by pursuing projects that beneficially use the methane generated in the digestion process as a renewable source of heat and/or power generation.
- **Renewable Energy Credits:** In the event where meeting an 80 percent reduction by 2050 is not possible from the utilization of renewable resources, IEUA plans to purchase renewable energy credits.

The CCAP also establishes goals and objectives to guide development of future projects. IEUA has identified key areas that should be addressed to create a resilient water and wastewater management system that also contributes to GHG emission reductions. These goals and objectives are listed below:

- **Goal: Maximize recycled water production and usage.**
 - **Objective:** Expand infrastructure at IEUA sites, within the region, or surrounding areas to enhance capabilities for end user application, storage, or groundwater replenishment of recycled water.
 - **Objective:** Upgrade and/or modernize facilities to ensure effective water treatment and continued compliance with all regulatory requirements.
- **Goal: Maintain health of the groundwater aquifer.**
 - **Objective:** Improve stormwater capture through improvements to the groundwater replenishment system infrastructure.
 - **Objective:** Enhance groundwater replenishment capabilities within the Chino Basin through infrastructure upgrades.
 - **Objective:** Treat groundwater effectively to remove harmful contaminants and ensure a healthy aquifer.
 - **Objective:** Protect the groundwater quality by properly maintaining and upgrading infrastructure to prevent system failures that may contaminate the groundwater.
 - **Objective:** Enhance storage capabilities of storm, recycled, or imported water through expansion of existing infrastructure or collaboration with surrounding water systems.
- **Goal: Maximize system efficiencies.**
 - **Objective:** Improve energy efficiencies at IEUA facilities.
 - **Objective:** Develop water use efficiency and/or conservation programs within the region.
 - **Objective:** Strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources
- **Goal: Measure performance.**
 - **Objective:** Report GHG emissions annually through The Climate Registry.
 - **Objective:** Track key performance indicators for recycled, storm, and imported water usage within IEUA's management system.

The CCAP does not include thresholds of significance for GHG emissions from IEUA's projects or establish mechanisms for the review of GHG emissions of specific projects.

4.6.4 Thresholds of Significance

The Program has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following section.

The criteria used to determine the significance of potential Project-related GHG impacts are taken from Appendix G of the *State CEQA Guidelines*. Based on these thresholds, a project would result in a significant impact related to GHG if it would:

- a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

4.6.4.1 CalEEMod

GHG emissions from construction of individual projects under the OBMPU were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, consistent with guidance from the SCAQMD.^{12,13} In July 2021, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of CalEEMod version 2020.4.0, which incorporates the latest vehicle emissions standards, construction fleet mix standards, and other applicable regulations. This model has been used to calculate construction-source GHG emissions from on-site and off-site (i.e., mobile) sources. Output from the model runs for construction activity are provided in the Appendix to the AQGHGIA.

4.6.4.2 Construction Life-Cycle Analysis not Required

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time. Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate. The science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

4.6.4.3 GHG Emissions Evaluation Methodology

Section 15064.4 of the California Code of Regulations specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate

¹² SCAQMD. 2021. "Frequently Asked Questions: What is CalEEMod and what is it used for?" <http://www.aqmd.gov/home/rules-compliance/ceqa/air-qualityanalysis-handbook/frequently-asked-questions> (accessed 07/23/23).

¹³ CalEEMod Version 2020.40.0 was utilized in support of this analysis as it was the approved version at the time the GHG emissions were estimated as part of the AQIA. CalEEMod Version 2022, the most current version of CalEEMod was, at the time the Air Quality Impact Analysis was modeled, in draft form. The two models ultimately return emissions forecasts for development projects, but the new model utilizes different methodologies to achieve the end emissions forecast.

mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative, or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

4.6.5 Potential Impacts

4.6.5.1 a) Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

As previously stated, the OBMPU consists of the construction and operation of the following facilities:

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

CONSTRUCTION

The following analysis has been abstracted from the 2020 Optimum Basin Management Program Update Greenhouse Gas Assessment prepared by Urban Crossroads and provided as Appendix 7 to this RDSEIR. Construction activities associated with the implementation of the proposed Project would result in emissions of CO₂ and CH₄, with the majority of emissions originating from construction equipment burning fossil fuel during construction. As required by AB 197, construction diesel equipment has progressively become more efficient and cleaner due to the phasing out of older equipment and replacing them with new equipment which have improved emission technology and electrified construction equipment.

Table 4.5-4 summarizes the Lifetime and Amortized GHG emissions associated with construction of the proposed Project. This information was obtained from the *Air Quality Impact Analysis (Gerrick Environmental, Appendix 2a)*. The construction “Emissions Per Project Category” are multiplied by the total number of “Projects Per Category Built” in order to determine the total lifetime emissions that are expected to occur. As shown, the Proposed Project will result in approximately 13,669.20 MTCO₂e over the lifetime of the Project and approximately 683.46 MTCO₂e annually (amortized over the 20-year horizon of the OBMPU [2020-2040]).

**Table 4.6-4
OBMPU CONSTRUCTION GHG EMISSIONS**

Category	Emissions Per Project Category MTCO ₂ e	Number of Projects Per Category Built	Emissions (MT/yr)
Well Development and Monitoring Devices			
Drill ASR and Monitoring Wells	49.4	207	10,225.8
Install In-Line Flow Meters ^a	0.03	400 ^a	12.0
Install Extensometer	1.3	3	3.9
Well Destruction or reconstruction/modification ^b	13.5	5 ^b	67.5
Conveyance Facilities and Ancillary Facilities			-
Pipeline Install (linear feet for 2 teams)	100.9	620,600	625.6
Booster Station Construction	72.0	18	1,296.0
Reservoir Construction	107.2	14	1,500.8
Storage Basins, Recharge Facilities, and Storage Bands			-
Storage Basins Construction w Haul	673.3	4	2,693.2
Storage Basin Modification	102.8	2	205.6
Desalters and Water Treatment Facilities			-
Upgrade Existing WTP	229.2	1	229.2
New H2O Purification Facility Construction	463.1	1	463.1
Groundwater Treatment at Well Sites Construction	32.3	20	646.0
New Regional Ground Water Treatment Construction	201.4	4	805.6
Improve Existing Ground Water Treatment Facilities	37.8	1	37.8
Total Lifetime MTCO₂e			13,669.20
Total Annual MTCO₂e¹			683.46

*rounded off in excel

**number of years to achieve total builds x emissions per year

^a 300 flow and 100 transducers

^b 5 destroy 5 reconstruct.

¹ It should be noted that the emissions are amortized over a 20-year period

OPERATIONS

The following analysis has been abstracted from the 2020 Optimum Basin Management Program Update Greenhouse Gas Assessment prepared by Urban Crossroads and provided as Appendix 7 to this RDSEIR. In terms of operational GHG emissions, the proposed Project involves the construction of wells, conveyance facilities and ancillary facilities, storage basins, recharge facilities, storage bands, desalters and water treatment facilities, and associated improvements. These components of the proposed Project are all assumed to be powered by electricity that comes from the grid. As the grid moves towards carbon neutrality and renewable sources of energy, with the goal of 100% clean energy by 2045, the facilities identified in the Project are anticipated to incorporate these energy sources by way of state regulatory schemes and the state's long-term climate goals and strategies, such as AB 197, AB 32, SB 32, SB 350, and SB 100.

Further, the proposed Project does not propose any substantive new stationary or mobile sources of GHG emissions, and therefore, by its very nature, will not generate quantifiable GHG emissions from Project operations. The proposed Project does not propose a trip-generating land use or facilities that would generate any substantive amount of on-going GHG emissions. While it is anticipated that the Project would require intermittent maintenance, such maintenance would be minimal, requiring a negligible amount of traffic trips on an annual basis.

Subchapters 4.2 (Air Quality) and 4.5 (Energy) of this DSEIR explain that, at this time, the project-level design for the OBMPU facilities has not yet been defined such that that previous data gathered could be utilized to generate OBMPU-specific operational energy demand calculations. Those chapters explain the difficulties of quantifying the proposed Project's operational energy demand as follows:

- (1) For certain types of facilities that are being proposed as part of the OBMPU, the IEUA and Watermaster have not collected sufficient data to predict operational energy demands, as such, for facilities such as ASR wells, the energy required is dependent on several factors (how deep the well is drilled, the type of equipment required to operate the well, where the water is delivered to/from, etc.), that cannot be known until project-level design has been completed;
- (2) The exact design, type and size of facilities that are considered appurtenances—such as booster pump stations, reservoirs, etc.—defined under Project Category 2: Conveyance Facilities and Related Infrastructure, have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed;
- (3) The exact scope and type of new groundwater treatment facilities, and regional groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed;
- (4) The proposed upgrades to the Chino Desalters, to the WFA Agua de Lejos Treatment Plant, and to existing groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed;
- (5) and finally, until a specific project is proposed at the design level, it is not known what source of energy will be utilized to operate said facility, which renders determining the energy-

related operational emissions a speculative matter given that energy is anticipated to be increasingly generated by alternative sources over the planning horizon for the OBMPU.

Therefore, the energy demands of the OBMPU components, and their associated GHG emissions, are too speculative and cannot be quantified at this time. CEQA Guidelines Section 15064.4 recognizes that it may not be always possible to quantify GHG emissions and gives the lead agency the discretion to determine, in the context of a particular project, whether to quantify GHG emissions from a particular project, and/or rely on a qualitative analysis or performance-based standards.

While the proposed Project's operational energy demands cannot be quantified for the reasons set forth above, they can be qualitatively discussed and analyzed by comparing the embedded energy intensity of the water that would be supplied to the Basin by the facilities proposed under the OBMPU with other potential water sources, such as importing water from the California State Water Project or the Colorado River.

Numerous studies have analyzed the intersection of energy and water, including a recent study, "The Future of California's Water-Energy Climate Nexus" (Sept. 9, 2021) (Water-Energy Nexus Report), prepared by the nonprofit organization Next 10.¹⁴

The Water-Energy Nexus Report aimed to update prior estimates of water-related energy and GHG emissions in California and builds on numerous prior studies, such as work prepared for the California Public Utilities Commission, California Energy Commission, and others. The Water-Energy Nexus Report developed an assessment of the energy and GHG footprint related to water use in California in hopes of identifying opportunities associated with reducing water-related energy use and in turn, GHG emissions.

The Water-Energy Nexus Report identifies the embedded energy demands from water conveyance methods for various regions in California, including the South Coast region, which includes the area where the proposed Project resides. (Water-Energy Nexus Report at p. 18.) The Report then identifies the embedded energy use by kilowatt hours per acre-foot (kWh/af) for each California region based on the various stages of the water cycle, including water generation or extraction, conveyance, treatment, and distribution.

The proposed Project would implement all of the Water Generation/Extraction methods defined by the Water-Energy Nexus Report, including groundwater pumping, recycled (non-potable) treatment, and recycled (indirect potable) treatment. With respect to Water Conveyance, the proposed Project would include local surface water deliveries, local imported deliveries, and recycled water conveyance. Table 4 of the Water-Energy Nexus Report is reproduced below as **Table 4.6-5**.

¹⁴ Next 10, September 2021. The Future of California Water-Energy Nexus
https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

Table 4.6-5
EXCERPT OF TABLE 4 OF THE WATER-ENERGY NEXUS REPORT

TABLE 4 California Electricity (kWh/AF) and Natural Gas (MMBtu/AF) Energy Intensities by Hydrologic Region, by Water Cycle Stage

	North Coast	San Francisco Bay	Central Coast	South Coast	Sacramento River	San Joaquin River	Tulare Lake	North Lahontan	South Lahontan	Colorado River
Electricity Energy Intensity (kWh/AF)										
1. Water Generation/Extraction										
Groundwater Pumping	343	453	479	647	350	365	450	320	433	494
Recycled (Indirect Potable) Treatment	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218	1,218
Recycled (Non-potable) Treatment	543	543	543	419	508	508	508	508	508	508
2. Water Conveyance										
Local Surface Water Deliveries	110	110	118	128	118	118	118	110	118	128
Local Imported Deliveries	116	137	44	44	44	44	44	44	44	44
Central Valley Project Deliveries	225	650	726	225	225	334	196	NA	NA	NA
Colorado River Deliveries	NA	NA	NA	2,115	NA	NA	NA	NA	NA	225
State Water Project Deliveries	NA	1,031	2,043	3,280	238	501	2,158	NA	3,505	4,000
Seawater Desalination Conveyance	100	100	100	100	100	100	100	100	100	100
Recycled Water Conveyance	364	364	364	364	364	364	364	364	364	364
3. Water Treatment										
Conventional Drinking Water Treatment	237	237	237	227	235	235	235	235	235	235
Seawater Desalination Treatment	4,503	4,503	4,503	4,503	4,503	4,503	4,503	4,503	4,503	4,503
Brackish Desalination Treatment	1,593	1,593	1,593	1,593	1,707	1,707	1,707	1,593	1,593	1,593
4. Distribution										
Urban Water Distribution	501	977	501	501	54	54	54	54	501	54
Agricultural Water Distribution	144	144	144	488	19	19	389	144	389	488

The embedded energy intensity of alternate sources of supply to the Basin, such as the California State Water Project and the Colorado River, are also included in **Table 4.6-5**, and serve as a qualitative basis for comparing the energy use of the proposed Project—and consequently, its GHG emissions—to alternative sources of supply.

Based on the energy intensity shown in Table 4 of the Water-Energy Nexus Report (**Table 4.6-5** herein), reliance on local sources of water is significantly less energy intensive than relying on imported water from either the State Water Project (3,280 kWh/af) or the Colorado River (2,115

kWh/af). Even the most energy-intensive local source—recycled (indirect potable) treatment plus recycled water conveyance ($1,218 + 364 = 1,582$ kWh/af)¹⁵—by far the most energy-intensive local water source—is 25% less energy intensive than Colorado River water and more than 50% less than State Water Project water. Other sources of local supply included in the proposed Project, such as groundwater pumping (647 kWh/af), are 70% to 80% less energy intensive than imported water, with correspondingly lower GHG emissions. In addition, as discussed in Subchapter 4.5 (Energy), certain components of the proposed Project may include opportunities to incorporate renewable energy and/or energy storage components, which if constructed, could further reduce the electricity demands from the grid and corresponding GHG emissions resulting from OBMPU implementation. No other indirect GHG emissions sources have been identified at this time, consequently, no impacts from indirect GHG emissions sources are anticipated.

Qualitatively, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River.

GHG EMISSIONS CONCLUSION

Given the inability at this time to quantify the proposed Project's operational GHG emissions, it is also inappropriate to apply a quantitative significance threshold to determine whether the proposed Project would have the potential to generate direct or indirect GHG emissions that would result in a significant impact on the environment. Instead, this analysis has evaluated the energy intensity of the water to be generated through the operations of the proposed Project and compared it to the energy intensity of alternative sources of supply. For informational purposes, the annual GHG emissions associated with the production of up to 20,000 afy has been calculated to represent the potential water supply capacity that the Project could provide. This figure is based on the concept that over a 10-year period, up to 200,000 af of water could be stored in the Basin as a result of the increase in Safe Storage Capacity proposed under the OBMPU, and analyzed for feasibility in the *2023 Storage Framework Investigation Report* (Appendix 6b, Volume 2). The 2023 SFI assumes that 50,000 af of water would be stored in the Basin each year over a four-year period, for a total of 200,000 af in storage, and then the water stored in the Basin would be held for three years and extracted from the Basin over a three-year period, the cycle then repeats. Divided over a 10-year period, the water stored in the Basin would average 20,000 afy. This is how the figure of 20,000 afy was selected for the purposes of this informational discussion.

As shown on **Table 4.6-6** below, GHG emissions associated with water conveyance from the Colorado River Deliveries or State Water Project Deliveries are substantially greater than all other water conveyance sources. Further, if the Project's annual amortized construction emissions (683.46 MTCO_{2e} per year) are added to any of the local sources, the resulting annual GHG emissions would be substantially less than the amount of GHG emissions for the same amount of water conveyed from either the Colorado River Deliveries or State Water Project Deliveries.

¹⁵ To get an accurate understanding of the energy intensity of recycled water sources, one must add the energy required for recycled water generation to conveyance.

Table 4.6-6
ESTIMATED GHG EMISSIONS FROM WATER CONVEYANCE SOURCES

	kWh/AF	AF/Year	kWh/year	MW/year	Tons CO ₂ e/year	Metric Tons CO ₂ e/Year
Local Surface Water Deliveries	128	20,000	2,560,000	2,560	364.80	330.94
Local Imported Deliveries	44	20,000	880,000	880	125.40	113.76
Central Valley Project Deliveries	225	20,000	4,500,000	4,500	641.25	581.73
Colorado River Deliveries	2115	20,000	42,300,000	42,300	6,027.75	5,468.28
State Water Project Deliveries	3280	20,000	65,600,000	65,600	9,348.00	8,480.37
Seawater Desalination Conveyance	100	20,000	2,000,000	2,000	285.00	258.55
Recycled Water Conveyance	365	20,000	7,300,000	7,300	1,040.25	943.70

Conversions:

Tons of CO₂ equivalent/MWh (avg 2026-2035) from Water-Energy Nexus Report 0.1425

Tons to Metric Tons 0.907185

On this basis, implementing the proposed Project would be substantially less energy intensive than relying on an equivalent amount of imported water and, in turn, would generate substantially less GHG emissions. Therefore, the proposed Project's direct and indirect GHG emissions would not result in a significant impact on the environment.

Level of Significant Before Mitigation: Less Than Significant

Mitigation Measures:

The proposed Program will incorporate the following construction related GHG emission reduction measures identified by the CAPCOA in its 2010 report, *Quantifying Greenhouse Gas Mitigation Measures*, into OBMPU construction activities, as defined in Mitigation Measure **GHG-1**.¹⁶

- Use alternative fuels for construction equipment;
- Use electric and hybrid construction equipment;
- Limit construction equipment idling beyond regulation requirements;
- Institute a heavy-duty off-road vehicle plan; and
- Implement a construction vehicle inventory tracking system.

The proposed Program will incorporate the following operational GHG emission reduction measures identified by the CAPCOA in its 2010 report, *Quantifying Greenhouse Gas Mitigation Measures*, into OBMPU operational activities, as feasible, and as defined in Mitigation Measure **GHG-2**:

- Exceed Title 24 Building energy efficiency standards;
- Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems; and,
- Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle.

The following mitigation measures shall be implemented to further reduce GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and proposed to be implemented.

¹⁶ CAPCOA, 2010. "Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures." August. <https://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/quantifying-greenhouse-gas-mitigation-measures.pdf?sfvrsn=0> (accessed 05/31/23).

These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis above.

GHG-1 ***GHG Reduction Measures During Construction. Implementing Agencies shall implement all feasible GHG reduction measures during construction. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:***

- ***Use alternative fuels for construction equipment***
- ***Use electric and hybrid construction equipment***
- ***Limit construction equipment idling beyond regulation requirements***
- ***Institute a heavy-duty off-road vehicle plan***
- ***Implement a construction vehicle inventory tracking system***

GHG-2 ***GHG Reduction Measures During Operation. Implementing Agencies shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measure:***

- ***Exceed Title 24 Building energy efficiency standards***
- ***Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems***
- ***Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle***

No mitigation measures applicable to greenhouse gas were identified in the 2000 OBMP PEIR and therefore no mitigation measures therein apply to minimize impacts under this issue.

Level of Significance After Mitigation: Less Than Significant

The proposed OBMPU would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts are considered less than significant in this regard.

4.6.5.2 b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

Pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions.

CONSTRUCTION

40% below 1990 levels by 2030

By using newer and electrified construction equipment as it is phased in pursuant to requirements under AB 197 and similar law, policies and programs, the Project will be aligned with applicable plans and policies and would, therefore, not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

This is consistent with SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030.

85% below 1990 levels by 2045 / 2050

While construction activities associated with the implementation of future OBMPU facilities would result in emissions of CO₂ and CH₄ (see previous section regarding threshold 1), most of the emissions will come from the burning of fossil fuel in construction equipment. These emissions from construction equipment will decrease even more as emissions technology improves in the next 20 years. Additionally, it is likely that diesel equipment will be cleaner and more efficient, powered by renewable diesel, and/or phased out due to local Climate Action Plans and state requirements (such by AB 197) by 2045. Newer electrified construction equipment will also become more broadly available, further decreasing construction emissions.

This is consistent with AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050.

OPERATIONS

40% below 1990 levels by 2030

Operational emissions are powered primarily by electricity, so the Project's GHG emissions will decline as renewable and carbon neutral energy sources make up a larger and larger percentage of power on the grid in compliance with state's plans, policies, and regulations.

This is consistent with SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030.

85% below 1990 levels by 2045 / 2050

Operational emissions are powered primarily by electricity, so the Project's GHG emissions will decline as renewable and carbon neutral energy sources make up a larger and larger percentage of power on the grid in compliance with state's plans, policies, and regulations.

Finally, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the Project will offset GHG emissions that would otherwise have occurred absent implementation of the Project.

This is consistent with AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050. This is also consistent with CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279.

Greenhouse Gas Conclusion

Results of the assessment indicate that the Project is consistent with the state and regional objectives, and that there would be a net reduction in GHG emissions with implementation of the Proposed Project and less than significant impact is expected with respect to greenhouse gas emissions.

Level of Significance Before Mitigation: Less Than Significant

*Mitigation Measures: Mitigation Measures **GHG-1** and **GHG-2** shall be implemented to further reduce GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and*

proposed to be implemented. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis above. Furthermore, no mitigation measures applicable to greenhouse gas were identified in the 2000 OBMP PEIR and therefore no mitigation measures therein apply to minimize impacts under this issue.

Level of Significance After Mitigation: Less Than Significant

The proposed OBMPU would not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts are considered less than significant in this regard.

4.3.6 Avoidance, Minimization and Mitigation Measures

No mitigation measures applicable to greenhouse gas were identified in the 2000 OBMP PEIR and therefore no mitigation measures therein apply to minimize impacts under this issue.

Mitigation measures designed to further reduce GHG emissions from construction and operation of the OBMPU are above. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis above. These measures are repeated below for reference.

GHG-1 GHG Reduction Measures During Construction. Implementing Agencies shall implement all feasible GHG reduction measures during construction. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:

- ***Use alternative fuels for construction equipment***
- ***Use electric and hybrid construction equipment***
- ***Limit construction equipment idling beyond regulation requirements***
- ***Institute a heavy-duty off-road vehicle plan***
- ***Implement a construction vehicle inventory tracking system***

GHG-2 GHG Reduction Measures During Operation. Implementing Agencies shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measure:

- ***Exceed Title 24 Building energy efficiency standards***
- ***Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems***
- ***Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle***

4.3.7 Cumulative Impacts

Impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Subsection 4.6.2, Climate Change Setting**), the cumulative worldwide and statewide effects of GHG emissions are substantial. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. As demonstrated in the analysis under **Subsection 4.3.5.2(b)**, above, the OBMPU would be consistent with the

applicable goals of applicable federal, State and local plans and programs designed to reduce GHG emissions. The OBMPU would be consistent with: AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030; AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045; Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; and, CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279. Furthermore, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, as demonstrated in **Tables 4.6-5** and **4.6-6**, the OBMPU will offset project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project, and therefore, the proposed OBMPU would not contribute to global climate change through an incremental contribution of greenhouse gases.

Level of Significance Before Mitigation: Less Than Significant

*Mitigation Measures: Mitigation Measures **GHG-1** and **GHG-2** would further reduce cumulative and project specific GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and proposed to be implemented. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis herein.*

Level of Significance After Mitigation: Less Than Significant

4.3.8 Unavoidable Significant Adverse Impacts

As stated above, an individual project such as the proposed Program cannot generate enough greenhouse gas emissions to effect a discernible change in global climate. However, the proposed Program may contribute to global climate change by its incremental contribution of greenhouse gases. This analysis has evaluated the energy intensity of the water to be generated through the operations of the proposed Project and compared it to the energy intensity of alternative sources of supply. As shown on **Table 4.6-6**, GHG emissions associated with water conveyance from the Colorado River Deliveries or State Water Project Deliveries are substantially greater than all other water conveyance sources. Further, if the Project's annual amortized construction emissions (683.46 MTCO₂e per year) are added to any of the local sources, the resulting annual GHG emissions would be substantially less than the amount of GHG emissions for the same amount of water conveyed from either the Colorado River Deliveries or State Water Project Deliveries. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 af would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5** and **4.6-6**, the OBMPU will offset project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Thus, the proposed Program would not result in new significant GHG impacts nor would it result in a substantial increase in the severity of GHG impacts. Mitigation Measures **GHG-1** and **GHG-2** would further reduce GHG emissions to the greatest extent feasible as future OBMPU facilities are defined and proposed to be implemented. These measures are intended to minimize the OBMPU GHG emissions footprint even further than identified in the impact analysis herein.

Additionally, as demonstrated in the analysis under Subsection 4.3.5.2(b), above, the OBMPU would be consistent with the applicable goals of applicable federal, State and local plans and programs designed to reduce GHG emissions. The OBMPU would be consistent with: AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030; AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045; Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; and, CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279. Thus, the proposed OBMPU would not otherwise conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts are considered less than significant in this regard. Program-related GHG emissions are not considered to be significant or adverse and would not result in an unavoidable significant adverse impact on global climate change. OBMPU GHG emissions are considered less than significant.

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4.7 HYDROLOGY AND WATER QUALITY

4.7.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue areas of Hydrology (watershed, drainage and flood hazards) and Water Quality from implementation of the proposed OBMPU. The purpose of the hydrology and water quality evaluation of this RDSEIR is to evaluate the available information about the background hydrology and water quality and forecast the type of impacts that may occur, including identification of mitigation measures that can ensure potential impacts from constructing and operating the various components of the OBMPU can be reduced to the minimum level achievable consistent with meeting project objectives.

The analysis contained in the 2000 OBMP PEIR, while still applicable in ways described herein, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated. Not only have regulations changed, but the hydrology of the Chino Basin is better understood at present since the 2000 OBMP PEIR was certified, and furthermore technology to assess the hydrology of the Basin has evolved. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations.

The Watermaster envisions the facilities described in this Section as a key element in the long-term sustainable management of the region's groundwater resources. The OBMPU is anticipated to be implemented over a planning horizon of 20 years—2020 to 2040. The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities supporting the 9 Program Elements that make up the OBMPU. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities.

The goals and their intent for the OBMPU include:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

These issues pertaining to hydrology and water quality will be discussed below under the following framework:

- 4.7.1 Introduction
- 4.7.2 Environmental Setting: Chino Basin Hydrology
- 4.7.3 Thresholds of Significance
- 4.7.4 Regulatory Setting
- 4.7.5 Impacts Discussion
- 4.7.6 Avoidance, Minimization and Mitigation Measures
- 4.7.7 Significant and Unavoidable Impacts

The following reference documents were used in preparing this section of the RDSEIR.

- Chino Basin Watermaster, February 2006. *Optimum Basin Management Program, Management Zone 1 Interim Monitoring Program, MZ-1 Summary Report*. Prepared by Wildermuth Environmental, Inc.
- Chino Basin Watermaster, October 2007. *Chino Basin Optimum Basin Management Program, Management Zone 1 Subsidence Management Plan*.
- Chino Basin Watermaster, July 23, 2015. *Chino Basin Subsidence Management Plan*.
- Chino Basin Watermaster, July 23, 2015. *Work Plan, Develop a Subsidence-Management Plan for the Northwest MZ-1 Area*.
- Tom Dodson & Associates, July 2000. *Final Program Environmental Impact Report for the Optimum Basin Management Program (SCH#200041047)(2000 OBMP PEIR)*
- San Bernardino County, November 2, 2020. *San Bernardino Countywide Plan*.
- WEI, July 2015. *2014 Annual Report of the Ground-Level Monitoring Committee*.
- WEI, October 2015. *2013 Chino Basin Groundwater Model Update and Recalculation of Safe Yield Pursuant to the Peace Agreement*.
- WEI, September 2018. *Recharge Master Plan Update*.
- WEI, October 2018; revised January 2019. *Storage Framework Investigation*.
- WEI, April 2019. *Optimum Basin Management Program Chino Basin Maximum Benefit Annual Report 2018*.
- WEI, June 2019. *Optimum Basin Management Program 2018 State of the Basin Report. Prepared for the Chino Basin Watermaster*.
- WEI, December 2019. *Storage Management Plan*.
- WEI, May 2020. *2020 Safe Yield Recalculation Report*.
- West Yost, February 2021. *Evaluation of the Local Storage Limitation Solution*.
- West Yost, February 2021. *2020 State of the Basin Report*.
- West Yost, 2021. *2021 Chino Basin Maximum Benefit Annual Report*.
- West Yost, October 2022. *Annual Finding of Substantial Compliance with the Recharge Master Plan – Fiscal Year 2022-23*.
- West Yost, April 2023. *2023 Storage Framework Investigation*.
- West Yost, April 2023. *Optimum Basin Management Program Chino Basin Maximum Benefit Annual Report 2022*.

Three comment(s) specific to this topic were received in response to the Notice of Preparation. These comments can be found in Subchapter 8.1, and the responses to each can be found below. No comments were received at the scoping meeting held for the proposed project.

Comment Letter #2 from Orange County Water District (OCWD) (dated 3/6/20) states:

- OCWD has statutory authority over and extensive activities within Prado Basin.
- The distribution of riparian vegetation and wetlands in the Prado Basin relies on rising groundwater or groundwater seepage as a Groundwater Dependent Ecosystem.
- The OBMPU EIR should evaluate potential effects that the proposed project might have on the Groundwater Dependent Ecosystem in Prado Basin.

- The OBMPU EIR should assess how the proposed projects would change or effect surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River.
- The OBMPU EIR should assess how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin.
- The OBMPU EIR should assess the effects that OBMPU related changes in groundwater levels will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should assess how changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin, and the effects these changes will have on sensitive riparian vegetation and riparian habitats.
- The OBMPU EIR should evaluate potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species that might occur to the proposed OBMPU projects.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would affect Santa Ana River flows reaching Prado Basin.
- The OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the habitat conservation plan.

*Response: Hydrology and water quality are addressed in detail in the RDSEIR, and in this Subchapter. Regarding groundwater, the proposed OBMPU projects are determined to not cause a significant effect with mitigation. The forecast for surface water is both more complex and nuanced because the existing data base and the scope of future impacts is less well defined. Regardless, proposed mitigation combined with the existing Prado Basin Habitat Sustainability Program (PBHSP) are deemed sufficient to reduce or control surface volume impacts to a less than significant impact level. In accordance with Section 15152(c) of the CEQA Guidelines, some detailed, site-specific information is not available and the impacts analysis for surface water diversions will be deferred to when those projects are being implemented. Nonetheless, the OBMPU includes a Mitigation Measure for future surface runoff diversions (Mitigation Measure **BIO-17**) which requires the Implementing Agency to conduct an evaluation of each water diversion project associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of diversion projects. If adverse impacts to Prado Basin wetland, critical, and riparian habitat are projected to occur as a result of the project-specific impact evaluation, the Implementing Agency shall conduct a second-tier CEQA evaluation of such projects. This does not preclude a determination of insignificance, particularly if the evaluation determines that the given project can be implemented without adversely impacting Prado Basin wetland, critical, and riparian habitat under the provisions of this RDSEIR. In addition, Mitigation Measure **BIO-17** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects. Furthermore, Mitigation Measure **BIO-17** would further commit IEUA to the preparation of the annual PBHSP beyond its expiration in 2030, or otherwise implement a comparable and equally effective monitoring program in its place to enable OBMPU implementing agencies address any future potential adverse impacts to riparian habitat/Prado Basin habitat due to implementation of the OBMPU.*

*Additionally, Mitigation Measures **HYD-9** and **HYD-10** address potential adverse impacts to riparian vegetation and habitat in Prado Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in*

potential adverse impacts to riparian vegetation and habitat in Prado Basin, and (2) respond with appropriate mitigation to minimize potential adverse impacts to riparian vegetation and habitat in Prado Basin that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts to riparian vegetation and habitat in Prado Basin that may result from implementation of future OBMPU projects.

Comment Letter #4 from the Department of Water Resources, Division of Safety of Dams (DSOD) (dated 3/3/20) states:

- The DSOD acknowledges the OBMPU includes possible future new surface water basins and improvements to existing basins
- The DSOD seeks additional information regarding whether these projects may be subject to State jurisdiction for dam safety. DSOD requests submittal of preliminary plans for each project to allow them to conduct reviews.
- DSOD outlines the process for initiating and processing applications with their organization.

Response: Although the issue raised involves review of proposed dams and minimizing any risk that such facilities may pose; no specific facilities are proposed at this time. However, based on the Comments in this letter the project has been designed to require future agency facility proposals which involve a dam to consult with DSOD and involve them in the review process to ensure safety of such facilities.

Comment #5 e-mail from Katie Gienger, Water Resources Manager for Ontario Municipal Utilities (dated 3/9/20) states:

- The Comment identifies the process for future review of projects that may result in potential changes to surface flows in the Santa Ana River (quality or quantity), particularly in relation to recycled water discharges to the River and means to mitigate potential impacts from such changes. This Comment states that the OBMPU should include discussion of the potential adverse impact to the Santa Ana River from proposed OBMPU future projects.

Response as it relates to Hydrology and Water Quality: Ownership and control over wastewater discharges is governed by contract, specifically the Chino Basin Regional Sewerage Service Agreement (Regional Contract) which has been in effect for almost 50 years. As correctly noted, the renewal of that contract is currently under negotiation, as it will lapse in 2023. It is neither the intent nor purpose of the RDSEIR to interpret contractual terms or resolve disputes between contracting parties, and certainly not to speculate on the outcome of dispute resolution. Further, what happens between IEUA and member agencies is still-in-progress, contract negotiations are inherently speculative, and until such negotiations are concluded it would be inappropriate for analysis or findings to be conducted.

Local water supply and interpretation of contracts is beyond the scope of the OBMPU, as is the 1969 Judgment obligation to meet SAR base flow obligations. Consideration of acquisition of other supply sources is part of local supply development and not considered in the OBMPU.

There are data available on Santa Ana River flows and discharges at various points along the River, but there are no specific projects or proposals for diversions of wastewater discharges that were ripe for evaluation within the scope of this RDSEIR. Fundamentally, retention of recycled water would constitute a diversion of water from discharge to either Chino or Mill Creek, initially, and subsequently to the Santa Ana River in Prado Basin. When examining the issue of diversion

of discharges (any type, including recycled water, stormwater, and non-point source urban discharges) in the RDSEIR, the issue was deferred to future specific proposals because no such specific proposals were in the OBMPU and the complicated variables—only some of which are described above— make any future forecasts speculative. Under **Subchapter 4.3, Biological Resources**, the issue of diversions and potential adverse impacts to Prado Basin habitat is addressed. Indirectly, this section also applies to recycled water diversions, and the conclusion is that such diversions, until defined and evaluated in the broader context, can have a potentially significant adverse impact on biological resources of the Chino Basin. As stated above, Mitigation Measure **BIO-17** requires further evaluation of specific diversion proposals when they are defined in sufficient detail to allow an evaluation. Additionally, Mitigation Measures **HYD-9** and **HYD-10** address potential adverse impacts to riparian vegetation and habitat in Prado Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential adverse impacts to riparian vegetation and habitat in Prado Basin, and (2) respond with appropriate mitigation to minimize potential adverse impacts to riparian vegetation and habitat in Prado Basin that may occur from a project or, where mitigation is not feasible, reject the project. Thus, based on the RDSEIR evaluation, diversion of additional water as part of the OBMPU (including recycled water) was concluded to represent a potentially unavoidable significant adverse impact to Prado Basin biological resources until proven otherwise with a project specific CEQA evaluation.

The 2020 Optimum Basin Management Program Update Report prepared for the Chino Basin Watermaster by WEI is provided as Appendix 6a, Volume 2 to this document. The 2023 Storage Framework Investigation Final Report prepared for the Chino Basin Watermaster by West Yost is provided as Appendix 6b, Volume 2 to this RDSEIR. The 2020 Safe Yield Recalculation Final Report prepared for the Chino Basin Watermaster prepared by WEI is provided as Appendix 6c, Volume 2 to this RDSEIR. Additionally, the Evaluation of the Local Storage Limitation Solution prepared for the Chino Basin Watermaster by West Yost is provided as Appendix 6d, Volume 2 of this RDSEIR. Additionally, the 2022 State of the Basin Report, published in June 2023 by West Yost on behalf of the Chino Basin Watermaster is provided as Appendix 6e, Volume 2 of this RDSEIR, and the 2021 Chino Basin Maximum Benefit Annual Report, prepared by West Yost for the Chino Basin Watermaster and IEUA dated April 2022, and provided as Appendix 6f, Volume 2 of this RDSEIR.

4.7.2 Environmental Setting: Chino Basin Hydrology

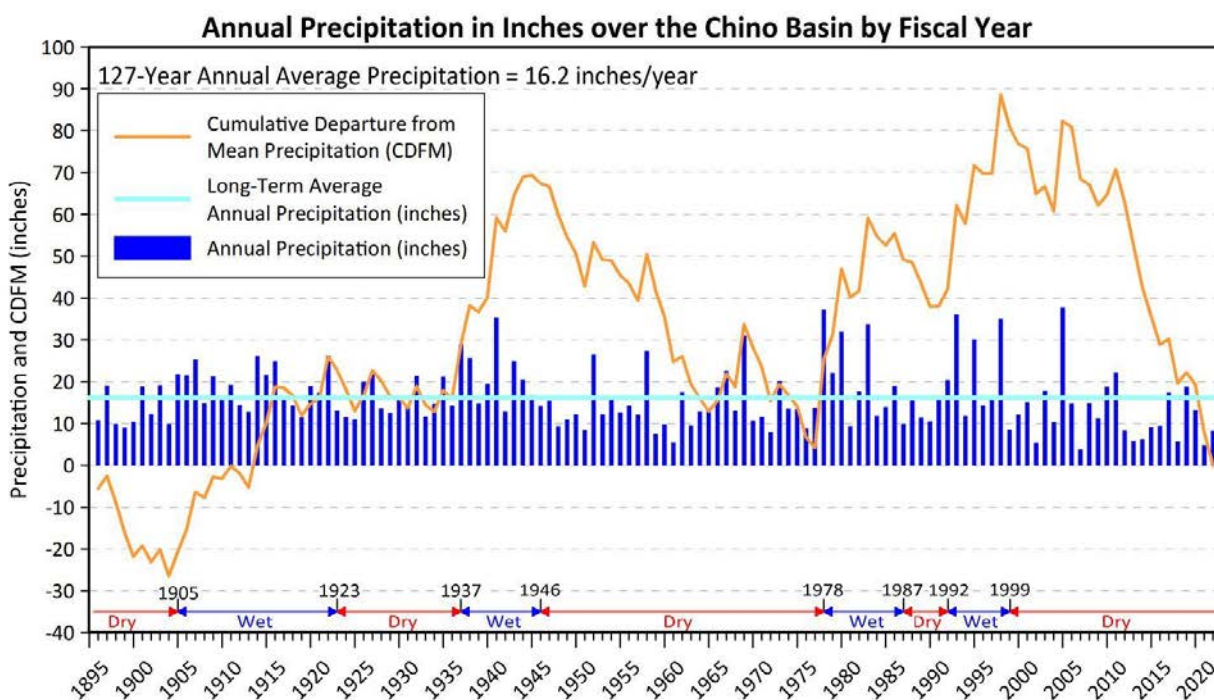
The basic hydrology information from the OBMP presented herein is abstracted from the “2022 State of the Basin Report,” published in June 2023 by West Yost on behalf of the Chino Basin Watermaster. This report is provided as Appendix 6e, Volume 2 of this RDSEIR.

4.7.2.1 Precipitation

Precipitation is a major source of groundwater recharge for the Chino Basin through the deep infiltration of precipitation, applied water and stormwater recharge in streams and recharge facilities. The chart below shows the long-term annual precipitation time series. These annual precipitation estimates are based on the areal average over the Chino Basin, created from gridded monthly precipitation estimates prepared by the PRISM Climate Group and covers the period 1895 through 2022. The annual precipitation estimates cover the fiscal year (FY) (July through June). The chart contains a horizontal line indicating the 127-year average annual precipitation of 16.2 inches, and it contains the cumulative departure from mean (CDFM) precipitation. The CDFM plot is a useful way to characterize the occurrence and magnitude of wet and dry periods: positive

sloping segments (trending upward from left to right) indicate wet periods, and negative sloping segments (trending downward from left to right) indicate dry periods. The wet and dry periods are labeled at the bottom of the chart. On average, the ratio of dry years to wet years is about three to two. That is, for every ten years, about six years will experience below average precipitation and four years will experience greater than average precipitation. That said, 1945 through 1977 was a 32-year dry period, punctuated by five years of above average precipitation: a dry-to-wet year ratio of about six to one. The period 1999 through June 2022 was a 24-year dry period punctuated with six wet years: a dry-to-wet year ratio of also about eight to three. Dry periods tend to be long and very dry and wet periods tend to be relatively shorter and very wet (e.g., 1936 through 1944, 1977 through 1985, and 1993 through 1998). The 30-year standard deviation of annual precipitation in the Chino Basin has approximately doubled over the last century, indicating that the variability of annual precipitation is increasing.

EXHIBIT 4.7-1
ANNUAL PRECIPITATION IN INCHES OVER THE CHINO BASIN BY FISCAL YEAR



4.7.2.2 Surface Water

Figure 4.7-1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed and the locations of two key stream-gaging stations in the Chino Basin. Daily discharge data measured at the USGS gaging stations on the Santa Ana River at MWD Crossing (USGS Station 11066460) and at the Santa Ana River at Below Prado Dam (USGS Station 11074000) can be used to characterize the discharge of the Santa Ana River as it enters and exits the Chino Basin. The relationship of groundwater management activities in the Chino Basin and the streambed infiltration of Santa Ana River discharge was incorporated into the Chino Basin OBMP. Santa Ana River discharge is composed of storm flow and base flow. Storm flow is discharge that is the direct result of runoff from precipitation. Base flow is the difference between the total measured

discharge and storm flow, and it consists of discharge from wastewater treatment plants and rising groundwater. Specifically, the summary of Judgment provides the definition of flows:

“Storm Flow: That portion of the total flow which originates from precipitation and runoff and which passes a point of measurement (either Riverside Narrows or Prado Dam) without having first percolated to groundwater storage in the zone of saturation, calculated in accordance with procedures referred to in the Judgment.”

“Base Flow: That portion of the total surface flow passing a point of measurement (either Riverside Narrows or Prado Dam) which remains after deduction of storm flow, non-tributary flows, exchange water purchased by OCWD, and certain other flows as determined by the (Santa Ana River) Watermaster.”

Figure 4.7-1 shows the locations of the USGS gaging stations and the wastewater treatment plant discharge. Base flow is a significant source of recharge to the Chino Basin. **Figure 4.7-1** also shows the annual discharge hydrographs for the Santa Ana River at MWD Xing and at Below Prado Dam. The annual discharge values have been divided into storm and base flows. The base flow time series tends to increase over time, following the conversion of land uses to urban and industrial, until the onset of the great recession in 2008. These land use conversions increased base flow because the improved land uses were sewered and the resulting treated wastewater was discharged to the River. After 2008, the base flow decline was caused by decreased water use due to recession and drought and the IEUA increased use of recycled water for direct and indirect uses, thereby reducing its treated wastewater discharges to the River.

Total Santa Ana River discharge entering the Chino Basin at the MWD Crossing (Riverside Narrows) has exceeded 50,000 afy since 1983 except from 1991 to 1995 and after 2007. Part of the decrease in base flow at the Riverside Narrows after 2007 is due to a decrease in treated wastewater discharge to the River upstream and declining groundwater levels in the groundwater basins underlying the Santa Ana River upstream, the combined effect of which is a decrease in rising groundwater just upstream of the MWD Crossing.

The base flow leaving the Chino Basin at Prado Dam is about two times the base flow entering the Chino Basin due to the combined wastewater treatment plant discharges of the cities of Corona and Riverside, the IEUA, and the West Riverside County Wastewater Reclamation Authority. The base flow at Prado Dam reached a maximum of 188,000 afy in WY 1996/97 and has been generally decreasing since. Starting in WY 2008/09, the base flow at Prado Dam has been less than 120,000 afy with an average of 87,500 afy. The decrease in base flow exiting the Chino Basin is due to: the decrease in base flow entering the Chino Basin at the Riverside Narrows; decreases in wastewater discharges due to water conservation and recycled water reuse; and increased streambed infiltration caused by increased groundwater production in the southern Chino Basin.

4.7.2.3 Surface Water Quality

The information summarized herein is from the “2021 Chino Basin Maximum Benefit Annual Report,” prepared by West Yost for the Chino Basin Watermaster and IEUA dated April 2022. This report is provided as Appendix 6f, Volume 2 of this RDSEIR.

Groundwater generally flows from the forebay regions in the north and east toward the Prado Basin, where rising groundwater becomes surface water in the Santa Ana River and its tributaries. Recent and past studies have provided insight into the influence of groundwater pumping in the

southern end of the Chino Basin on the Safe Yield of the Basin and the ability of pumping in this part of the Basin to control the discharge of rising groundwater to the Prado Basin and Santa Ana River. Several studies quantify the impacts of the groundwater desalters in the southern Chino Basin on groundwater discharge to the Prado Basin and the Santa Ana River. These studies also indicated that the Chino Basin Desalter program and a slight permanent decrease in basin storage authorized in the Peace II Agreement and approved by the Court will (i) capture groundwater flowing south from the forebay regions of the Chino Basin and (ii) reduce the outflow of high-salinity groundwater to the Santa Ana River, thereby providing greater protection of downstream beneficial uses.

The application of the maximum-benefit is contingent upon the implementation of specific projects and programs by Watermaster and the IEUA.¹ These projects and programs, termed the “Chino Basin maximum-benefit commitments,” include “The achievement and maintenance of the “hydraulic control” of groundwater outflow from the Chino Basin, specifically from Chino-North, to protect Santa Ana River water quality and downstream beneficial uses.”

Rising groundwater from the Chino Basin to the Santa Ana River consists of groundwater from Chino-North that flows past the Chino Creek Well Field (CCWF) well field and unpumped groundwater south of and outside the influence of the Chino Desalter well fields. Groundwater discharge from Chino-North to the Prado Basin Management Zone (PBMZ) is either pumped by wells, consumed by riparian vegetation in the PBMZ or becomes rising groundwater and contributes to the Santa Ana River discharge at Prado Dam. Calibration of the 2008 Wasteload Allocation Model (1994-2006) estimated that rising groundwater in the PBMZ had an average Total Dissolved Solid (TDS) concentration of about 850 mg/l (WEI, 2009b). This estimate is consistent with a TDS mass-balance characterization of the Santa Ana River (WEI, 2015d) and recent sampling at monitoring wells in the PBMZ.

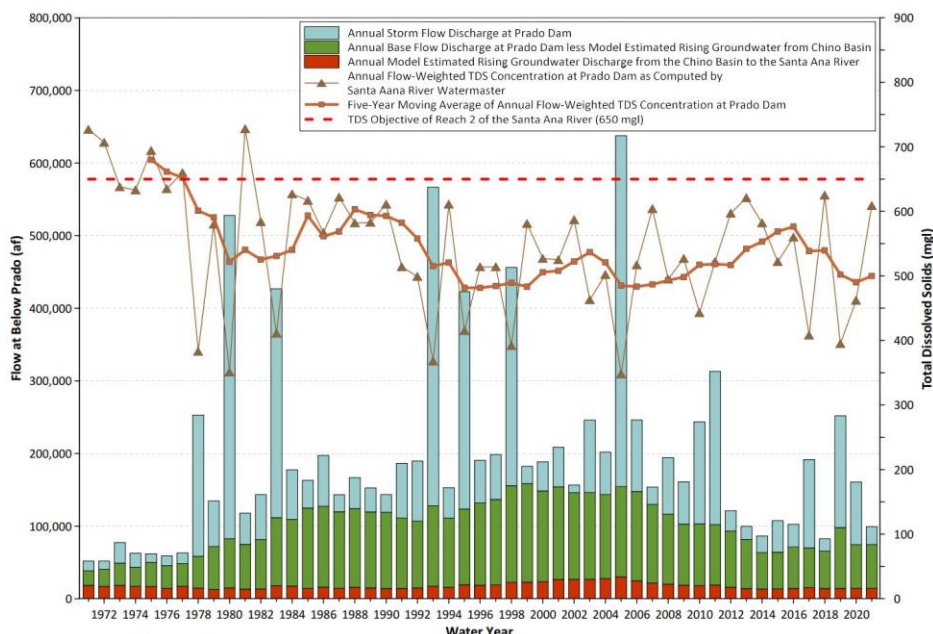
Rising groundwater from the Chino Basin to the Santa Ana River consists of groundwater from Chino-North that flows past the CCWF well field and unpumped groundwater south of and outside the influence of the Chino Desalter well fields. The Santa Ana River Watermaster’s (SARWM) annual analysis of the volume and TDS concentration of the Santa Ana River is used to demonstrate the impact of rising groundwater outflow on the TDS concentration of the Santa Ana River at Prado Dam. The SARWM has compiled annual reports pursuant to the 1969 stipulated judgment² that contain estimates of significant discharges to the Santa Ana River, estimates of the storm flow discharge and base flow discharge of the River each water year, as well as the volume-weighted TDS concentration of discharge at the Riverside Narrows and at Prado Dam (see SARWM, 2022). Below is a time-history chart of the annual discharge components in the

¹ In 2002, recognizing that implementing the recycled water reuse program would require large-scale treatment and mitigation of salt loading under the then-current antidegradation objectives for TDS and nitrate defined in the Basin Plan, Watermaster and the IEUA petitioned the Regional Board to establish a maximum benefit-based SNMP that involved (1) defining a new groundwater quality management zone that encompasses the northern parts of MZ-1, MZ-2 and MZ-3 called the Chino-North GMZ, (2) establishing TDS and nitrate objectives for the Chino-North GMZ to numerically higher values than established for MZ-1, MZ-2 and MZ-3 to enable maximization of recycled water reuse and (3) committing to a program of salt and nutrient management activities and projects (“maximum benefit commitments”) that ensure the protection of beneficial uses of the Chino-North GMZ and downgradient waters (the Santa Ana River and the Orange County GMZ). The technical work performed to support the maximum benefit SNMP proposal included the development and use of an analytical salt budget tool to project future TDS and nitrate concentrations in the Chino-North GMZ with and without the maximum benefit SNMP. The maximum benefit SNMP was incorporated into the Basin Plan by the Regional Board in January 2004.

² The Santa Ana River was adjudicated in the 1960s, and a stipulated judgment was filed in 1969 (OCWD v. City of Chino et al., Case No. 117628, County of Orange). Since the Judgment was filed, the SARWM has compiled annual reports.

Santa Ana River at Prado Dam and the associated annual volume-weighted TDS concentration as reported by the SARWM.

EXHIBIT 4.7-2
ANNUAL DISCHARGE COMPONENTS IN THE SANTA ANA RIVER AT PRADO DAM AND THE ASSOCIATED ANNUAL VOLUME-WEIGHTED TDS CONCENTRATION AS REPORTED BY THE SARWM



The base flow discharge is represented by two bars: (i) the SARWM estimate of base flow discharge at Prado Dam minus the rising groundwater from the Chino Basin component, (ii) and the total rising groundwater discharge from the Chino Basin to the Santa Ana River estimated with the Watermaster's 2020 groundwater model update (the 2020 Chino Valley Model [2020 CVM])—the sum of these two terms equals the SARWM estimate of base flow discharge at Prado Dam. This figure also shows the five-year moving average of the annual flow-weighted TDS concentration of the Santa Ana River at Prado Dam, which is the metric the Regional Board uses to determine compliance with the Basin Plan TDS concentration objective of 650 mg/l for Reach 2 of the Santa Ana River³ (Reach 2 TDS metric) (Regional Board, 2008). Note that:

- Since about 1980, the annual estimates of the rising groundwater discharge from the Chino Basin to the Santa Ana River, which ranged from about 14,300 to 25,100 afy, have been a small percentage of the total annual flow at Prado Dam, ranging from about three percent during wet years to about 20 percent during dry years.
- From 2005 to 2015, the model-estimated groundwater discharge from Chino-North to the PBMZ, was about 2,400 afy without CCWF operation, representing a small fraction of the total rising groundwater from Chino Basin to the Santa Ana River: it represents about 13 percent of the rising groundwater discharge from the Chino Basin to the Santa Ana River, and about two percent of the total flow in the Santa Ana River at Prado Dam.
- In 2016, the CCWF commenced full production, meaning that the estimated groundwater discharge from Chino-North to the PBMZ was reduced to de minimis levels (less than 1,000 afy). The model-projected groundwater discharge past the

³ Reach 2 of the Santa Ana River spans from Prado Dam to 17th Street in Santa Ana.

CCWF ranges from about 900 to 700 afy through 2050. This represents about four percent of the total rising groundwater discharge to the Santa Ana River from the Chino Basin, and less than one percent of the total flow in the Santa Ana River at Prado Dam.

- Since about 1980, the Reach 2 TDS metric has ranged between 480 and 600 mg/l and has not exceeded the TDS objective of 650 mg/L—even during extended dry periods when storm water dilution of the Santa Ana River is relatively little (e.g., water years 1984 through 1992, 1999 through 2004, and 2012 through 2016).
- The Reach 2 TDS metric increased continuously from water year 2006 to water year 2016, which coincides with a dry climatic period and a steady decrease in the volume of base flow discharge. The decrease in baseflow is mostly attributable to the decrease in low-TDS wastewater discharges to the Santa Ana River.
- In water year 2022, the Reach 2 TDS metric was 518 mg/l, an increase of 18 mg/l from the previous year.

These observations suggest that the rising groundwater discharge from the Chino Basin to the Santa Ana River has had a de minimis impact on the flow and TDS concentration of the Santa Ana River since about 1980 and has never contributed to an exceedance of the TDS objective for Reach 2. The groundwater discharge from the Chino-North to the PBMZ that becomes rising groundwater discharge in the Santa Ana River has historically been small compared to total discharge in the Santa Ana River and has decreased due to operation of the CCWF. Based on the trends observed since 2005, the Reach 2 TDS metric will likely continue to increase as the other conditions that affect the flow and quality of the Santa Ana River change over time, such as continued reduction of wastewater effluent discharges to the River, changes in the source quality of discharges to the River, and/or an increase in the duration and frequency of dry periods due to climate change. Given that wastewater effluent discharges are projected to decline further, the maintenance of hydraulic control of Chino-North will become increasingly important to protecting downstream beneficial uses.

4.7.2.4 Flood Hazards

Because of high evaporation and percolation rates associated with the surrounding soils and the climate, runoff from normal rainfall generally soaks into the ground quickly if it falls on permeable surfaces. However, during abnormally intense rainfall, localized flooding may occur with stormwater collecting in slight topographic lows or along streets due to the limited capacity of storm drains and collection systems and before being conveyed into regional stormwater facilities. Urban development within the Chino Basin resulted in greater stormwater runoff that is verified through the measured increase in volume of storm flow downstream of Prado Dam.

Under the Federal Emergency Management Agency (FEMA) National Flood Insurance Program has created Flood Insurance Rate Map (FIRM) panels that delineate flood hazard areas. The FEMA FIRM panels for the Chino Basin are provided in the technical appendices as figures. The FEMA FIRM panels, for the Chino Basin include the following:

06037C1475F	06065C0039G	06065C0682G	06071C7870J	06071C7915H
06037C1725F	06065C0667F	06065C0683G	06071C7890J	06071C7920H
06037C1750F	06065C0677G	06065C0686G	06071C7890J	06071C8605H
06065C0018G	06065C0678G	06065C0687G	06071C7895H	06071C8606H
06065C0019G	06065C0679G	06065C0702G	06071C7895J	06071C8607H
06065C0038G	06065C0681G	06065C0705G	06071C7915H	06071C8608H

06071C8609J	06071C8630J	06071C8638H	06071C8653J	06071C8676J
06071C8615H	06071C8633J	06071C8639J	06071C8654H	06071C9330H
06071C8617J	06071C8634J	06071C8641J	06071C8657H	06071C9335H
06071C8628J	06071C8635J	06071C8642J	06071C8659H	06071C9375H
06071C8629H	06071C8636J	06071C8651H	06071C8665H	06071C9616H
06071C8630J	06071C8637J	06071C8652H	06071C8667H	

These panels are provided in Volume 2 of the RDSEIR, Technical Appendices, Appendix 7. The index maps provide the panel number for specific areas within each county, which if located within the Chino Basin are provided on the disc listed by panel number. By referencing these maps, it can be determined if proposed future projects associated with the OBMPU will be located within flood hazard areas.⁴ Flood hazard areas are also shown in city and county general plans (Safety Element) but these are not as accurate as the FEMA FIRM panels.

4.7.2.5 Groundwater

The Chino Basin encompasses about a 235 square mile area located in the upper Santa Ana River watershed (Chapter 3, **Exhibits 1 and 2**) The Chino Basin is an alluvial valley that is relatively flat from east to west and slopes from the north to the south at a one to two percent grade. Elevations across the alluvial valley area range from about 2,000 feet in the foothills of the San Gabriel Mountains to about 500 feet near Prado Dam. The Chino Basin is bounded by: the San Gabriel Mountains and the Cucamonga Basin to the north; the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills to the east; the La Sierra area and the Temescal Basin to the south; and by the Chino and Puente Hills and the Pomona and Claremont Basins to the west.

The Chino Basin is one of the largest groundwater basins in Southern California. Recent work by WEI indicates the groundwater stored in the Chino Basin may be 12 million acre-ft or greater (WEI, 2020). Cities and other water supply entities within the basin produce groundwater for all or part of their municipal and industrial supplies; and about 200 to 300 agricultural users continue to produce groundwater from the Basin. The Chino Basin is an integral part of the regional and statewide water supply system. Prior to 1978, the Basin was in overdraft. After 1978, the Basin has been operated as prescribed in the Judgment and the OBMP.

While considered one basin from geologic and legal perspectives, the Chino Basin can be hydrologically subdivided into at least five flow systems that act as separate and distinct hydrologic units (Chapter 3, **Exhibit 2**). Each flow system can be considered a management zone, and the management zones delineated in the OBMP were determined based on these hydrologic units (WEI, 1999). Each management zone has unique hydrology, and water resource management activities that occur in one management zone has limited impacts on the other management zones.

The predominant sources of recharge to the Chino Basin groundwater reservoirs are percolation of direct precipitation and returns from applied water. The following is a list of other potential sources of recharge:

- Infiltration of flow within unlined stream channels overlying the basin
- Underflow from fractures within the bounding mountains and hills

⁴ FEMA, 2023. National Flood Hazard Layer Viewer. <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd&extent=-117.79023562011693,33.925122263182395,-117.50596437988294,34.06744215295162> (accessed 08/02/23)

- Artificial recharge of urban runoff, storm water, imported water, and recycled water at recharge basins
- Underflow from seepage across the bounding faults, including the Red Hill Fault (from Cucamonga basin), the San Jose Fault (from the Claremont Heights and Pomona basins), and the Rialto-Colton Fault (from the Rialto-Colton Basin)
- Deep percolation of precipitation and returns from use
- Intermittent underflow from the Temescal Basin

In general, groundwater flow mimics surface drainage patterns: groundwater flows from the forebay areas of high elevation (areas in the north and east flanking the San Gabriel and Jurupa Mountains) towards areas of discharge near the Santa Ana River within the Prado Flood Control Basin.

In detail, groundwater discharge throughout the Chino Basin primarily occurs via:

- Groundwater production
- Rising water within Prado Basin (and potentially other locations along the Santa Ana River, depending on climate and season)
- Evapotranspiration within Prado Basin (and potentially other locations along the Santa Ana River, depending on climate and season) where groundwater is near or at the ground surface
- Intermittent underflow to the Temescal Basin

4.7.2.5.1 Groundwater Monitoring

The environmental setting of groundwater monitoring in the Chino Basin is characterized in the Project Description (Chapter 3, **Exhibits 6-10**).

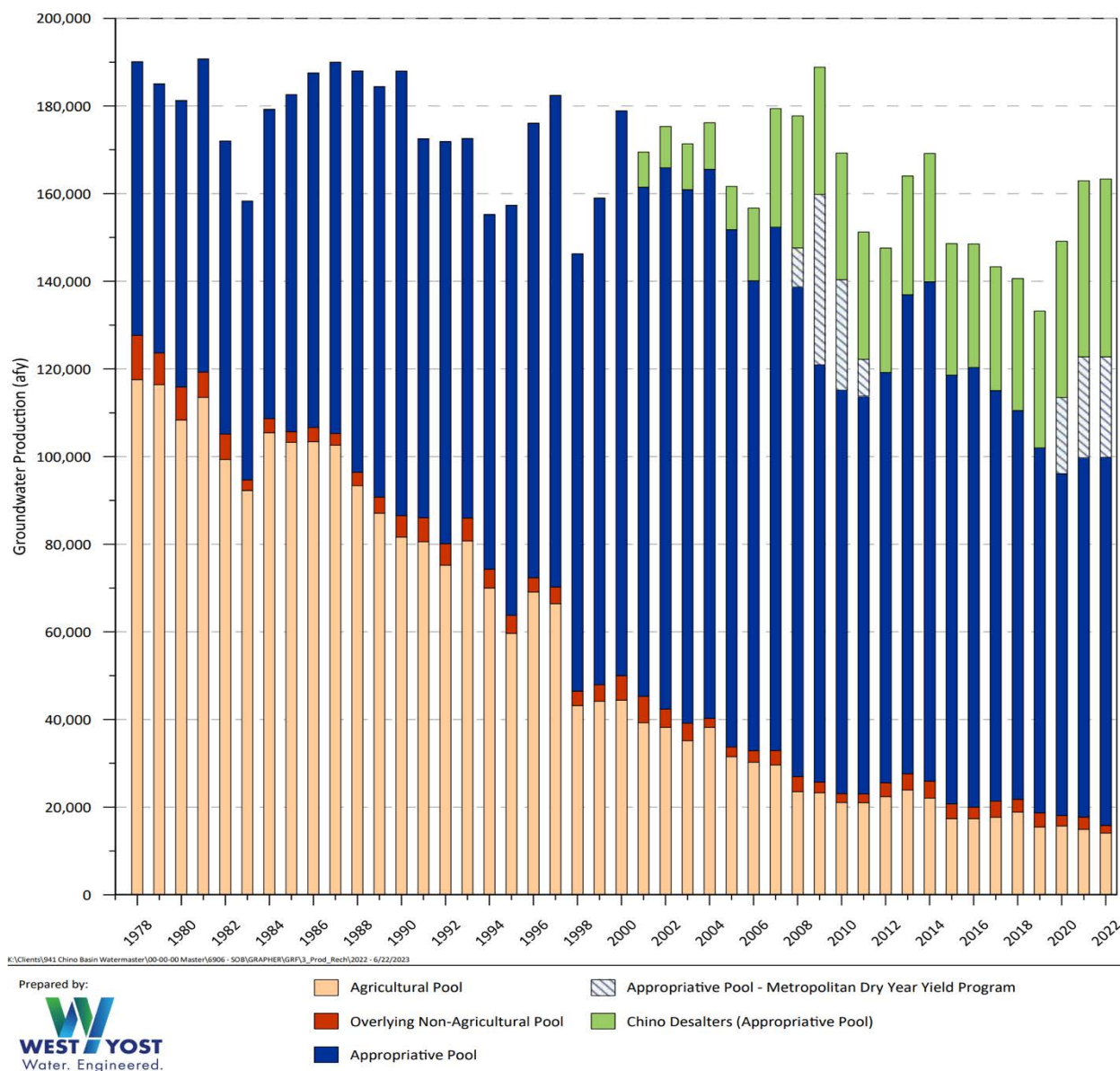
4.7.2.5.2 Groundwater Pumping

Since its establishment in 1978, Watermaster has collected information to estimate total groundwater production from the Chino Basin. The Watermaster Rules and Regulations require groundwater producers that produce in excess of 10 afy to install and maintain meters on their well(s). Well owners that pump less than 10 afy are considered “minimal producers” and are not required to meter or report to the Watermaster. When the 2000 OBMP was adopted, many of the Agricultural Pool wells did not have properly functioning meters installed, so Watermaster initiated a meter installation program for these wells as part of PE 1. Meters were installed at most agricultural wells by 2003. Watermaster staff visit and record production data from the meters at these wells on a quarterly basis. For the remaining unmetered Agricultural Pool wells, including minimal producer wells, Watermaster applies a “water duty” method to estimate their production on an annual basis. Members of the Appropriative Pool and Overlying Non-Agricultural Pool, and the Chino Desalter Authority (CDA) record their own meter data and submit them to Watermaster staff on a quarterly basis. All Chino Basin production data are checked for accuracy and stored in Watermaster’s relational database. Watermaster summarizes and reports the groundwater production data based on FY (July 1 to June 30). Watermaster uses reported production to quantify and levy assessments pursuant to the Judgment. **Exhibit 28** (Chapter 3) shows the locations of all active production wells, symbolized by Pool, in the Chino Basin during FY 2019/2020.

The graph below shows bar charts depicting the annual groundwater production by Pool for FY 1977/1978 through 2021/2022 as recorded in Watermaster’s database. Total annual groundwater production has ranged from a maximum of about 191,000 af during FY 1980/1981 to a minimum of about 133,000 af during FY 2018/2019 and has averaged about 169,000 afy. Since FY

1977/1978, Agricultural Pool production has decreased by 73,700 af—declining in proportion to the decline in total production—from 55 percent of total production in FY 1977/1978 to 9 percent in FY 2021/2022. During the same period, Appropriative Pool production increased by about 85,000 af—from 39 percent of total production in FY 1977/1978 to 90 percent as of FY 2021/2022—inclusive of production at the CDA wells. Production in the Overlying Non-Agricultural Pool declined from about six percent of total production in FY 1977/1978 to one percent as of FY 2021/2022.

EXHIBIT 4.7-3
GROUNDWATER PRODUCTION BY POOL IN THE CHINO BASIN WITH AGRICULTURAL POOL PRODUCTION
AMOUNTS FROM WATERMASTER DATABASE BY FISCAL YEAR



The spatial distribution of production has also shifted since 1978. **Figure 4.7-2** is a series of maps that illustrate the location and magnitude of groundwater production at wells in the Chino Basin for FYs 1977/1978 (Establishment of Watermaster), 1999/2000 (commencement of the OBMP), and 2021/2022 (current conditions).

The decline in agricultural production in the southern half of the Chino Basin has gradually been replaced by production at the CDA wells since FY 2000/2001. The CDA wells and treatment facilities were developed as part of OBMP PE 3 – Develop and Implement Water Supply Plan for the Impaired Areas of the Basin and PE 5 – Develop and Implement Regional Supplemental Water Program. The desalters are meant to enhance water supply reliability and improve groundwater quality in the Chino Basin. **Figure 4.7-3** displays the locations of current and future desalter wells and treatment facilities. This figure also summarizes the history of desalter production in the southern portion of the Chino Basin and its nexus to the OBMP goals.

4.7.2.5.3 Artificial Recharge

The environmental setting of groundwater monitoring in the Chino Basin is characterized in the Project Description (Chapter 3, **Exhibit 10**).

4.7.2.5.4 Groundwater Levels

Figure 4.7-4 displays contours of equal groundwater elevation across the Chino Basin during the spring of 2022, showing the effects of about 22 years of OBMP implementation. The contours indicate that the regional groundwater flow is in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There is a discernible depression in groundwater levels around the eastern portion of the Chino Basin Desalter well field, which demonstrates the achievement of Hydraulic Control in this area. This depression merged with the pumping depression around the JCSD well field to the east and increased the hydraulic gradient from the Santa Ana River toward the desalter well field. Additionally, there continues to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ-1 (Montclair and Pomona areas).

Changes in Groundwater Storage

Figure 4.7-5 shows the change in groundwater elevation during the 22-year period of OBMP implementation: spring 2000 to spring 2022. This map was created by subtracting a rasterized grid created from the groundwater elevations for spring 2000 from a rasterized grid created from the groundwater elevations for spring 2022. Groundwater levels have increased in the western portion of the basin. Groundwater levels have decreased in the central and eastern portions of the basin, and around the eastern portion of the Chino Desalter well field in the south. The changes in groundwater elevation shown here are consistent with projections from the Watermaster's groundwater modeling efforts (WEI, 2003a; 2007c; 2014a; 2015; 2020) that simulated the changes in the groundwater levels and flow patterns from the production and recharge strategies described in the Judgment, OBMP, Peace Agreement, and Peace II Agreement. These strategies include: desalter production in the southern portion of the Basin; controlled overdraft through Basin Re-operation to achieve Hydraulic Control; subsidence management in MZ-1; mandatory recharge of Supplemental Water in MZ-1 to improve the balance of recharge and discharge; and facilities improvements to enhance the recharge of storm, recycled, and imported waters. The changes of groundwater levels are illustrative of changes in storage.

State of Hydraulic Control

Figure 4.7-6 illustrates how groundwater elevations and flow directions have changed in the southern Chino Basin after 22 years of pumping at the Chino-I Desalter well field and 16 years of pumping at the Chino-II Desalter well field. Pumping at the CCWF began in 2014. The groundwater elevation contours depict a regional depression in groundwater levels surrounding the Chino-II Desalter well field and the eastern half of the Chino-I Desalter well field (east of well I-20). This regional depression suggests that groundwater flowing south in the Chino-North MZ is being captured and pumped by the desalter wells. Furthermore, the contours southeast of the desalter well field (east of Archibald Avenue) indicate that the Santa Ana River is recharging the Chino Basin and flowing northwest towards the desalter wells. These observations indicate that Hydraulic Control is achieved east of well I-20. West of I-20, the contours suggest that some groundwater flows past the desalter wells. Groundwater modeling has shown that pumping at the CCWF well field decreases the volume of groundwater flow past the desalter wells to less than 1,000 afy, which the Regional Board defines as de minimis discharge. In 2017, pumping at the CCWF well field declined as well I-17 temporarily ceased operation due to a decrease in the maximum contaminant level for 1,2,3-TCP.

In 2020, Watermaster used its groundwater model to determine the volume of groundwater discharge from the Chino-North GMZ to the Prado Basin GMZ past the CCWF for both historical pumping conditions through 2018 and projected pumping conditions through 2050. The model analysis indicated that the groundwater discharge past the CCWF into Prado Basin was always less than the de minimis level of 1,000 afy.

4.7.2.5.5 Groundwater Quality

The management of TDS and nitrate concentrations is essential to Watermaster's maximum benefit salt and nutrient management plan. In 2002, Watermaster proposed that the Regional Board adopt alternative maximum benefit water quality objectives for the Chino-North GMZ that were higher than the antidegradation water quality objectives for MZ-1, MZ-2, and MZ-3. The proposed objectives were approved by the Regional Board and incorporated into the Basin Plan in 2004 (RWQCB, 2004). The maximum benefit objectives enabled Watermaster and the IEUA to implement recycled water recharge and reuse throughout the Chino Basin. The application of the maximum benefit objectives is contingent upon the implementation of specific projects and programs known as the "Chino Basin maximum benefit commitments." The commitments include requirements for basin-wide monitoring of groundwater quality, and the triennial recomputation of ambient TDS and nitrate. They also require the development of plans and schedules for water quality improvement programs when current ambient TDS exceeds the maximum benefit objective or when recycled water used for recharge and irrigation exceeds the discharge limitations listed in the IEUA's recycled water discharge and reuse permits.

The ambient water quality (AWQ) of GMZs in the Santa Ana Watershed are computed on a triennial basis and compared with the groundwater-quality objectives defined in the Basin Plan to determine assimilative capacity for TDS and nitrate and to assess if waste discharge requirements are protective of groundwater quality. AWQ represents the volume-weighted average constituent concentration for a GMZ and is derived from water quality statistics computed at wells based on a 20-year time-history of sample results.

In the Chino Basin, the Chino-North GMZ maximum-benefit objective is used as the measure of compliance to permit recycled water discharge and reuse. The Chino-North GMZ is the combined extent of MZ-1, MZ-2, and MZ-3 up-gradient of the Prado Basin. The Chino-North maximum-benefit objective is numerically higher than the individual anti-degradation objectives set for MZ-1,

MZ-2, and MZ-3. If Watermaster and the IEUA do not implement the specific projects and programs described in the Chino Basin maximum-benefit commitments (Table 5-8 in the Basin Plan), the anti-degradation objectives will apply, and Watermaster and the IEUA will be required to mitigate TDS and nitrate loading from recycled water discharge and reuse above the anti-degradation objectives.

AWQ determinations have been made for eight 20-year periods: 1954-1973, 1978-1997, 1984-2003, 1987-2006, 1990-2009, 1993-2012 (WEI, 2000; 2005b; 2008a; 2011b; and 2014), 1996-2015 (DBS&A, 2017), and 1999-2018 (WSC, 2020). The AWQ determinations for 2002-2021 will be published in 2023. **Figures 4.7-7** and **4.7-8** show trends in the ambient water quality determinations for TDS and nitrate, respectively.

From 1973 to 2018, the ambient TDS increased from 260 to 350 mg/l but remains below the maximum-benefit objective of 420 mg/l; 70 mg/l of assimilative capacity remains. When the current ambient TDS exceeds the maximum-benefit objective, there will be a mitigation requirement for the recharge and direct use of recycled water.

In the Chino-East and Chino-South GMZs, the current ambient TDS concentrations are greater than the objectives. Because the TDS concentration of the recycled water reused by the Chino Basin parties in these GMZs is less than the antidegradation objectives of 730 and 680 mg/l, there are no regulatory compliance challenges.

From 1973 to 2018, the ambient nitrate in Chino-North increased from 3.7 to 10.3 mg/l and is currently above the maximum benefit objective of 5 mg/l (**Figure 4.7-8**). To ensure recycled water recharge in the Chino-North GMZ is in compliance with the maximum benefit objective, Watermaster and the IEUA must recharge low-nitrate imported and storm waters such that the 12-month, volume-weighted concentration of all recharge sources (storm water, recycled water, and imported water) is less than or equal to the maximum-benefit objective.

In the Chino-East and Chino-South GMZs, the current ambient nitrate concentrations are two to three times greater than the antidegradation objectives of 10 mg/l and have been increasing since 1973.

For all GMZs, the increase in ambient constituent concentrations is likely related to an increase in the data available to perform the calculations since the implementation of the OBMP monitoring programs, opposed to actual the degradation of water quality.

Additional information on the environmental setting of water quality in the Chino Basin is characterized in the Project Description (Chapter 3, **Exhibits 18-24**).

4.7.2.5.6 Ground-level Monitoring Program

The environmental setting of subsidence in the Chino Basin is characterized in the Project Description (Chapter 3, **Exhibit 13**).

4.7.3 Thresholds of Significance

Per Appendix G of the State CEQA Guidelines, the criteria used to determine the significance of impacts related to Hydrology and Water Quality may be considered potentially significant if the project would:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - (i) Result in substantial erosion or siltation onsite or offsite?
 - (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?
 - (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,
 - (iv) impede or redirect flood flows?
- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

These impact issues are evaluated in **Section 4.7.5, Project Impacts**.

4.7.3.1 Methodology

The information presented herein is abstracted from the 2023 SFI Report published in April 2023 by West Yost for the Chino Basin Watermaster (Appendix 6b, Volume 2 of this DSEIR). The 2023 SFI is the document which analyzed the basin response from the above, and therefore, is utilized to form the conclusions found in **Section 4.7.5, Project Impact**, below.

The 2023 SFI analyzed the basin response from (i) the use of storage space of up to 700,000 af from the Chino Basin Parties and Metropolitan's DYYP, and (ii) the conjunctive-use by Storage and Recovery Programs to between 700,000 af and 900,000 af. Based on the work done in the 2023 SFI, the storage space was divided into three Operational Bands: Operational Band 1 of up to 700,000 af characterizes the storage space used by the Chino Basin Parties and Metropolitan; Operational Bands 2 and 3 characterize the use of up to 800,000 af and 900,000 af, respectively, for use by future Storage and Recovery Programs.

The OBMPU ultimately proposes the use of up to 900,000 af for use by the Chino Basin Parties, Metropolitan, and future Storage and Recovery Programs.

In the 2023 SFI, the groundwater level and flow responses for all planning scenarios were evaluated using the current Chino Basin groundwater model and related pre- and post-processing tools. Watermaster's Chino Basin groundwater model was last calibrated in 2020 using the historical period of 1960 through 2018. The current version of the model is the 2020 Chino Valley Model (2020 CVM). The 2020 CVM was developed for the 2020 Safe Yield Recalculation (WEI, 2020) and was later used for the Evaluation of the Local Storage Limitation Solution (LSLS Report; WY, 2021; Appendix 6d, Volume 2 to this DSEIR), which supported the increase of Safe Storage Capacity in the Chino Basin. The 2020 CVM is also used to complete various Watermaster engineering tasks, including required model demonstrations and providing information for SGMA compliance. The potential impact of future Storage and Recovery Programs on the movement of solvent plumes in the basin was evaluated with the USGS-MT3D model (USGS, 2016), a solute and reactive transport model, that uses the groundwater level and flow information directly from the 2020 CVM and plume-specific information to project the movement of the groundwater plumes.

The Baseline Scenario used to evaluate the effect of Storage and Recovery Program scenarios was based on the project scenario simulated in the LSLS Report. This Baseline Scenario includes the expected pumping and recharge activities of the Parties and the assumed operations of Metropolitan's DYYP through 2028. For the 2023 SFI, Storage and Recovery scenarios were developed upon the Baseline Scenario to characterize the impacts of Storage and Recovery Programs of multiple sizes and configurations.

For increasing bands of storage (i.e., Operational Bands 2 and 3), alternative facility and operating plans were developed, and are intended to bracket the reasonable use of existing facilities and new facilities required to implement Storage and Recovery Programs. The facilities included in the 2023 SFI that are required to implement the Storage and Recovery Programs are commensurate with those identified in the OBMPU and outlined in the Project Description under Summary of All Facilities.

Increased Use of Existing Facilities (Scenario 2A) and Maximum Use of Existing and New Facilities (Scenario 3A/B) were built based on the Baseline Scenario. Scenarios 2 and 3 included assumed operations for the IEUA's Chino Basin Program (CBP) and additional Storage and Recovery operations. Thus, for forecasting purposes, the projected CBP Storage and Recovery operations were utilized as a facsimile by which to develop model scenarios in which 800,000 af and 900,000 af of storage could be achieved. However, should the CBP be withdrawn from implementation for reasons unknown at this time, this analysis assumes that a combination of other Storage and Recovery projects (such as ASR wells, recharge basins, etc.) analyzed as part of the OBMPU and outlined in the Project Description under Summary of All Facilities could be implemented to achieve the same or similar results.

The additional Storage and Recovery operations were assumed to occur in ten-year, back-to-back operating cycles, consisting of four put years followed by three hold years and three take years. This operating pattern is identical to that used in the planning of the DYYP; the operating cycles are assumed to begin in 2028 after the end of the DYYP contract. Puts are conducted through wet-water recharge and/or in-lieu recharge. Wet-water recharge can be conducted via spreading basins and/or ASR wells. Takes are conducted via existing and/or new wells. A hold period consists of time between puts and take periods. **Table 4.7-1** summarizes the annual volume of puts and takes for the CBP and Scenarios 2 and 3 (Increased Use of Existing Facilities (Scenario 2A) and Maximum Use of Existing and New Facilities (Scenario 3A/B)).

**Table 4.7-1
SUMMARY OF PUT/TAKE CYCLES FOR THE 2023 SFI SCENARIOS
VALUES IN 1,000 AFY**

Fiscal Year	Assumed CBP Operations		Scenario 2A ¹		Scenario 3A/3B ^(a)	
	Put	Take	Put	Take	Put	Take
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	7.5	-	25	-	50	-
2030	15	-	25	-	50	-
2031	15	-	25	-	50	-
2032	15	-	25	-	50	-
2033	15	-	-	-	-	-
2034	15	-	-	-	-	-
2035	15	-	-	-	-	-
2036	15	-	-	33.3	-	66.7
2037	15	-	-	33.3	-	66.7
2038	15	-	-	33.3	-	66.7
2039	15	25	25	-	50	-
2040	15	50	25	-	50	-
2041	15	50	25	-	50	-
2042	15	25	25	-	50	-
2043	15	-	-	-	-	-
2044	15	-	-	-	-	-
2045	15	-	-	-	-	-
2046	15	25	-	33.3	-	66.7
2047	15	50	-	33.3	-	66.7
2048	15	50	-	33.3	-	66.7
2049	15	25	25	-	50	-
2050	15	-	25	-	50	-
2051	15	-	25	-	50	-
2052	15	25	25	-	50	-
2053	15	37.5	-	-	-	-
2054	7.5	12.5	-	-	-	-
2055	-	-	-	-	-	-
2056	-	-	-	33.3	-	66.7
2057	-	-	-	33.3	-	66.7
2058	-	-	-	33.3	-	66.7
2059	-	-	-	-	-	-
2060	-	-	-	-	-	-
Total	375	375	300	300	600	600

(a) Scenarios 2A, 3A, and 3B also include the Storage and Recovery contemplated in the CBP.

The operating and facilities assumptions for Increased Use of Existing Facilities (Scenario 2A) and Maximum Use of Existing and New Facilities (Scenario 3A/B) Scenarios were:

- Scenario 2A represents a maximum use of managed storage from 700,000 to 800,000 af.
 - Scenario 2A includes a conservative assumption of the contemplated operations of the Chino Basin Program (CBP), a Storage and Recovery Program planned by the IEUA, or an equivalent Storage and Recovery Program. This includes 15,000 afy of puts via injection wells over the period of calendar year 2029 through 2054, including three take periods of 25,000 to 50,000 afy. The IEUA has certified a Program EIR for the CBP, but the CBP is not yet an approved Storage and Recovery Program; therefore, its impacts are considered as part of the cumulative impact evaluation of the Storage and Recovery Programs considered in the OBMPU.
 - Puts in Scenario 2A (above the CBP operations) were conducted half by wet-water recharge and half by in-lieu recharge.
 - The 33,333 afy of takes for Scenario 2A were based on the IEUA's and the Appropriative Pool parties' contractual obligations for the DYYP.
 - The puts and takes for the CBP operations do not always coincide with the puts and takes for the other Storage and Recovery operations included in Scenario 2A.
- Scenario 3 represents a maximum use of managed storage from 800,000 to 900,000 af. Scenarios 3A and 3B include the following assumptions to facilitate the additional 100,000 af of storage above Scenario 2A:
 - In Scenario 3A, half of the put capacity required (12,500 afy) was assumed to occur at existing facilities, and the remaining puts would occur at new facilities. About 2,740 afy of puts were assumed to occur at the MVWD's ASR wells and about 9,760 afy of puts were assumed to be recharged in existing spreading basins. The remaining 12,500 afy of puts were assumed to occur at new ASR wells. For takes, it was assumed that six new ASR wells and two new recovery wells were required to pump 16,667 afy, and the remaining 16,667 afy would be pumped by the parties.
 - In Scenario 3B, 25,000 afy of puts were assumed to occur at new ASR wells. Takes were identical to Scenario 3A.
 - The puts and takes for the CBP operations do not always coincide with the puts and takes for the other Storage and Recovery operations included in Scenarios 3A and 3B.

The scenarios presented herein encompass the various impacts related to actions within different storage/operational bands to demonstrate the specific impacts to the Basin that would occur with utilization of these storage bands as OBMPU facilities are developed. The scenarios are presented to enable stakeholder use of storage space up to 700,000 af and conjunctive-use by Storage and Recovery Programs from 700,000 af to 900,000 af, with 900,000 af being the maximum Safe Storage Capacity of the Basin modeled therein, and also representing that which is proposed under the OBMPU. Refer to **Figure 4.7-9**, which depicts the projected water in managed storage accounts from 2019 through 2059.

4.7.4 Regulatory Setting

In addition to the impact issues listed above, there are certain regulations that also are used to evaluate the potential significance of impacts on hydrology and water quality. These issues are summarized in the following text.

4.7.4.1 Federal

Federal Clean Water Act

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The Clean Water Act was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial storm water discharges. In November 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish requirements for specific categories of industries, including construction projects that encompass certain acreage, currently projects of one acre or larger.

Pursuant to Section 404 of the Clean Water Act, the United States Army Corps of Engineers (ACOE) regulates discharges of dredged and/or fill material into waters of the United States. "Waters of the United States" are defined in ACOE regulations at 33 C.F.R. Part 328.3(a) and through U.S. Supreme Court caselaw. Under Section 404 of the Clean Water Act (CWA), the USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term "waters" includes certain wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR and by federal case law.

The Federal CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

The Federal CWA and the State Porter-Cologne Water Quality Act, require basin-wide planning. Additionally, pursuant to their delegated authority under the Clean Water Act, the Regional Water Quality Control Boards (RWQCBs or Regional Boards) have the authority to issue National Pollutant Discharge Elimination System (NPDES) permits that establish discharge standards and encourages the development of new approaches to water quality management. In addition, the State Water Resources Board (SWRCB or State Board) has established statewide general water quality permits that may apply to OBMPU projects. For example, the Construction General Permit applies to construction activities affecting greater than one acre with the potential to discharge to a water of the U.S. (WOTUS) (see more detailed discussion, below).

The Chino Basin is located within the Santa Ana Regional Water Quality Control Board's (Santa Ana RWQCB) jurisdiction.

National Pollutant Discharge Elimination System (NPDES) Program

The NPDES permit program is administered in the State of California by the SWRCB and RWQCBs under the authority of the USEPA to control water pollution by regulating point sources that discharge pollutants into WOTUS waters. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The Construction General Permit NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit) (CGP) regulates discharges of pollutants in stormwater associated with construction activity to WOTUS from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit

The Industrial General Permit (IGP) became effective July 1, 2015 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 Code of Federal Regulations Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including

governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP).

National Flood Insurance Program (NFIP)

The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal Government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the Federal Government will make flood insurance available within the community as a financial protection against flood losses.

In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories by producing Flood Hazard Boundary Maps (FHBMs), Flood Insurance Rate Maps (FIRMs), and Flood Boundary & Floodway Maps (FBFMs). Several areas of flood hazards are commonly identified on these maps. One of these areas is the Special Flood Hazard Area (SFHA) or high-risk area defined as any land that would be inundated by the 100-year flood — the flood having a 1-percent chance of occurring in any given year (also referred to as the base flood).

The high-risk area standard constitutes a reasonable compromise between the need for building restrictions to minimize potential loss of life and property and the economic benefits to be derived from floodplain development. Development may take place within the SFHAs, provided that development complies with local floodplain management ordinances, which must meet the minimum Federal requirements.

4.7.4.2 State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act found in the California Water Code is California's statutory authority for the protection of water quality. Under this act, the State must adopt water quality policies, plans, and objectives that protect the State's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater and this authority serves as the basis for Waste Discharge Requirements issued to municipal sewage treatment facilities by the RWQCBs. The Porter-Cologne Water Quality Act is accompanied by implementing regulations that are promulgated in Title 22 of the California Code of Regulations. Title 22 includes treatment and reuse requirements for recycled water projects throughout California.

Anti-Degradation Policy

The SWRCB's Anti-Degradation Policy, otherwise known as Resolution No. 68-16, sets specific restrictions for surface and groundwater that have higher than the required quality in order to avoid degradation of those water bodies (SWRCB, 2010). Requirements of this policy must be included within all Water Quality Control Plans throughout California (discussed below). Under this policy, actions that would lower the water quality in designated water bodies would only be allowed: if the action would provide a maximum benefit to the people of California, if it will not unreasonably affect beneficial uses, and if it will not lower water quality below applicable standards.

Water Recycling Requirements

The Santa Ana RWQCB Basin Plan requires that a discharge permit be obtained for the use of recycled water. Water Recycling Requirements (WRR) are prepared on a case-by-case basis for reuse of Title 22 recycled water as well as for discharge of fully advanced treated water intended for groundwater recharge or injection. WRRs are generally issued to the wastewater treatment agency but also cover intended uses. Water recycling criteria are contained in sections 60301 through 60355 of Title 22 and prescribe recycled water quality and wastewater treatment requirements for the various types of allowed uses in accordance with the SWRCB, Division of Drinking Water (DDW) (formerly a part of the California Department of Public Health (CDPH)).

Water Recycling Policy and Salt and Nutrient Management Plans

In February 2009, the State Water Resources Control Board (SWRCB) adopted Resolution No. 2009-0011, which established a statewide Recycled Water Policy. Draft amendments to the Recycled Water Policy were released in May 2012, September 2012, October 2012 (SWRCB hearing change sheets), and January 2013. The Recycled Water Policy Amendment was adopted by the SWRCB on January 22, 2013. The Recycled Water Policy encourages increased use of recycled water and local storm water. It also requires local water and wastewater entities, together with local salt/nutrient contributing stakeholders to develop a Salt and Nutrient Management Plan (SNMP) for each groundwater basin and subbasin in California.

Sustainable Groundwater Management Act

In 2014, the California State Legislature approved a combination of bills that together formed the Sustainable Groundwater Management Act (SGMA). SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs) that must develop Groundwater Sustainability Plans (GSPs) for medium or high priority groundwater basins in California by 2022. The goal of the GSPs is to make groundwater basins sustainable by the year 2042. In San Bernardino County, the Valley District is forming a joint GSA with other groundwater management agencies in the region to begin preparing a GSP that will manage future groundwater extraction in the program area. The Chino Basin is exempt from most of the SGMA requirements because it is adjudicated.

Recycled Water Groundwater Recharge Projects

On June 18, 2014, new regulations were adopted covering groundwater recharge for potable reuse with recycled water. The new regulations (CWC sections 13500-13529.4) outline permit requirements for recharging groundwater with recycled water for potable reuse in California. The regulations cover surface recharge and subsurface injection and transfer permitting responsibilities from the CDPH to the SWRCB Division of Drinking Water (DDW). The regulations include protocols to provide for source control, water quality control, retention time, emergency response planning, monitoring programs, operational plans, management plans, reporting requirements, and public review requirements.

California Water Code Section 1211

California Water Code section 1211 requires that: (1) the owner of any wastewater treatment plant obtain the approval of the SWRCB before making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes to the discharge or use of treated wastewater have the potential to decrease the flow in any portion of a watercourse and (2) the SWRCB review the proposed changes pursuant to the provisions of Water Code section 1700; In order to approve the proposed change, the State Water Board must determine that the proposed change will not operate to the injury of any legal user of the water involved.

4.7.4.3 Regional

Santa Ana Basin Plan

The SWRCB sets statewide policy and together with the RWQCBs implement state and federal laws and regulations. Each of the nine Regional Boards has adopted a Basin Plan. The Santa Ana River Basin Plan covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The Basin Plan specifies water quality objectives for all surface waters within the Santa Ana watershed. Water quality objectives specified for the creeks and streams include total dissolved solids (TDS), hardness, chloride, sulfate, fluoride, sodium, and total inorganic nitrogen. Groundwater quality objectives for all groundwater basins address total coliform, chemical constituents, radioactivity, and taste and odor. Chino Basin-specific groundwater quality objectives addressed maximum benefit objectives for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The Basin Plan has developed water quality objectives for both surface water and groundwater resources within the Santa Ana watershed. Water quality objectives for all resources address nitrate, TDS, metals, total coliform, chemical constituents, radioactivity, and taste and odor. Chino Basin-specific groundwater quality objectives have been developed for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The *Water Quality Control Plan for the Santa Ana River Basin Region 8* (Basin Plan) provides the framework for the RWQCB's regulatory program.⁵ Specifically, it:

1. Sets forth surface and groundwater quality standards for the Santa Ana Region;
2. Identifies beneficial uses of water and discusses objectives that shall be maintained or attained to protect those uses;
3. Provides an overview of types of water quality issues, and discusses them in the context of potential threats to beneficial uses;
4. Denotes recommended or required control measures to address the aforementioned water quality issues;
5. Prohibits certain types of discharge in particular areas of the Region;
6. Summarizes relevant State Board and Regional Board planning and policy documents, and discusses other relevant water quality management plans adopted by federal, state, and regional agencies; and
7. Identifies past and present water quality monitoring programs, and discusses monitoring activities that could be implemented in future Basin Plan updates.

Overall, the Basin Plan functions as the regulatory authority for water quality standards established in local NPDES permits and other RWQCB decisions.

Santa Ana River Judgment

IEUA and Western Municipal Water District (WMWD) have a joint obligation under the 1969 Santa Ana River (SAR) Judgment⁶ to provide Base Flow at Prado. The SAR Judgment states the following:

“CBMWD [Chino Basin Municipal Water District, now IEUA] and WMWD shall be responsible for an average annual Adjusted Base Flow of 42,000-acre feet at Prado. A continuing account [...] shall be maintained of actual Base Flow at Prado, with all

⁵ Santa Ana RWQCB, 2023. Santa Ana River Basin Plan.

https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/ (accessed 08/03/23)

⁶ Superior Court of the State of California for the County of Orange, 1969. (See footnote 1, above.)

adjustments thereof and any cumulative debit or credit. Each year the obligation to provide Base Flow shall be subject to the following:

1. **Minimum Annual Quantities.** Without regard to any cumulative credits, or any adjustments for quality for the current Water Year [...], CBMWD and WMWD each year shall be responsible for not less than 37,000 -acre feet of Base Flow at Prado, plus one-third of any cumulative debit; provided, however, that for any year commencing on or after October 1, 1986, when there is no cumulative debit, [...] said minimum shall be 34,000-acre feet.”

The historical accrual of Base Flow credits means that the IEUA’s and WMWD’s minimum Base Flow Obligation at Prado will be 34,000 AFY into the foreseeable future. Notably, the Judgment only prescribes a requirement for the volume of Base Flow and does not prescribe its source.

4.7.4.4 Local

County policies generally pertaining to hydrology and water quality have been included in the section below. Future projects under this RDSEIR will be analyzed at the program-level to assess the applicability of all local general plan and municipal code policies.

General Plan Policies

County of San Bernardino General Plan

The following goals and policies within the San Bernardino Countywide Plan regarding hydrology and water quality would be applicable to program activities within the Chino Basin (County of San Bernardino, 2020).

Goal NR-2 Clean and safe water for human consumption and the natural environment

Policy NR-2.1 Coordination on water quality

We collaborate with the state, regional water quality control boards, watermasters, water purveyors, and government agencies at all levels to ensure a safe supply of drinking water and a healthy environment.

Policy NR-2.2 Water management plans

We support the development, update, and implementation of ground and surface water quality management plans emphasizing the protection of water quality from point and non-point source pollution.

Policy NR-2.3 Military coordination on water quality

We collaborate with the military to avoid or minimize impacts on military training and operations from groundwater contamination and inadequate groundwater supply.

Policy NR-2.4 Wastewater discharge

We apply federal and state water quality standards for wastewater discharge requirements in the review of development proposals that relate to type, location, and size of the proposed project in order to safeguard public health and shared water resources.

Policy NR-2.5 Stormwater discharge

We ensure compliance with the County’s Municipal Stormwater NPDES (National Pollutant Discharge Elimination System) Permit by requiring new development and significant redevelopment to protect the quality of water and drainage systems through site design, source

controls, stormwater treatment, runoff reduction measures, best management practices, low impact development strategies, and technological advances. For existing development, we monitor businesses and coordinate with municipalities.

Policy NR-2.6 Agricultural waste and biosolids

We coordinate with regional water quality control boards and other responsible agencies to regulate and control animal waste and biosolids in order to protect groundwater and the natural environment.

Goal IU-1 Water supply and infrastructure are sufficient for the needs of residents and businesses and are resilient to drought

Policy IU-1.1 Water supply

We require that new development be connected to a public water system or a County-approved well to ensure a clean and resilient supply of potable water, even during cases of prolonged drought.

Policy IU-1.2 Water for military installations

We collaborate with military installations to avoid impacts on military training and operations from groundwater contamination and inadequate groundwater supply.

Policy IU-1.3 Recycled water

We promote the use of recycled water for landscaping, groundwater recharge, direct potable reuse, and other applicable uses in order to supplement groundwater supplies.

Policy IU-1.4 Greywater

We support the use of greywater systems for non-potable purposes.

Policy IU-1.5 Agricultural water use

We encourage water-efficient irrigation and the use of non-potable and recycled water for agricultural uses.

Policy IU-1.6 User fees

For water systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

Policy IU-1.7 Areas vital for groundwater recharge

We allow new development on areas vital for groundwater recharge when stormwater management facilities are installed onsite and maintained to infiltrate predevelopment levels of stormwater into the ground.

Policy IU-1.8 Groundwater management coordination

We collaborate with watermasters, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other “undesirable results” as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.

Policy IU-1.9 Water conservation

We encourage water conserving site design and the use of water conserving fixtures, and advocate for the adoption and implementation of water conservation strategies by water service agencies. For existing County-owned facilities, we incorporate design elements, building materials, fixtures, and landscaping that reduce water consumption, as funding is available.

Policy IU-1.10 Connected systems

We encourage local water distribution systems to interconnect with regional and other local systems, where feasible, to assist in the transfer of water resources during droughts and emergencies.

Policy IU-1.11 Water storage and conveyance

We assist in development of additional water storage and conveyance facilities to create a resilient regional water supply system, when it is cost effective for County-owned water and stormwater systems.

Goal IU-2 Residents and businesses in unincorporated areas have safe and sanitary systems for wastewater collection, treatment, and disposal

Policy IU-2.1 Minimum parcel size

We require new lots smaller than one-half acre to be served by a sewer system. We may require sewer service for larger lot sizes depending on local soil and groundwater conditions, and the County's Local Area Management Program.

Policy IU-2.2 User fees

For wastewater systems operated by County Special Districts, we establish user fees that cover operation and maintenance costs and set aside adequate reserves for capital upgrades and improvements.

Policy IU-2.3 Shared wastewater facilities for recycled water

We encourage an expansion of recycled water agreements between wastewater entities to share and/or create connections between wastewater systems to expand the use of recycled water.

Goal IU-3 A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding

Policy IU-3.1 Regional flood control

We maintain a regional flood control system and regularly evaluate the need for and implement upgrades based on changing land coverage and hydrologic conditions in order to manage and reduce flood risk. We require any public and private projects proposed anywhere in the county to address and mitigate any adverse impacts on the carrying capacity and stormwater velocity of regional stormwater drainage systems.

Policy IU-3.2 Local flood control

We require new development to install and maintain stormwater management facilities that maintain predevelopment hydrology and hydraulic conditions.

Policy IU-3.3 Recreational use

We prefer that stormwater facilities be designed and maintained to allow for regional open space and safe recreation use without compromising the ability to provide flood risk reduction.

Policy IU-3.4 Natural floodways

We retain existing natural floodways and watercourses on County-controlled floodways, including natural channel bottoms, unless hardening and channelization is the only feasible way to manage flood risk. On floodways not controlled by the County, we encourage the retention of natural floodways and watercourses. Our priority is to reduce flood risk, but we also strive to protect wildlife corridors, prevent loss of critical habitat, and improve the amount and quality of surface water and groundwater resources.

Policy HZ-3.6 Contaminated water and soils

We advocate for and coordinate with local and regional agencies in efforts to remediate or treat contaminated surface water, groundwater, or soils in or affecting unincorporated environmental justice focus areas. We pursue grant funding and establish partnerships to implement the County's Site Remediation Program in unincorporated environmental justice focus areas, with particular emphasis in addressing the types of contamination identified in the Hazard Element tables.

Policy HZ-3.7 Well Water Testing

In unincorporated environmental justice focus areas that are not served by public water systems, we periodically test well water for contamination, identify potential funding sources, and, where feasible, provide technical assistance to implement necessary improvements, with particular emphasis in addressing the types of contamination identified in the Hazard Element tables.

Goal PP-3 Reduced risk of death, injury, property damage, and economic loss due to fires and other natural disasters, accidents, and medical incidents through prompt and capable emergency response.

Policy PP-3.5 Firefighting water supply and facilities

We coordinate with water providers to maintain adequate water supply, pressure, and facilities to protect people and property from urban fires and wildfires.

County of Riverside General Plan

The following goals and policies within the Land Use Element of the County of Riverside General Plan, revised April 16, 2019, regarding hydrology and water quality that would be applicable to all program activities within the Chino Basin.

LU 1.5 The County of Riverside shall participate in regional efforts to address issues of mobility, transportation, traffic congestion, economic development, air and water quality, watershed and habitat management with cities, local and regional agencies, stakeholders, Indian nations, and surrounding jurisdictions. (AI 4, 16)

LU 4.1f. Incorporate water conservation techniques, such as groundwater recharge basins, use of porous pavement, drought tolerant landscaping, and water recycling, as appropriate.

LU 5.3 Review all projects for consistency with individual urban water management plans (AI 3).

LU 18.4 Coordinate Riverside County water-efficiency efforts with those of local water agencies. Support local water agencies' water conservation efforts.

LU 21.2 Require that adequate and available circulation facilities, water resources, sewer facilities and/or septic capacity exist to meet the demands of the proposed land use. (AI 3) *(repeated for several land uses)*

City General Plans and Municipal Codes

The Chino Basin includes the following incorporated cities: cities of Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties. Each of these cities has its own General Plan and municipal code that pertain to protection of hydrological resources.

4.7.5 Impacts Discussion

4.7.5.1 a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

GROUNDWATER QUALITY

Impacts on Groundwater Quality

Under the 2023 SFI, eight VOC plumes were evaluated: the Pomona area, GE Flatiron, CIM, Chino Airport, South Archibald, Milliken Landfill, and Stringfellow plumes. The two inorganic plumes include the Kaiser TDS and the Stringfellow perchlorate plumes.

Figure 4.7-13 shows the initial locations of the VOC plumes and their estimated locations in July 2058, which is the future date by which the SFI modeled the put/hold/take cycles for the Storage and Recovery Program scenarios. These maps show the projected boundary of the VOC plumes with concentrations greater than the 5 µg/l MCL as estimated by the MT3D model.

Future projections of the Stringfellow TCE and perchlorate plumes were not made because the Model does not currently include the hydrogeologic resolution to make a reasonable projection of their movements. Future projections of the Kaiser TDS plume were not made because its location is not well known nor is the spatial distribution of the TDS concentration within it.

These simulations are not definitive assessments of the fate of these plumes. The precise movement of these plumes is controlled by the localized heterogeneities that are not represented in the 2020 CVM. The best use of the solute modeling results described herein is to show how Storage and Recovery Programs could affect the movement of the plumes relative to the Baseline Scenario. The projected locations of the plumes are shown in outline form for each scenario and indicate the limits of the projected plume with a VOC concentration greater than 5 µg/l. The simulation results are summarized below.

- Pomona area TCE Plume. The TCE concentration in the Pomona area TCE plume is projected to fall below 5 µg/l by 2058 through contaminant removal from groundwater pumping, dispersion, and natural degradation. This occurs for all scenarios. Future Storage and Recovery Programs resembling those investigated in the Scenarios 2A through 3B are projected to have no effect on the Pomona area TCE plume movement.
- CIM PCE Plume. The PCE concentration in the CIM PCE plume is projected to fall below 5 µg/l by 2058 through dispersion and natural degradation. This occurs for all scenarios. Future Storage and Recovery Programs resembling those investigated in the Scenarios 2A through 3B are projected to have no effect on CIM PCE plume movement.
- GE Flatiron Plume. **Figure 4.7-13** shows the projected movement of the GE Flatiron TCE plume in 2058, caused by projected GE Flatiron plume remediation activities and projected management of the basin. The projected plume paths are similar for the Baseline Scenario and the Storage and Recovery Program Scenarios. However, the southern edge of the GE Flatiron plume is projected to migrate southward about 0.3 miles further in Scenario 3A than under the Baseline Scenario, which is the largest effect of the Storage and Recovery Program Scenarios. The southern edge of the GE Flatiron plume is projected reach City of Chino Well 18 several years earlier under the Storage and Recovery Program Scenarios. The plume displacements due to the Storage and Recovery Program Scenarios are minor compared to the magnitude of the projected movement of the plumes in the Baseline Scenario.

- Chino Airport Plume. **Figure 4.7-13** shows the projected location of the Chino Airport TCE plume under the assumption that no remediation plan is implemented by 2058. As of this writing, the final remediation plan for this plume has not been decided. The plume is projected to move to the southeast in the absence of a remediation plan. The projected plume paths are virtually identical for Scenarios 1A, 2C, 3B, and 4B. Future Storage and Recovery Programs resembling those investigated in the Scenarios 2A through 3B are projected to have no effect on Chino Airport plume movement.
- GE Test Cell Plume. **Figure 4.7-13** shows the projected location of the GE Test Cell TCE plume in 2058. The plume is projected to move south past the Ely Basins recharge facility. The projected plume paths are virtually identical for the Baseline Scenario and the Storage and Recovery Program Scenarios with the exception that the southerly leading edge of the plume is about 0.3 miles further south for Scenario 3A. Future Storage and Recovery Programs resembling those investigated in Scenarios 2A through 3B are projected to have an effect on GE Test Cell TCE plume movement. The plume displacements due to the Storage and Recovery Program Scenarios are minor compared to the magnitude of the projected movement of the plumes in the Baseline Scenario.
- South Archibald Plume. **Figure 4.7-13** shows that the TCE concentration of this plume is projected to fall below 5 µgl by 2058 through contaminant removal from groundwater pumping, dispersion, and natural degradation. Future Storage and Recovery Programs resembling those investigated in Scenarios 2A through 3B are projected to have no effect on South Archibald plume movement.
- Milliken Landfill Plume. The TCE concentration in the Milliken Landfill plume is projected to fall below 5 µgl by 2058 through contaminant removal from dispersion, and natural degradation. This occurs for all scenarios. Future Storage and Recovery Programs resembling those investigated in Scenarios 2A through 3B are projected to have no effect on Milliken Landfill plume movement.

Impact Conclusion

The impacts on groundwater quality may be significant if the OBMPU results in new movement of these plumes within the Chino Basin outside of known contamination zones causes water quality degradation, which could result in a significant impact on water quality of the Basin, thereby hindering management of the Basin circumstances as they are known at present. Without monitoring of these water quality plumes, and subsequent mitigative actions to avoid movement of the plumes, a significant impact would occur.

SURFACE WATER QUALITY

Construction

For a developed area, the three main sources of potential violation of water quality standards or waste discharge requirements are from generation of municipal wastewater; from stormwater runoff; and potential discharges of pollutants, such as accidental spills.

Construction of proposed OBMPU projects would require the use of heavy equipment and construction-related chemicals, such as fuels, oils, grease, solvents and paints that would be stored in limited quantities onsite. In the absence of proper controls, these construction activities could result in accidental spills or disposal of potentially harmful materials used during construction that could wash into and pollute surface waters or groundwater. Materials that could potentially contaminate the construction area from a spill or leak include diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids.

Because the proposed projects would be implemented incrementally over time, there would not be a single construction discharge permitting process. Instead, as construction of each proposed upgrade or facility is initiated, individual construction discharge permits would be acquired by the Implementing Agency of the project. Where the anticipated total disturbance for a facility would be greater than one acre, the Implementing Agency would be required to acquire coverage under the statewide CGP. By complying with the CGP and preparing and implementing a SWPPP. Without the coverage of the CGP and SWPPP, which is intended to protect surface water quality during construction, a significant impact would occur. However, compliance with the CGP is a mandatory requirement, and therefore, compliance thereof would be required as part of implementation of future individual OBMPU projects. The SWPPP would include BMPs to control erosion, sedimentation, and hazardous materials release from construction sites into surface waters. Compliance with the SWPPP BMPs and other conditions of the CGP and SWPPP would ensure impacts to water quality are less than significant for OBMPU projects that are greater than one acre in size.

If anticipated disturbance is less than one acre, the CGP would not apply to the facility construction. Instead, the facility would be required to comply with minimum BMPs as specified by the San Bernardino County MS4 Permit, which would implement BMPs to provide erosion control, sediment control, and waste management strategies for construction sites. Without implementation of these BMPs, which would protect surface water quality during construction, a significant impact would occur. However, compliance with the San Bernardino County MS4 Permit is mandatory, and therefore, compliance thereof would be required as part of implementation of future individual OBMPU projects. Adherence to these conditions would ensure that potential water quality degradation associated with construction activities on sites less than one acre would be minimized to less than significant levels. Through compliance with the San Bernardino County MS4 Permit for projects under one acre during construction, impacts would be less than significant.

Compliance with these permits during construction of all facilities would minimize potential release of pollutants via storm water runoff from construction sites and reduce the potential for violation of water quality standards to less than significant levels.

Operation

The proposed OBMPU facilities would be required to implement the water quality standards and BMP design guidelines as outlined in the Technical Guidance Manual (TGM) for Water Quality Management Plans for San Bernardino County,⁷ the Water Quality Management Plan: A Guidance Document for the Santa Ana Region of Riverside County,⁸ and California Stormwater Quality Association Stormwater Best Management Practice Handbook for New Development and Redevelopment for Los Angeles County.⁹ Meeting this mandatory requirement will address the current Water Quality Management Plan (WQMP) requirements established by the Santa Ana Regional Water Quality Control Board's Order No. R8-210-0036. It should be noted that future OBMPU projects will implement updated technical permits that are approved during final engineering. The above guideline documents for each county require projects to treat runoff emanating from future proposed developments in order to treat constituents and contaminants that may cause water quality degradation downstream at receiving waters identified by the

⁷ <https://www.sbcounty.gov/uploads/DPW/docs/SantaAnaRiver-WQMP-Final-June2013.pdf> (accessed 08/03/23).

⁸ https://content.rcflood.org/downloads/NPDES/Documents/SA_WQMP/SantaAnaWQMPGuidance.pdf (accessed 08/03/23).

⁹ https://pw.lacounty.gov/wmd/stwq/files/BMP_NewDevRedev_Complete.pdf (accessed 08/03/23).

Regional Board. The BMPs that will be implemented by future projects will minimize or eliminate the degradation of surface and groundwater by implementing infiltration or biofiltration basin based BMPs as outlined in the above guideline documents for each county.

During periods when water is being stored in the infiltration basins or bioretention basins, it is essential that these surface water bodies be managed in a manner to sustain water quality objectives. Without management of the surface water bodies to sustain water quality objectives, a significant impact would occur.

During OBMPU project implementation, discharge of the treated effluent into creeks, proposed recharge basins, and injection wells would be required to continue to comply with the DDW recycled water regulations contained in Title 22 of the CCR, subject to conditions imposed by the RWQCB pursuant to WRRs and WDRs. Compliance with NPDES discharge regulations with approval from the SARWQCB is mandatory and would ensure that the proposed projects would not result in significant impacts to surface or groundwater quality during operation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

No 2000 OBMP Mitigation Measures are applicable to minimize impacts to water quality from implementation of the OBMPU.

GROUNDWATER QUALITY

As stated above, in order to prevent movement of plumes in the Chino Basin, mitigation is required that will minimize impacts below significance thresholds. This is for the following reasons:

- Water quality degradation caused by a Storage and Recovery Program is considered an MPI under the Peace Agreement. Under the 2020 SMP, Watermaster will review each Storage and Recovery Program application, estimate the surface and ground water systems response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program applicant will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive groundwater-quality monitoring pursuant to the Peace Agreement and Court orders and modeling to assess status and projected movement of plumes in the Chino Basin. The information developed from these efforts will be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells. And, to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation actions include: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and 2, and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions.

Mitigation Measures **HYD-11** and **HYD-12** address potential degradation of water quality within the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential degradation of water quality, and (2) respond with appropriate mitigation to minimize potential degradation of water quality that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent potential degradation of water quality that may result from implementation of future OBMPU Projects.

HYD-11: Water Quality Degradation Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for water quality degradation). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster and pursuant to MM HYD-10; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for water quality degradation, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-12: Water Quality Degradation Part 2. To mitigate potential water quality degradation caused by a proposed Storage and Recovery Program Application (as described above under HYD-9), the data gathered through Watermaster's comprehensive groundwater-quality monitoring shall be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells, and to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation includes but is not limited to: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

SURFACE WATER QUALITY

While the majority of the impacts to surface water quality can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding violations to surface water quality standards. Therefore, the following mitigation measures shall be implemented to prevent any violation of any water quality standards or waste discharge requirements or otherwise substantially degrading surface or groundwater quality.

Mitigation Measure **HYD-14** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. This mitigation measure would further ensure that no water quality standards are violated through targeted stormwater pollution control.

HYD-14: Small Site Stormwater Discharge BMPs. *Prior to the commencement of construction of any OBMPU project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), the Implementing Agency shall require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each OBMPU facility, and to control urban runoff after each OBMPU facility is constructed and the well (if approved for operation post well testing) or other OBMPU facility is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to:*

- *The use of silt fences or coir rolls;*
- *The use of temporary stormwater desilting or retention basins;*
- *The use of water bars to reduce the velocity of stormwater runoff;*
- *The use of wheel washers on construction equipment leaving the site;*
- *The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;*
- *The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and*
- *Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.*

During project design, overland flows and drainage at each OBMPU project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Los Angeles, Riverside, and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no violations of water quality standards would occur.

HYD-15: Drainage Plans. *Prior to commencement of construction of project facilities, the Implementing Agency shall require that the Project Proponent submit either:*

- (1) *Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever possible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not possible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall:*
- (2) *Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located.*

As stated above, during periods when water is being stored in the recharge basins, storage basins, and site-specific infiltration basins or bioretention basins, these surface water bodies must be managed in a manner to sustain water quality objectives. This can be achieved through the preparation of a Recharge and Storage Basin Management Plan that shall establish ongoing

management actions required to achieve these applicable water quality standards. Typical management actions can include oxygenation of the water body; control of sediment accumulation; and control of nutrients flowing into the basin to minimize the potential for a basin to support vectors. As such, the following mitigation measures are necessary to minimize water quality impacts from implementation of the recharge basins and other projects with associated water quality management basins.

HAZ-6: Vector management. *Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.*

HYD-18: Recharge and Storage Basin Management Plan Actions. *Recharge Basins, Storage Basins, and site-specific infiltration or bioretention basins shall each be required to prepare a Recharge and Storage Basin Management Plan that shall establish ongoing management actions required to achieve adherence to applicable water quality standards. Management actions shall be identified in the Management Plans, which shall include, but not be limited to the following:*

- *Oxygenation of the water body;*
- *Control of sediment accumulation; and,*
- *Control of nutrients flowing into the basin to minimize the potential for a basin to support vectors*

With implementation of the mitigation identified above, it will be feasible to meet water quality standards at the time each individual proposed OBMPU project is implemented in the future and this can be accomplished without causing substantial degradation of onsite or downstream water quality or violation of any water quality or public health standards.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Given that the proposed OBMPU would occur entirely within the boundaries of the Chino Basin, the analysis contained herein is presumed to constitute a comprehensive reflection of Basin response where water quality standards are concerned. Therefore, the analysis presented as the OBMPU project impacts remain valid when applied on a cumulative basis.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measures **HYD-11, HYD-12, HYD-14, HYD-15, HYD-28, and HAZ-6** are required to minimize cumulative impacts on the Basin.

Level of Significance After Mitigation: Less Than Significant

4.7.5.2 b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

The following analysis discussions cover several Basin management criteria that, if impacted by the proposed OBMPU, would result in a significant potential to impeded sustainable groundwater management of the Basin. These criteria are as follows:

1. **Material Physical Injury:** "Material Physical Injury" (MPI) means material injury that is attributable to the Recharge, Transfer, Storage and Recovery, management, movement or Production of water, or implementation of the OBMP, including, but not limited to, degradation of water quality, liquefaction, land subsidence, increases in pump lift (lower water levels) and adverse impacts associated with rising groundwater. Material Physical Injury does not include "economic injury" that results from other than physical causes. Once fully mitigated, physical injury shall no longer be considered to be material. The following are a subset of MPI:
 - a. **Pumping Sustainability:** The term pumping sustainability, as used herein, refers to the ability to produce water from a specific well at a desired production rate, given the groundwater level at that well and its well construction and current pumping equipment details.
 - b. **Reduction in Net Recharge:** Net recharge is net inflow to the basin excluding the direct recharge of Supplemental Water. Net recharge is a key factor in the calculation of Safe Yield, and therefore a reduction in net recharge will cause a reduction in Safe Yield.
 - c. **Risk of New Land Subsidence:** Land subsidence is the lowering of the land-surface elevation from changes that take place underground. To determine whether subsidence would occur under a given scenario, to detect the likelihood of initiating new subsidence, the following metric is used: if projected groundwater levels are higher than the control surface, then new land subsidence should not occur; if projected groundwater levels decline below the control surface, then new land subsidence could occur.
 - d. **Loss of Hydraulic Control:** Hydraulic Control is the elimination of groundwater discharge from the Chino-North Groundwater Management Zone to the Santa Ana River or its reduction to less than 1,000 afy.
 - e. **Movement of Water Anomalies:** In the Chino Basin, there are eight VOC plumes, and two inorganic plumes (Kaiser TDS and the Stringfellow perchlorate). Movement of these plumes within the Chino Basin outside of known contamination zones can cause water quality degradation, which could result in a significant impact on water quality of the Basin, thereby hindering proper management of the Basin circumstances as they are known at present.
 - f. **Loss of Riparian Vegetation at Prado Basin:** The riparian vegetation in the Prado Basin is supported by a combination of shallow groundwater and surface-water discharge in the Santa Ana River and its tributaries that cross the Prado Basin. Any reductions in groundwater levels and wastewater discharge to the Santa Ana River and its tributaries due to Storage and Recovery Programs can affect the extent and health of the riparian vegetation.

Given that one of the Objectives of the OBMPU is to Enhance Basin Water Supplies, with intent of increasing the water supplies available for Chino Basin Parties and improving water supply reliability, there are no features of the proposed Project that would substantially decrease water supplies, beyond any possible pumping sustainability challenges that may result on an individual basis from the implementation of future OBMPU facilities—which is discussed in detail below. Therefore, this issue not discussed further, as no Project-related groundwater supply impacts are anticipated.

The following represents background data to support the analysis provided under the issue topics headed in all caps, reflecting the list of criteria provided above.

Projected Groundwater Production for the Planning Period

Projected pumping by the Parties for the Baseline Scenario is shown in the table below, and ranges from about 139,500 af in 2020 to 173,800 af in 2040.

**TABLE 4.7-2
BASELINE SCENARIO PUMPING PROJECTIONS (AF)**

Water Source	2020	2025	2030	2035	2040
Chino Basin Groundwater	139,519	144,596	151,808	164,600	173,805

Table 4.7-3 summarizes the puts and takes for the Storage and Recovery Program Scenarios, including the assumed operations for the CBP. Pumping changed by the following amounts in the Storage and Recovery Program Scenarios compared to the Baseline Scenario:

- Scenario 3A/B: During put years, pumping is about 12,500 afy less than pumping in the Baseline Scenario, identical to Scenario 2A. During take years, pumping is about 67,667 afy more than pumping in the Baseline Scenario and 33,333 afy more than Scenario 2A.

**Table 4.7-3
ALLOCATION OF PUTS AND TAKES AMONG EXISTING AND NEW FACILITIES FOR STORAGE AND RECOVERY PROGRAM SCENARIO 3A AND 3B**

	SSC Increased to 900,000 af	
	3A	3B
Cumulative storage above operational band 1 used in each scenario (af)	200,000	200,000
Annual put	50,000	50,000
Existing in-lieu capacity used	12,500	12,500
Existing spreading basin recharge capacity used	19,520	9,760
Existing ASR capacity used	5,480	2,740
Total existing put capacity used	37,500	25,000
New ASR well capacity used	12,500	25,000
Annual take	66,667	66,667
Take through existing facilities	50,000	50,000
Take through new wells	16,667	16,667

(a) Volumes listed in this table do not include assumed CBP operations.

The impacts of the changes in Project groundwater pumping and recharge projections are described under the “Projected groundwater levels” and “Impacts on groundwater quality” sections herein.

Projected Managed Aquifer Recharge for the Planning Period

Managed Aquifer Recharge includes recharge of stormwater and supplemental water (imported and recycled water). Recharge conducted to facilitate a Storage and Recovery Program comprises supplemental water. Managed Aquifer Recharge in the Baseline Scenario is derived from the assumptions that were used in the 2020 Safe Yield Recalculation and the LSLS Report, and include:

- **Stormwater Recharge in Spreading Basins.** Stormwater recharge in spreading basins is estimated to be about 10,500 afy through 2022 and to increase to about 14,300 afy in 2023 with the completion of the 2013 RMPU projects.
- **Recycled Water Recharge in Spreading Basins.** Annually recycled water recharge in spreading basins is estimated to increase from about 13,500 afy in 2019 to 16,400 afy in 2030 and beyond.
- **Imported Water Recharge in Spreading Basins.** Imported water recharge in the Baseline Scenario is assumed to occur due to (i) assumed wet-water recharge puts to facilitate Metropolitan's DYYP and (ii) wet-water recharge used to satisfy part of the Parties' replenishment obligations when projected production exceeds projected production rights.
 - Puts for Metropolitan's DYYP were assumed to occur at a rate of 19,500 afy for 2019 through 2021, half of which was assumed to be wet-water recharge. This period does not overlap with the period over which the 2023 SFI Storage and Recovery Programs are assumed to occur.
 - Assumptions for imported water recharge used to satisfy part of the Parties' replenishment obligations is based on projected pumping, pumping rights, and behavior of the Parties (i.e., use of storage accounts versus wet-water recharge). Imported water recharge for replenishment obligations is estimated to be zero through 2027, and increase to 3,800 afy in 2040, before declining to 3,000 afy in 2041 through 2050 and to 2,200 afy in 2051 through 2060.

Managed Aquifer Recharge (not including in-lieu recharge) changed by the following amounts in the Storage and Recovery Program Scenarios compared to the Baseline Scenario:

- Scenario 3A/B: During put years, Managed Aquifer Recharge is about 25,000 afy more than recharge in Scenario 2A. During take years, pumping is about 33,333 afy more than pumping in Scenario 2A. Recharge stays the same for the two scenarios during take and hold years.

The impacts of the changes in Project groundwater pumping and recharge projections are described under the "Projected groundwater levels" and "Impacts on groundwater quality" sections herein.

Projected Recharge and Replenishment Capacity

Table 4.7-4 below summarizes the existing recharge capacity and the recharge capacity expected when the planned 2013 RMPU projects are online. Stormwater recharge varies by year, based on hydrologic conditions, and averaged about 10,150 afy during the period FY 2004/2005 through FY 2019/2020 (period of available historical data). The net new stormwater recharge from MS4 projects constructed in the period FY2000/2001 through FY 2017/2018 is estimated to average about 380 afy. Supplemental water recharge in recharge basins occurs during non-storm periods. The recharge capacity available for supplemental water recharge varies from year to year based on the hydrologic conditions and is projected to average about 56,600 afy¹⁰. The ASR and in-lieu

¹⁰ Annual Finding of Substantial Compliance with the Recharge Master Plan – Fiscal Year 2022-23 (West Yost, 2022)

recharge capacities are estimated to be about 5,480 afy and 17,700 afy, respectively¹¹. The initial OBMP recharge master plan was developed in 2002; its current version is the 2013 Amendment to the 2010 Recharge Master Plan Update (2013 RMPU) (WEI, 2013). The projects selected for implementation in the 2013 RMPU involve improvements to existing recharge facilities and the construction of new facilities that, in aggregate, will increase the recharge of stormwater and dry-weather flow by 4,700 afy and increase recycled water recharge capacity by 7,100 afy. These projects are expected to be fully constructed and operational by 2024. Pursuant to the Peace II Agreement, Watermaster and the IEUA update their recharge master plan on a five-year frequency, Watermaster and the IEUA completed the 2018 RMPU in October 2018, with the next plan scheduled to be completed in October 2023.

**Table 4.7-4
ESTIMATED RECHARGE CAPACITIES IN THE CHINO BASIN (AF)**

Water Type	Recharge Type	2020 Conditions	2020 Conditions Plus Pending Recommended 2013 RMPU Projects
Stormwater	Average Stormwater Recharge in Spreading Basins	9,950	14,700
	Average Expected Recharge of MS4 Projects	380	380
	Subtotal	10,330	15,080
Supplemental Water	Spreading Capacity for Supplemental Water	56,600	56,600
	ASR Injection Capacity	5,480	5,480
	In-Lieu Recharge Capacity	17,700	17,700
	Subtotal	79,780	79,780
Total		90,110	94,860

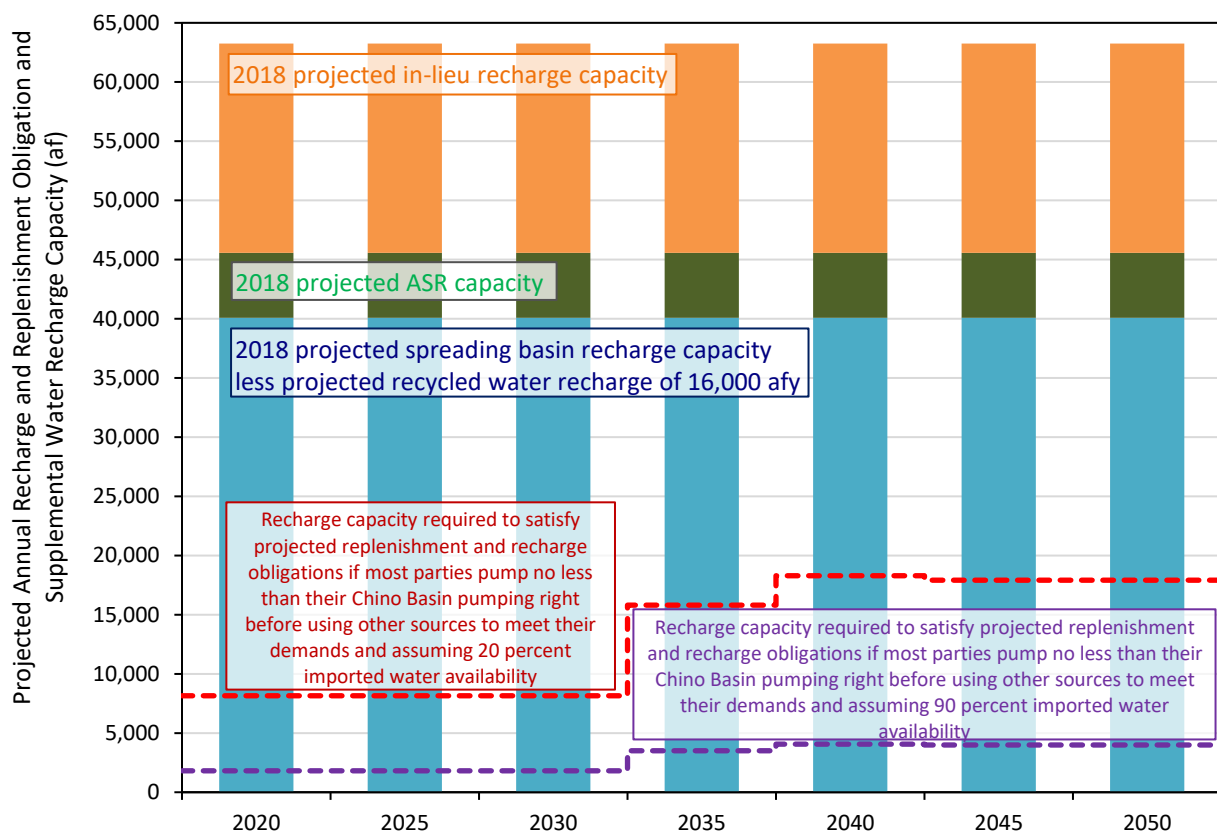
Future supplemental water recharge capacity requirements are estimated by assessing future supplemental water recharge projections in the context of the availability of supplemental water for recharge. Recycled water is assumed 100-percent reliable, and therefore the recharge capacity requirement to recharge recycled water is assumed equal to its projected supply. The imported water supply from MWDSC is assumed to be 20 percent reliable (available one out of five years) without full implementation of its 2015 Integrated Resources Plan (IRP) and 90 percent reliable (available nine out of ten years) with it (WEI, 2018). Therefore, the recharge capacity required to meet recharge and replenishment obligations with imported water supplied by Metropolitan is five times the projected recharge and replenishment requirement without full

¹¹ Ibid

implementation of the 2015 IRP and about 1.1 times the projected recharge and replenishment requirement with its full implementation. The chart above shows the recharge capacity available at recharge basins less that used for recycled water recharge, in-lieu recharge capacity, and ASR recharge capacity as a stacked bar chart—the total supplemental capacity being the sum of these recharge capacities. The chart also shows the time history of the supplemental water recharge capacity required to recharge imported water from Metropolitan without and with full implementation of Metropolitan’s 2015 IRP.

As the chart below shows, whether Metropolitan fully implements its 2015 IRP, Watermaster and the IEUA are projected to have enough recharge capacity available to meet all of their recharge and replenishment obligations through 2050, which is ten years after the OBMPU horizon year.

**EXHIBIT 4.7-4
COMPARISON OF PROJECTED ANNUAL RECHARGE AND REPLENISHMENT OBLIGATION
TO SUPPLEMENTAL WATER RECHARGE CAPACITY**



For the Maximum Use of Existing and New Facilities (Scenario 3A/B) Scenarios, assumed recharge capacity changes as follows:

- Scenario 3A: Assumes an increase of 12,500 afy in recharge capacity from new ASR wells compared to Scenario 2A.
- Scenario 3B: Assumes an increase of 25,000 afy in recharge capacity from new ASR wells compared to Scenario 2A.

Projected Groundwater Levels

Groundwater Level Change Maps Across Chino Basin

The attached series of figures (**Figures 4.7-10** through **4.7-12**) show the differences in groundwater levels in July 2058 between the Baseline Scenario and Scenarios 2A, 3A, and 3B, respectively. The differences in groundwater levels of the Storage and Recovery Scenarios and the Baseline Scenario are summarized below.

The impacts of the changes in Project groundwater pumping and recharge projections on groundwater levels are evaluated under four categories: pumping sustainability, subsidence, net recharge, and hydraulic control.

PUMPING SUSTAINABILITY

Impacts on Pumping Sustainability due to Changes in Groundwater Levels

The term pumping sustainability, as used herein, refers to the ability to produce water from a specific well at a desired production rate, given the groundwater level at that well and its well construction and current pumping equipment details. The projected groundwater-elevation time-series charts at individual wells (Appendix A of the 2023 SFI) includes a pumping sustainability metric if provided by the Appropriator. Pumping sustainability metrics are defined by each well owner. Groundwater pumping at a well is assumed to be sustainable if the groundwater elevation at that well remains above the pumping sustainability metric. If the projected groundwater elevation declines below the sustainability metric, the owner will either lower the pumping equipment in their well, reduce pumping, or a combination of the two.

The increase in storage and subsequent removal of stored water will raise groundwater levels during the put and hold periods and lower groundwater levels thereafter until the stored water is completely pumped out. This increase and decrease in groundwater levels may impact the parties in the basin disproportionately. Pumping sustainability becomes a concern if Storage and Recovery Program operations cause groundwater levels to fall below sustainable pumping levels at the parties' wells when the stored water is removed.

Table 4.7-5 shows wells with sustainability metrics in the Chino Basin that have projected groundwater levels that decline below the sustainability metric under the Baseline Scenario or any Storage and Recovery Program Scenario during the program period. As shown in **Table 4.7-5**, there are 19 wells that are projected to experience pumping sustainability challenges under the Baseline Scenario. At 10 of these wells (City of Ontario Wells 31, 37, 38, and 39, CVWD Well CB-5, FWC Wells F23A, F24A, F26A, and F44B, and JCSD Well 13), one or more Storage and Recovery Program Scenarios are projected to exacerbate the existing pumping sustainability challenges by 10 feet or more. These wells are all near the planned ASR or extraction wells assumed to facilitate the Storage and Recovery Program Scenarios under the proposed OBMPU. One or more Storage and Recovery Program Scenarios could cause five additional wells (CVWD Well CB-39, Ontario Well 24, JCSD Wells 17, 15, and 12) to experience pumping sustainability challenges that were not projected to experience pumping sustainability challenges under the Baseline Scenario. One well (Chino Desalter Authority [CDA] I-10) that is projected to experience pumping sustainability challenges under the Baseline Scenario remained above the sustainability metric under the Storage and Recovery Program Scenarios.

**TABLE 4.7-5
CHARACTERIZATION OF THE CHANGE IN PUMPING SUSTAINABILITY OBSERVED IN
STORAGE AND RECOVERY PROGRAM SCENARIOS**

Well Owner	Well Name	Difference between the minimum water level in Storage and Recovery Scenarios and the Baseline ^(a)		New pumping sustainability challenges due to one or more Storage and Recovery Scenarios
		Maximum	Minimum	
CVWD	CB-39	-47	-26	x
Ontario	39	-32	-24	
Ontario	37	-32	-23	
Ontario	38	-31	-21	
Ontario	24	-27	-20	x
CVWD	CB-5	-24	-16	
Ontario	31	-23	-18	
FWC	F44B	-14	-9	
FWC	F24A	-11	-8	
FWC	F26A	-11	-8	
FWC	F23A	-10	-7	
JCSD	13	-10	-7	
JCSD	17	-9	-6	x
JCSD	20	-9	-6	
JCSD	18	-8	-5	
JCSD	14	-6	-3	
JCSD	15	-6	-3	x
JCSD	16	-5	-3	
JCSD	12	-5	-2	x
JCSD	8	-3	-1	
CDA	II-1	-0.5	0.3	
CDA	I-10	1.0	0.5	
CDA	I-15	0.7	0.0	
CDA	I-14	0.7	0.1	
(a) Determined over the period from FY 2029 through FY 2058. Negative values indicate that the minimum water level in the Storage and Recovery Scenario is less than the Baseline Scenario and vice versa.				

Impact Conclusion

The impacts to groundwater pumping sustainability may substantially decrease groundwater supplies and interfere with groundwater recharge. The increase in storage and subsequent removal of stored water will raise groundwater levels during the put and hold periods and lower groundwater levels thereafter until the stored water is completely pumped out. Potential changes in pumping sustainability relative to the Baseline Scenario are not evident until after the OBMPU horizon year of 2040, more than 20 years from current conditions. If these pumping sustainability challenges are not monitored and mitigated as potentially significant impacts arise, a significant impact would occur.

RISK OF NEW LAND SUBSIDENCE

Impacts on Subsidence due to Changes in Groundwater Levels

Watermaster has been conducting subsidence investigations in MZ-1 since September 2000. Detailed information on Watermaster's land subsidence investigations, causes of subsidence, Watermaster's subsidence management plan for the so-called managed area in the City of Chino, and annual monitoring reports and ongoing investigations to develop a land subsidence management plan for the northwest MZ-1 area can be found on Watermaster's website.¹² This body of work includes the review of historical land subsidence across the basin using In SAR, ground level surveys, the construction and monitoring of vertical and horizontal extensometers, controlled pumping tests, rigorous review of basin hydrogeology, and numerical modeling.

PA-7 is the key subsidence indicator well used in Watermaster's MZ-1 Long Term Management Plan for the managed area in the City of Chino. Under this plan, basin management activities must maintain a groundwater elevation greater than the guidance level of 400 feet above mean sea level (ft-amsl) at the PA-7 piezometer to ensure that permanent new land subsidence does not occur. The guidance level is defined as the threshold groundwater elevation at the onset of inelastic compaction of the aquifer system as recorded by the Ayala Park extensometer. The guidance level was established by Watermaster and is subject to change based on the periodic review of monitoring data.

To evaluate the risk of the occurrence of new land subsidence across MZ-1 in the Evaluation of the LSLS (WY, 2021a), the minimum historical groundwater elevations at wells were used to develop a groundwater elevation "control surface" across MZ-1. This control surface was used as metric to detect the likelihood of initiating new subsidence: if projected groundwater levels are higher than the control surface, then new land subsidence should not occur; if projected groundwater levels decline below the control surface, then new land subsidence could occur.

The western part of the basin is either susceptible to or actively experiencing land subsidence. The areas of current concern include the so-called "managed area" and the northwest MZ-1 area. Land subsidence in the "managed area" has been reduced to de minimis levels through the voluntary efforts of the Cities of Chino and Chino Hills. Land subsidence in the northwest MZ-1 area, including parts of the Cities of Chino, Montclair, Ontario, and Pomona, is continuing, and Watermaster is currently in the process of developing a land subsidence management plan in this area. New land subsidence becomes a concern if Storage and Recovery Program operations cause groundwater levels to fall below the new land subsidence metric in the areas susceptible to land subsidence. And, pursuant to the Peace Agreement, this new land subsidence is an MPI and would require mitigation. In this investigation, we use the term new land subsidence to refer to land subsidence caused by the lowering of groundwater levels below the current estimate of the new land subsidence metric. The ongoing subsidence in northwest MZ-1 is occurring because the groundwater levels in that area have been and are currently less than the preconsolidation stress.

To determine the risk of new land subsidence, projected minimum groundwater levels for the Storage and Recovery Program Scenarios and the Baseline Scenario were compared at each of the locations in MZ-1 that were used to develop the control surface in the Evaluation of the LSLS (WY, 2021a).

²¹ Chino Basin Watermaster, 2023. Public FTP.
https://cbwm.syncedtool.com/shares/folder/9abb162877b999/?folder_id=1055 (accessed 08.22.23)

Under the Baseline Scenario, 14 of the 90 wells used to develop the control surface have simulated water levels that drop below the control surface during the Storage and Recovery Program period (FY 2029 through FY 2058). The minimum projected water level at each of these 14 wells ranges from 7 to 32 feet below the control surface. At these wells, the Storage and Recovery Program Scenarios affected the minimum water levels by a range of +6 feet (increasing the water level relative to the Baseline Scenario) to -2 feet (decreasing the water level relative to the Baseline Scenario).

All Storage and Recovery Program Scenarios result in more wells with projected groundwater levels that fall below the control surface. Scenarios 2A, 3A, and 3B result in four, three, and four additional wells with projected water levels below the control surface, respectively. The greatest negative difference between the projected water level and the control surface in these wells is -6 feet, which occurs in Scenario 3B. The increase in the number of wells with projected water levels below the control surface indicates that the Storage and Recovery Program Scenarios may increase the risk of new land subsidence.

Impact Conclusion

The impacts on new land subsidence may substantially decrease groundwater supplies and interfere with groundwater recharge by impeding management of the Basin through resulting MPI. No new land subsidence is projected under the Storage and Recovery Program scenarios, if implemented pursuant to the 2020 SMP. However, if not implemented pursuant to the 2020 SMP, which requires monitoring of potential land subsidence and mitigative actions if precursors of subsidence are evident, a potentially significant impact would occur.

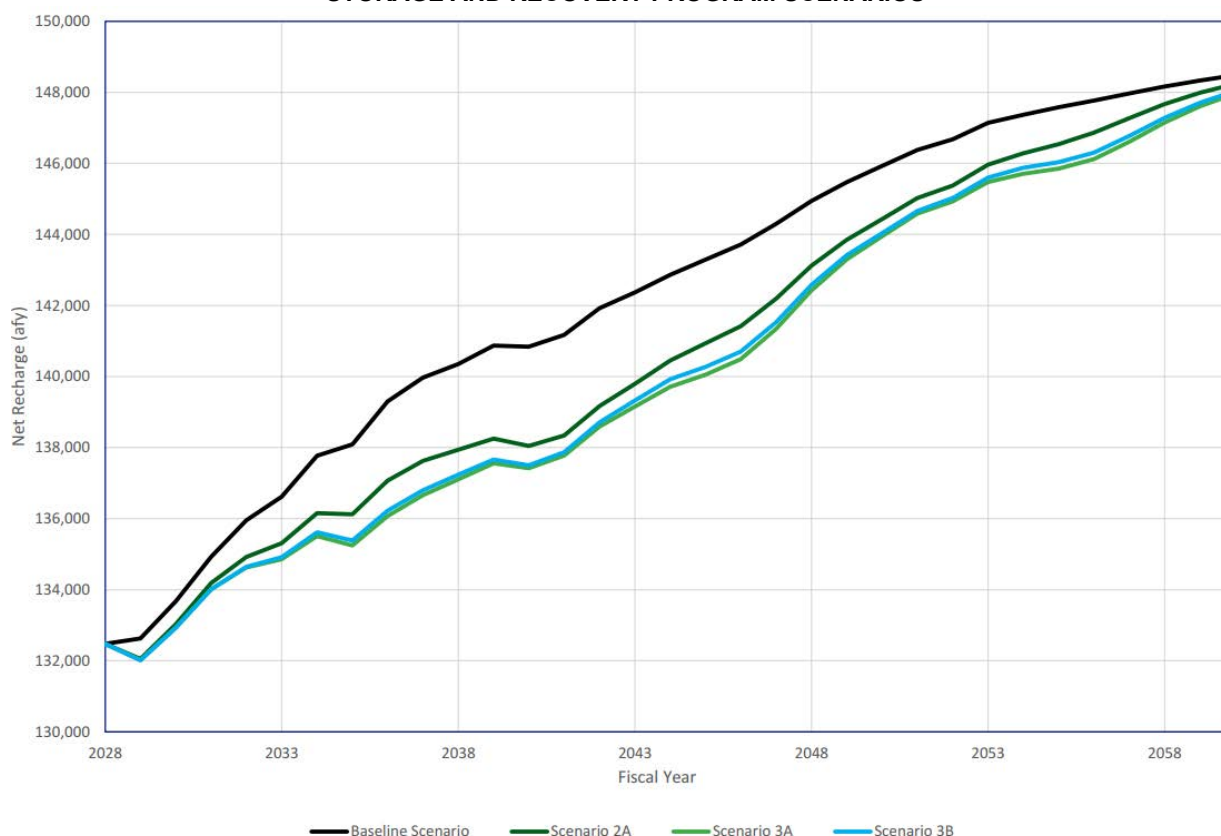
NET RECHARGE

Impacts on Net Recharge due to Changes in Groundwater Levels

Net recharge is net inflow to the basin excluding the direct recharge of Supplemental Water. The expected operating scheme for the parties' managed storage and the Storage and Recovery Programs is to put water into storage and hold it there in advance of a future take. This has the effect of temporarily increasing storage, starting with the first puts and ending when the stored water is completely pumped out. Past modeling work has demonstrated that storing water in the basin for subsequent removal has the effect of reducing net recharge to the basin. Net recharge is a key factor in the calculation of Safe Yield, and therefore a reduction in net recharge will cause a reduction in Safe Yield.

Exhibit 4.7-5 shows the time series of net recharge for the Baseline Scenario and the Storage and Recovery Program Scenarios for the period of FY 2029 through 2060. All Storage and Recovery Program scenarios result in an initial decrease in net recharge compared to the Baseline Scenario due to the initial increase in storage of supplemental water recharge which displaces native groundwater in the Chino Basin. However, as the third cycle of the Storage and Recovery Programs end and the total volume in Managed Storage declines, the net recharge for the Storage and Recovery Program scenarios approaches the net recharge of the Baseline Scenario.

**EXHIBIT 4.7-5
PROJECTED NET RECHARGE FOR THE BASELINE AND
STORAGE AND RECOVERY PROGRAM SCENARIOS**



The impact of Storage and Recovery Programs on net recharge is summarized in **Table 4.7-6** below.

**TABLE 4.7-6
SUMMARY OF NET RECHARGE IN BASELINE AND STORAGE AND RECOVERY PROGRAM SCENARIOS**

Time Period, FY	Average Net Recharge				Difference from Baseline Net Recharge		
	Baseline	Scenario 2A	Scenario 3A	Scenario 3B	Scenario 2A	Scenario 3A	Scenario 3B
2031-2040	138,500	136,600	135,900	136,000	-1,900	-2,600	-2,500
2041-2050	143,600	141,400	140,700	140,800	-2,200	-2,900	-2,800
2051-2060	147,600	146,700	146,200	146,300	-900	-1,400	-1,300
2029-2058	142,200	140,500	139,900	140,000	-1,700	-2,300	-2,200

Impact Conclusion

The impacts on net recharge may be significant. Reduction in net recharge caused by a Storage and Recovery Program directly interferes with groundwater recharge under threshold b. If net recharge reductions are not monitored and mitigated as potentially significant net reductions in recharge arise, a significant impact would occur.

HYDRAULIC CONTROL

Impacts on Hydraulic Control due to Changes in Groundwater Levels

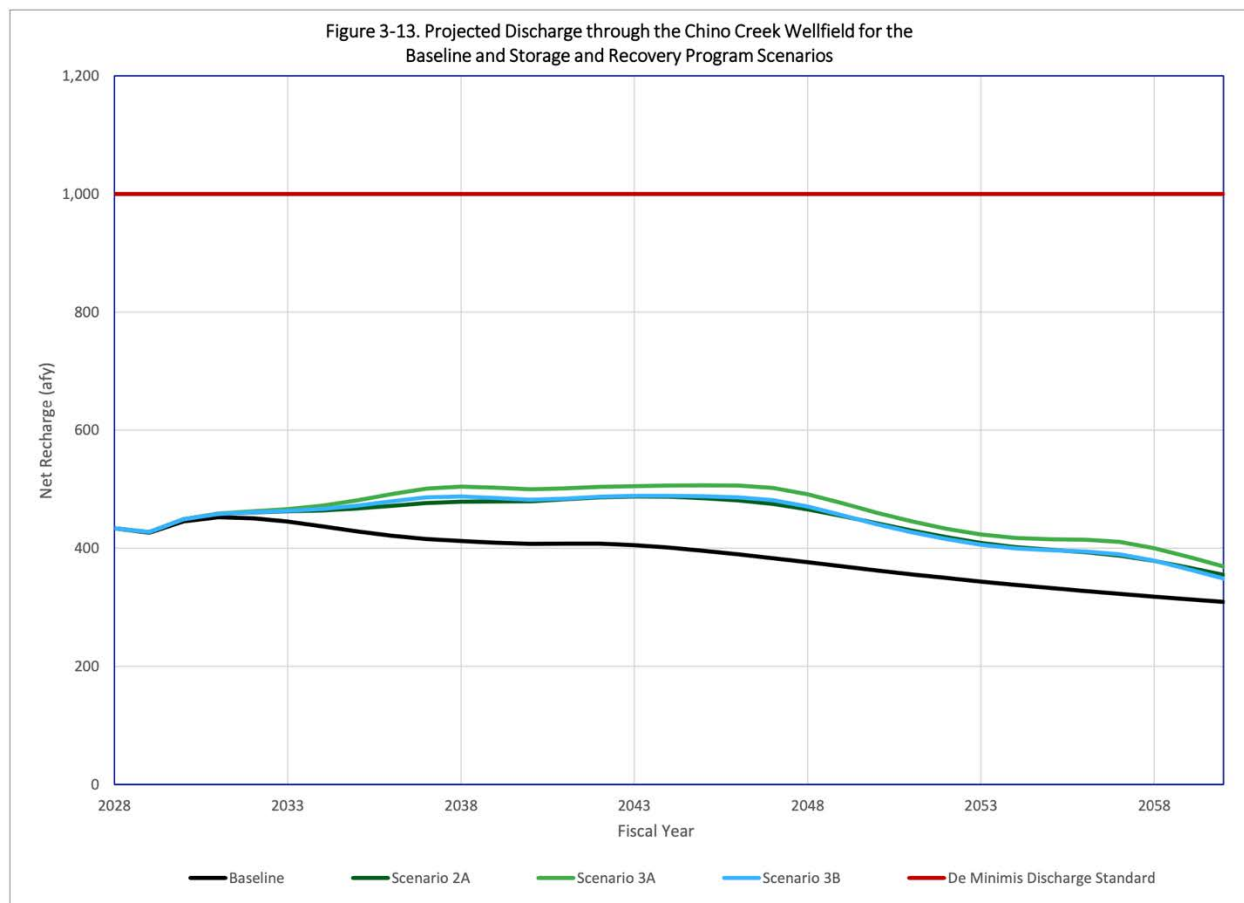
The attainment of Hydraulic Control is measured by demonstrating, from groundwater elevation data, either that all groundwater north of the desalter well fields cannot pass through the desalter well fields (total hydraulic containment standard) or that groundwater discharge through the desalter well fields is, in aggregate, less than 1,000 afy (de minimis Hydraulic Control standard). The Regional Board has agreed that compliance with the Hydraulic Control standard will be determined from the results of periodic calibrations and applications of the Watermaster's Chino Basin groundwater model and interpretations of the model results.

The achievement of Hydraulic Control required the expansion of the Chino desalter program to 40,000 afy and the reduction in storage in the basin by 400,000 af. Hydraulic Control was recently achieved when the subsurface discharge through the Chino Creek well field, a part of the Chino desalter facilities, was reduced to less than 1,000 afy. Increasing storage in the basin will have the effect of increasing the subsurface discharge through the CCWF, potentially causing a loss of Hydraulic Control. The loss of Hydraulic Control could have significant economic adverse impacts to the parties if required to mitigate past TDS and nitrate loading to the Chino Basin in excess of the antidegradation objectives from recycled water reuse for all recycled water used back to 2004 and all future recycled water reuse.

Model simulations of the Baseline Scenario and the Storage and Recovery Program Scenarios indicated complete Hydraulic Control in the CDA well field area running from the Jurupa Hills in the east to Chino Desalter well I-4 in the west for the projection period of 2018 through 2060.

The area between Chino Desalter well I-4 and the Chino Hills includes the CCWF, which produces water to supply the CDA. **Exhibit 4.7-6** below shows time series of the projected groundwater discharge through the CCWF for the Baseline Scenario and the Storage and Recovery Program Scenarios and the de minimis Hydraulic Control standard of 1,000 afy. The groundwater discharge through the CCWF is projected to be less than 1,000 afy for all Storage and Recovery Program scenarios. All scenarios are projected to maintain Hydraulic Control through 2060.

EXHIBIT 4.7-6
PROJECTED DISCHARGE THROUGH THE CHINO CREEK WELLFIELD FOR THE
BASILINE AND STORAGE AND RECOVERY PROGRAM SCENARIOS



The discharge through the CCWF in the Storage and Recovery Program Scenarios and the Baseline Scenario declines over time and is always less than 510 afy during the Storage and Recovery Program period, around half of the de minimis standard. Throughout the Storage and Recovery Program period (FY 2029 through FY 2058), the average difference between the discharge through the CCWF in the Storage and Recovery Program Scenario and the Baseline Scenario is 55 afy, 75 afy, and 60 afy for Scenarios 2A, 3A, and 3B, respectively.

Impact Conclusion

Under the Baseline Scenarios and Storage and Recovery Program Scenarios analyzed in the 2023 SFI, hydraulic control is projected to be maintained through 2060, about 20 years after the 2040 horizon year for the OBMPU, never exceeding a discharge through the CCWF of 510 afy. However, overall management of the Basin, including maintaining Hydraulic Control, requires monitoring for potential loss of Hydraulic Control and mitigative actions would be required if precursors of loss of hydraulic control are evident. Loss of Hydraulic Control may substantially decrease groundwater supplies and interfere with groundwater recharge by impeding management of the Basin through resulting in MPI. This is because the whole of the OBMPU facilities would not be implemented all at once, and therefore, without analysis of future storage and recovery projects on a project-by-project basis, a potentially significant impact would occur.

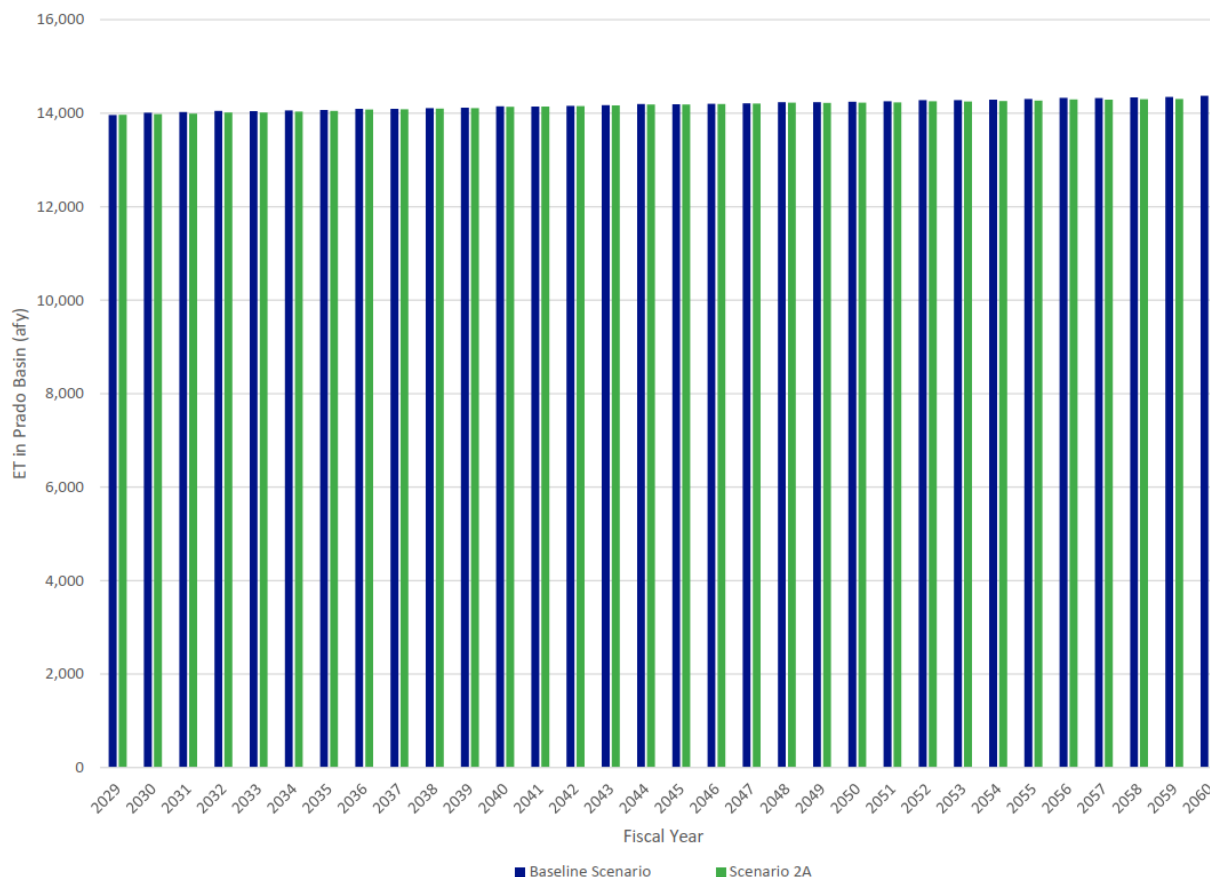
RIPARIAN VEGETATION AT PRADO BASIN

Impacts on Riparian Vegetation due to Changes in Groundwater Levels

The riparian vegetation in the Prado Basin is supported by a combination of shallow groundwater and surface-water discharge in the Santa Ana River and its tributaries that cross the Prado Basin. Any reductions in groundwater levels and wastewater discharge to the Santa Ana River and its tributaries due to Storage and Recovery Programs can affect the extent and health of the riparian vegetation. The differences in model-calculated evapotranspiration (ET) flux from groundwater in the Prado Basin management Zone (PBMZ) is used as an indication of the potential adverse impacts on the riparian habitat due to Storage and Recovery Programs.

Exhibit 4.7-7 shows the time series of ET in the PBMZ for the Baseline Scenario and Scenario 2A for the period of FY 2029 through 2060. Scenario 2A has the least ET of the Storage and Recovery Program Scenarios; the other Scenarios were omitted for clarity. The average projected ET in the PBMZ during the Storage and Recovery Program Period in the Baseline Scenario is 14,170 afy, compared to 14,150 afy in Scenario 2A. The difference in projected ET between the Baseline Scenario and Scenario 2A is 20 afy, which is less than 0.3 percent of the average projected ET over the period in the Baseline Scenario.

**EXHIBIT 4.7-7
PROJECTED EVAPOTRANSPIRATION IN PRADO BASIN FOR THE
BASELINE AND STORAGE AND RECOVERY PROGRAM SCENARIO 2A**



Impact Conclusion

As demonstrated above, the impacts of Storage and Recovery Programs on ET and riparian vegetation are not expected to be significant. In addition, IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. However, if the annual Prado Basin Habitat Sustainability Monitoring Program is no longer prepared beyond its expiration in 2030, a significant impact to riparian vegetation, and thereby sustainable management of the Basin, could occur. Furthermore, as with hydraulic control, overall management of the Basin, including maintaining riparian vegetation at Prado Basin, requires monitoring for potential loss of riparian vegetation and mitigative actions would be required if precursors of loss of riparian vegetation are evident. This is because the whole of the OBMPU facilities would not be implemented all at once, and therefore, without analysis of future storage and recovery projects on a project-by-project basis, a potentially significant impact would occur.

MOVEMENT OF PLUMES

Impacts on Groundwater Quality

Impact Conclusion

The impacts on groundwater quality may be significant if movement of these plumes within the Chino Basin outside of known contamination zones causes water quality degradation, which could result in a significant impact on water quality of the Basin, thereby substantially decreasing *useable* groundwater supplies and hindering management of the Basin circumstances as they are known at present. Without monitoring of these water quality plumes, and subsequent mitigative actions to avoid movement of the plumes, a significant impact would occur.

SUMMARY OF IMPACTS TO SUSTAINABLE GROUNDWATER MANAGEMENT

The table below summarizes the impacts to the sustainable management of the basin from the use of storage by future Storage and Recovery Program scenarios.

TABLE 4.7-7
SUMMARY OF CONCLUSIONS FOR OPERATIONAL BANDS 2 AND 3, AND SCENARIOS 3A and 3B

Criteria	Scenario	
	3A	3B
Range in Managed Storage Used for Storage and Recovery Programs	Up to 900,000 af	
Average Reduction in Net Recharge over Storage and Recovery Program (afy)	-2,300	-2,200
Risk of New Pumping Sustainability Challenges	Potential new pumping sustainability challenges at wells near the assumed wells that will facilitate Storage and Recovery. These challenges are expected to be localized and temporary and would be mitigated.	
Risk of New Land Subsidence	No risk of new land subsidence is projected to occur.	
Hydraulic Control	Maintained through FY 2060	
Riparian Vegetation	Impacts on riparian vegetation are projected to be negligible.	
Movement of Water Quality Anomalies	No scenario is projected to result in any known plume impacting a well operated by an Appropriative Pool party that is not already projected to be impacted under the Baseline Scenario.	

The Storage and Recovery Program scenarios analyzed herein will cause a reduction in storage if the storage-induced reduction in net recharge is not accounted for. As mentioned earlier, one way to mitigate the storage program induced reduction in net recharge is to reduce the takes by the amount of reduced net recharge ("Leave Behind" water). Not addressing the storage program induced reduction in net recharge will reduce the Safe Yield allocated to the Appropriative Pool parties, cause overdraft, or both, and will cause pumping sustainability challenges.

Storage and Recovery Program Scenarios 3A, and 3B are projected to affect the direction and speed of the GE Flatiron and Test Cell plumes, but, as stated above, no scenario is projected to result in any known plume impacting a well operated by an Appropriative Pool party that is not already projected to be impacted under the Baseline Scenario.

Without Watermaster periodically reviewing current and projected Basin conditions, comparing the information contained in the 2023 SFI and herein to the projected Basin conditions, a significant potential to impede sustainable groundwater management of the Basin. Furthermore, without flexibility in how Watermaster approaches minimizing the groundwater issues outlined herein to maintain sustainable groundwater management, a significant impact would occur,

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

No 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue; however, 2000 OBMP PEIR Mitigation Measures **4.5-4** and **4.5-15** have been modified to better conform to the Watermaster's sequence of review and response for projects that require storage and recovery program applications.

This section describes the mitigation measures that must be implemented to reduce hydrology and water quality impacts to a less than significant level. Watermaster utilizes its monitoring network and its groundwater model to evaluate Storage and Recovery Program applications to determine whether they will cause MPI, and to deny the application or require mitigation measures, if feasible. The extensive mitigation efforts provided herein will not allow for any project to be implemented unless feasible mitigation measures can minimize impacts to the groundwater basin below significance thresholds established by Watermaster to evaluate MPI in accordance with standardized procedures. Thus, future projects will be carefully reviewed both as part of Watermaster's Storage and Recovery Program application process and in relation to the environmental analysis provided herein. The Storage and Recovery operations are, therefore, modeled conservatively based on reasonably foreseeable projects and operations to achieve up to 900,000 af of storage in the Basin.

Pumping Sustainability

Potential changes in pumping sustainability relative to the Baseline Scenario are not evident until after the 2040 horizon year of the OBMPU, more than 20 years from current conditions. Regardless, if these pumping sustainability challenges are not monitored and mitigated as potentially significant impacts arise, a significant impact would occur. However, mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- Given that changes in pumping sustainability relative to the Baseline Scenario are not evident until after the 2040 horizon year of the OBMPU, more than 20 years from current conditions, Watermaster will monitor groundwater pumping and implement

appropriate mitigation when/if pumping sustainability declines, thereby preventing MPI.

- Loss of pumping sustainability caused by a Storage and Recovery Program is considered MPI under the Peace Agreement. Under the 2020 SMP, and enforced through mitigation provided below, Watermaster will review each Storage and Recovery Program application, estimate the surface and ground water systems response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program applicant will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive groundwater-level monitoring under the Peace Agreement and Court orders. The information developed from this monitoring will be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation include: (1) modifying the put and take cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions.

Mitigation Measures **HYD-1** and **HYD-2** address impacts related to pumping sustainability in the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in loss of pumping sustainability, and (2) respond with appropriate mitigation to minimize the potential loss of pumping sustainability that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts related to pumping sustainability that may result from implementation of future OBMPU Projects.

HYD-1: Pumping Sustainability Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for loss of pumping sustainability). Watermaster shall then prepare a report that describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for loss of pumping sustainability, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-2: Pumping Sustainability Part 2. To mitigate MPI caused by a proposed Storage and Recovery Program Application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation

requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

Subsidence

The impacts on new land subsidence may be significant. No new land subsidence is projected under the Storage and Recovery Program scenarios, if implemented pursuant to the 2020 SMP. However, if not implemented pursuant to the 2020 SMP, which requires monitoring of potential land subsidence and mitigative actions if precursors of subsidence are evident, a potentially significant impact would occur. However, mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- New land subsidence caused by a Storage and Recovery Program is considered MPI under the Peace Agreement. Under the 2020 SMP, and as proposed below, Watermaster will review each Storage and Recovery Program application, estimate the surface and ground water systems response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program applicant will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive groundwater-level and ground-level monitoring under the Peace Agreement and Court orders. The information developed from this monitoring will be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation actions include: (1) limiting facilities and operations of the Storage and Recovery Programs to MZ-2 and MZ-3 (2) modifying the put and take cycles to ensure the Storage and Recovery Program does not contribute to the lowering of water levels below the new land subsidence metric, (3) strategically increasing supplemental water recharge near the affected area (especially in the deep aquifer layers), (4) reducing pumping (especially in the deep aquifer layers) and providing an alternate supply to the affected Parties to ensure Parties can meet their demands in response to any pumping reductions, (5) reallocating pumping from deeper to shallower layers, (6) a combination of (1) through (5), and (7) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.

Mitigation Measures **HYD-3** and **HYD-4** address potential new land subsidence within the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to respond (1) determine whether future OBMPU projects would result in new subsidence, and (2) respond with appropriate mitigation to minimize the potential for new subsidence that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts related to new subsidence that may result from implementation of future OBMPU Projects.

HYD-3: ***New Land Subsidence Part 1.** Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for new land subsidence, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-4: ***New Land Subsidence Part 2.** To mitigate the potential for new land subsidence caused by a proposed Storage and Recovery Program Application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) limiting facilities and operations of the Storage and Recovery Programs to MZ-2 and MZ-3 (2) modifying the put and take cycles to ensure the Storage and Recovery Program does not contribute to the lowering of water levels below the new land subsidence metric, (3) strategically increasing supplemental water recharge near the affected area (especially in the deep aquifer layers), (4) reducing pumping (especially in the deep aquifer layers) and providing an alternate supply to the affected Parties to ensure Parties can meet their demands in response to any pumping reductions, (5) reallocating pumping from deeper to shallower layers, (6) a combination of (1) through (5), and (7) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

Net Recharge and Safe Yield

Reduction in net recharge caused by a Storage and Recovery Program is an adverse impact. If net recharge reductions are not monitored and mitigated as potentially significant net reductions in recharge arise, a significant impact would occur. However, mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- Reduction in net recharge caused by a Storage and Recovery Program is an adverse impact that must be mitigated. Under the 2020 SMP, Watermaster will estimate the reduction in net recharge and Safe Yield for each Storage and Recovery Program and deduct it from water stored in each Storage and Recovery Program storage account to compensate for its impact on net recharge and Safe Yield. Watermaster will review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program applicant will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive monitoring (under the Peace Agreement and Court orders) and modeling to estimate net recharge of the Chino Basin. The information developed from these efforts will be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate for these

impacts. Potential mitigation actions include: (1) modifying put and take cycles to minimize reductions in net recharge, such as executing takes prior to puts, (2) reducing the total volume of takes compared to puts (i.e., "Leave Behind" water), including recharging additional water to mitigate reductions in net recharge, (3) constructing facilities in the southern part of the basin to mitigate the reduction of net recharge, (4) a combination of (1) through (3), and (5) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions.

Mitigation Measures **HYD-5** and **HYD-6** address potential reduction in net recharge and impacts to Safe Yield within the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential reduction in net recharge and impacts to Safe Yield, and (2) respond with appropriate mitigation to minimize the potential for a reduction in net recharge and for impacts to Safe Yield that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts related to potential reduction in net recharge and impacts to Safe Yield that may result from implementation of future OBMPU Projects.

HYD-5: Net Recharge Part 1. *Watermaster shall estimate the reduction in net recharge and Safe Yield for each Storage and Recovery Program/Project and deduct it from water stored in each Storage and Recovery Program storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements pursuant to MM HYD-6 established by Watermaster; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on net recharge and Safe Yield, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-6: Net Recharge Part 2. *To mitigate impacts on net recharge and Safe Yield caused by a proposed Storage and Recovery Program Application (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying put and take cycles to minimize reductions in net recharge, such as executing takes prior to puts, (2) reducing the total volume of takes compared to puts (i.e., "Leave Behind" water), including recharging additional water to mitigate reductions in net recharge, (3) constructing facilities in the southern part of the basin to mitigate the reduction of net recharge, (4) a combination of (1) through (3), and (5) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

Hydraulic Control

Under the Baseline Scenarios and Storage and Recovery Program Scenarios, hydraulic control is projected to be maintained through 2060, never exceeding a discharge through the CCWF of 510 afy. However, overall management of the Basin, including maintaining Hydraulic Control, requires monitoring for potential loss of Hydraulic Control and mitigative actions would be required

if precursors of loss of hydraulic control are evident. This is because the whole of the OBMPU facilities would not be implemented all at once, and therefore, without analysis of future storage and recovery projects on a project-by-project basis, a potentially significant impact would occur. Thus, the mitigation is necessary to prevent a significant impact from occurring.

Mitigation Measures **HYD-7** and **HYD-8** address potential adverse impacts to Hydraulic Control of the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential adverse impacts to Hydraulic Control, and (2) respond with appropriate mitigation to minimize potential adverse impacts to Hydraulic Control that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent adverse impacts to Hydraulic Control that may result from implementation of future OBMPU projects.

HYD-7: *Hydraulic Control Part 1. Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on Hydraulic Control and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-8; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on hydraulic control, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-8: *Hydraulic Control Part 2. To mitigate for potential impacts on Hydraulic Control caused by a proposed Storage and Recovery Program Application (as described above under HYD-7), the Watermaster's comprehensive monitoring and modeling that assesses the state of Hydraulic Control in Chino Basin shall be used to estimate groundwater outflow from Chino North to the Santa Ana River, assess the state of Hydraulic Control, determine if the Storage and Recovery Program will cause a loss of hydraulic control, and develop mitigation requirements to mitigate for impacts to the state of Hydraulic Control. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (2) construct facilities in the southern part of the basin to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

Riparian Vegetation and Habitat in Prado Basin

As demonstrated above, the impacts of Storage and Recovery Programs on ET and riparian vegetation are not expected to be significant. In addition, IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. However, if the annual Prado Basin Habitat Sustainability Monitoring Program is no longer prepared beyond its expiration in 2030, a significant impact to riparian vegetation, and thereby sustainable management of the Basin, could occur. Furthermore, as with hydraulic control, overall management of the Basin, including maintaining riparian vegetation at Prado Basin, requires monitoring for potential loss of riparian vegetation and mitigative actions would be required if precursors of loss of riparian vegetation are evident. This is because the whole of the OBMPU

facilities would not be implemented all at once, and therefore, without analysis of future storage and recovery projects on a project-by-project basis, a potentially significant impact would occur. As part of the CBP PEIR, IEUA must implement CBP Mitigation Measure BIO-25, which requires IEUA to continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or otherwise implement a comparable and equally effective monitoring program in its place to ensure such a program is in place for the duration of the proposed diversion of up to 16,000 AFY from the Santa Ana River. As part of its commitments in this OBMPU RDSEIR, the IEUA will further commit to the preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or otherwise implement a comparable and equally effective monitoring program in its place to enable OBMPU implementing agencies address any future potential adverse impacts to riparian habitat due to implementation of the OBMPU. This shall be enforced through Mitigation Measures **HYD-9** and **HYD-10**, in addition to **BIO-17**, repeated below, which has been extracted from **Subchapter 4.3, Biological Resources**.

Mitigation Measures **HYD-9** and **HYD-10** address potential adverse impacts to riparian vegetation and habitat in Prado Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential adverse impacts to riparian vegetation and habitat in Prado Basin, and (2) respond with appropriate mitigation to minimize potential adverse impacts to riparian vegetation and habitat in Prado Basin that may occur from a project or, where mitigation is not feasible, reject the project. Furthermore, Mitigation Measure **BIO-17** would further commit IEUA to the preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or otherwise implement a comparable and equally effective monitoring program in its place to enable OBMPU implementing agencies address any future potential adverse impacts to riparian habitat/Prado Basin habitat due to implementation of the OBMPU. These measures would enable the Watermaster to prevent adverse impacts to riparian vegetation and habitat in Prado Basin that may result from implementation of future OBMPU projects.

HYD-9: ***Riparian Vegetation Part 1.** Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on riparian vegetation and habitat in Prado Basin and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-12; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on riparian vegetation and habitat in Prado Basin, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-10: ***Riparian Vegetation Part 2.** To mitigate for potential impacts on riparian vegetation and habitat in Prado Basin caused by a proposed Storage and Recovery Program Application (as described above under HYD-11), the Watermaster's comprehensive monitoring and modeling that assesses the state of riparian vegetation and habitat in Prado Basin shall be used to estimate groundwater levels in the Prado Basin, assess the health of the riparian vegetation and habitat, determine if the Storage and Recovery Program will adversely impact riparian vegetation and habitat, and develop mitigation requirements to mitigate for impacts to the riparian vegetation and habitat in Prado Basin. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to mitigate groundwater level impacts in Prado Basin, (2) develop areas in the Prado Basin for new riparian vegetation or habitat to*

offset any effects by Storage and Recovery Program operations, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

BIO-17 **Permanent Water Diversion Projects.** *The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. The IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or shall implement a comparable and equally effective monitoring program in its place to enable OBMPU Implementing Agencies to utilize the monitoring data to address and mitigate any future potential adverse impacts to Prado Basin Habitat due to implementation of the OBMPU. The Implementing Agency shall conduct an evaluation of each water diversion projects associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of such diversion projects.*

Water Quality/Movement of Plumes

The impacts on groundwater quality may be significant if the OBMPU results in new movement of these plumes within the Chino Basin outside of known contamination zones causes water quality degradation, which could result in a significant impact on water quality of the Basin, thereby hindering management of the Basin circumstances as they are known at present. Without monitoring of these water quality plumes, and subsequent mitigative actions to avoid movement of the plumes, a significant impact would occur. However, mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- Water quality degradation caused by a Storage and Recovery Program is considered an MPI under the Peace Agreement. Under the 2020 SMP, Watermaster will review each Storage and Recovery Program application, estimate the surface and ground water systems response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program applicant will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive groundwater-quality monitoring pursuant to the Peace Agreement and Court orders and modeling to assess status and projected movement of plumes in the Chino Basin. The information developed from these efforts will be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells. And, to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation actions include: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and 2, and (4) the implementation of a monitoring program to verify the

effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions.

Mitigation Measures **HYD-11** and **HYD-12** essentially cover the intent of 2000 OBMP PEIR Mitigation Measure **4.5-15**, which requires recharge of water within the vicinity of an existing or known groundwater plume to model the impacts of the recharge, which is rendered unnecessary by Mitigation Measures **HYD-11** and **HYD-12**, below. Mitigation Measures **HYD-11** and **HYD-12** address potential degradation of water quality within the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether future OBMPU projects would result in potential degradation of water quality, and (2) respond with appropriate mitigation to minimize potential degradation of water quality that may occur from a project or, where mitigation is not feasible, reject the project. These measures would enable the Watermaster to prevent potential degradation of water quality that may result from implementation of future OBMPU Projects.

HYD-11: Water Quality Degradation Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for water quality degradation). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster and pursuant to MM HYD-10; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for water quality degradation, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-12: Water Quality Degradation Part 2. To mitigate potential water quality degradation caused by a proposed Storage and Recovery Program Application (as described above under HYD-9), the data gathered through Watermaster's comprehensive groundwater-quality monitoring shall be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells, and to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation includes but is not limited to: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

General Impacts to Groundwater from OBMPU Implementation

Mitigation Measure **HYD-13** essentially covers the intent of 2000 OBMP PEIR Mitigation Measure **4.5-4**, the Watermaster shall include the estimated amount of water lost from the Basin due to rising water at the low end of the Basin and adjust storage salt balance accounts accordingly, which is rendered unnecessary by Mitigation Measure **HYD-13**. Mitigation Measure **HYD-13** addresses the plan of response by Watermaster should the Basin conditions come to vary from the projections that have been modeled as part of the OBMPU (and all supporting documentation). This measure would enable Watermaster to modify previously agreed upon mitigation measures

to address actual basin conditions and apply these measures to OBMPU projects that have obtained storage agreements and to future OBMPU projects. This allows for flexibility in how Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels. Furthermore, Watermaster is able to accept or reject projects based on a project's ability to avoid the basin constraints outlined herein, which will ultimately minimize impacts related to groundwater from implementation of the OBMPU to below significance thresholds.

HYD-13: Basin Monitoring and Mitigation. Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected basin conditions assumed in the evaluation of the Storage and Recovery Program application process, compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the Storage and Recovery Program storage agreements. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the Storage and Recover Program storage agreements that will adequately mitigate MPI and related adverse impacts. The Watermaster shall continue to determine what Programs and Projects should be implemented or should be rejected based on their potential to contribute to or cause MPI or other adverse impacts to the Basin.

The mitigation measures provided above require Watermaster to utilize its monitoring network and its groundwater model to evaluate Storage and Recovery Program applications to determine whether they will cause MPI, and to deny the application or apply mitigation measures, if feasible. The extensive mitigation efforts provided herein will not allow for any project to be implemented unless feasible mitigation measures can minimize impacts to the groundwater basin below significance thresholds long established by Watermaster to evaluate MPI in accordance with standardized procedures.

Note this document acknowledges that monitoring is not mitigation in and of itself, but it is essential to the Watermaster's mitigation process because it identifies when affirmative action is necessary to avoid impacts. Data indicating that a significant impact may be evolving will allow Watermaster to initiate any of the mitigation measures outlined above to reduce or eliminate the potentially significant impact identified through monitoring. The text below identifies how this can be accomplished.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

In a way, the projects proposed as part of the OBMPU represent a way in which to cumulatively manage the Chino Basin and the manner of interface with the remainder of the Santa Ana River watershed. Watermaster was established to administer the Judgment, which adjudicated the groundwater rights of the Chino Basin, and as such the Watermaster manages the cumulative changes to the Chino Basin, such as those that may occur from implementation of the OBMPU. The facilities included in the 2023 SFI that are required to implement the Storage and Recovery Programs are commensurate with those identified in the OBMPU and outlined in the Project Description under Summary of All Facilities. Scenarios 2 and 3 were built based on the Baseline Scenario. Scenarios 2 and 3 included assumed operations for the IEUA's Chino Basin Program (CBP) and additional Storage and Recovery operations. Thus, as described under Subsection 3.8 of the Chapter 3, Project Description of this DSEIR, cumulative impacts have been considered

as part of the three Scenarios analyzed herein. Therefore, the analysis presented as the OBMPU Project impacts remain valid when applied on a cumulative basis.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

The mitigation measures (Mitigation Measures **HYD-1** through **HYD-13**) provided above require Watermaster to utilize its monitoring network and its groundwater model to evaluate Storage and Recovery Program applications to determine whether they will cause MPI, and to deny the application or apply mitigation measures, if feasible. The extensive mitigation efforts provided herein will not allow for any project to be implemented unless feasible mitigation measures can minimize impacts to the groundwater basin below significance thresholds long established by Watermaster to evaluate MPI in accordance with standardized procedures. Therefore, the proposed Project will not contribute a cumulatively considerable impact under this issue.

Level of Significance After Mitigation: Less Than Significant

4.7.5.3 c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would . . .

Significance threshold (c) asks whether the OBMPU will “Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would” result in a variety of potential impacts, including (i) substantial erosion or siltation on- or off-site; (ii) a substantial increase in surface run-off that results in flooding on- or off-site; (iii) a substantial increase in storm water flows that overwhelms existing storm water systems, or leads to polluted runoff; and (iv) impeding or redirecting flood flows.

Subsections 4.7.5.3.1 through 4.7.5.3.4, below, analyze these significance thresholds.

4.7.5.3.1 c(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed wells could alter the existing drainage patterns at each project site. It is not known whether the wells will be installed within developed sites or within sites that are vacant and undeveloped. The extensometers will be located within wells and therefore would not result in any greater impacts than those outlined above with the exception of the potential for ground disturbance in the areas surrounding existing wells proposed to include monitoring devices,

should any be required as part of the OBMPU. The same is true for well abandonment. However, given the small area (less than one half acre) within which the proposed wells and extensometers will be installed, it is not anticipated that substantial changes in drainage would occur. The construction of proposed facilities would require activities such as pavement breaking, ditching, drilling, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, or Los Angeles, San Bernardino and Riverside Counties MS4 Permits, where applicable would be required. If the anticipated disturbance is less than one acre, the facility would be required to comply with minimum BMPs as specified by the San Bernardino County MS4 Permit, which would implement BMPs to provide erosion control, sediment control, and waste management strategies for construction sites. Without implementation of these BMPs, which would prevent substantial erosion or siltation onsite or offsite as a result of drainage changes, a significant impact would occur. However, compliance with the San Bernardino County MS4 Permit is mandatory, and therefore, compliance thereof would be required as part of implementation of future individual OBMPU projects. With implementation of such BMPs and compliance with conditions of required permits governing storm water runoff from construction sites, potential onsite and offsite erosion would be reduced to less than significant levels and discharges from construction sites would not exceed the capacity of existing storm water drainage systems.

The installation of monitoring devices—flow meters—within surface water would have a minor potential to alter the course of a stream or river; however, these devices are small and their presence within surface water would not substantially alter the course of a stream or river, or substantially alter drainage patterns as a result. These devices do not require substantial ground disturbance to install, and would be innocuous once installed—the presence of these devices would be akin to the addition of a medium sized rock (less than a cubic yard in size) to the surface water within which it is placed. As such, the installation of flow meters would have a less than significant potential to substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite.

During operation of the proposed wells, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Without mitigation to ensure that the changes in the extent of permeable or impermeable surfaces are assessed and accounted for as part of project design, a significant impact would result.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as those identified under Project Category 1. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition and no operational impact would occur.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as those identified under Project Category 1 and 2. As stated under Project Category 2, it is anticipated that the majority of the facilities proposed as part of Project Category 3 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project a significant impact would occur.

The proposed expansion of the safe storage capacity from 700,000 af to up to 900,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite. Impacts related to the facilities that would support this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under issue (b) above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be the same as those identified under Project Category 1, 2, and 3.

Combined Project Categories

The majority of the proposed facilities would not alter the course of a stream or river; though the installation of some monitoring devices would be placed within surface water, these devices would not substantially impact the course of a stream or river due to their small size. The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs is mandatory. The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. However, without mitigation to ensure that the changes in the extent of permeable or impermeable surfaces are assessed and accounted for as part of project design, thereby minimizing erosion and siltation potential, a significant impact would result.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable, or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR are Mitigation Measures **4.5-1** and **4.5-6**, and the text for 2000 OBMP PEIR Mitigation Measure **4.5-5** has been modified and updated, as identified in the text below.

As discussed under **Subsection 4.7.5.1(a)**, above, while the majority of the impacts to erosion and siltation can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding potential erosion and siltation impacts. Therefore, the following mitigation measures shall be implemented to prevent potential erosion and siltation impacts.

2000 OBMP PEIR Mitigation Measure **4.5-1** would require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may result in substantial siltation or erosion. This measure has been abstracted from the 2000 OBMP PEIR (measure 4.5-1):

4.5-1: *To minimize potential ground disturbances associated with installation and maintenance of proposed monitoring equipment on existing wells, the equipment shall be installed within or along existing disturbed easements or right-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements.*

2000 OBMP PEIR Mitigation Measure **4.5-6** would require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future OBMPU facility sites to minimize the potential for erosion on- or off-site. This measure has been abstracted from the 2000 OBMP PEIR (measure 4.5-6):

4.5-6: *For long-term mitigation of site disturbances at OBMP facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or man-made landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two-year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows. These measures and requirements shall be applied to closure of abandoned well site disturbed areas.*

Given the small size area in which some OBMPU facilities would be developed, mitigation to enforce best management practices (BMPs) beyond MS-4 compliance is provided below to minimize impacts at sites that are less than an acre and are therefore not subject to the CGP or SWPPP. Each of these permits and plans would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets. Mitigation Measure **HYD-14** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects.

HYD-14: *Site Stormwater Discharge BMPs. Prior to the commencement of construction of any OBMPU project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), the Implementing Agency shall*

require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each OBMPU facility, and to control urban runoff after each OBMPU facility is constructed and the well (if approved for operation post well testing) or other OBMPU facility is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to:

- The use of silt fences or coir rolls;***
- The use of temporary stormwater desilting or retention basins;***
- The use of water bars to reduce the velocity of stormwater runoff;***
- The use of wheel washers on construction equipment leaving the site;***
- The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

During project design, overland flows and drainage at each OBMPU project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increase in erosion or sedimentation would occur. Impacts would be less than significant with mitigation.

HYD-15: Drainage Plans. Prior to commencement of construction of project facilities, the Implementing Agency shall require that the Project Proponent submit either:

- (1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever possible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not possible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall:***
- (2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located.***

With implementation of the mitigation identified above, the proposed Project would have a less than significant potential to substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could result in significant impacts to local drainage systems after rapid development of structures. The proposed OBMPU projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in erosion or siltation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Since the Project could result in potential significant impacts, the Project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would require mitigation (Mitigation Measures **HYD-14** through **HYD-15**, and 2000 OBMP PEIR Mitigation Measures **4.5-1 and 4.5-6**), as identified above, to reduce impacts to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.7.5.3.2 c(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed wells could alter the existing drainage patterns at each project site. It is not known whether the wells will be installed within developed sites or within sites that are vacant and undeveloped. However, given the small area (less than one half acre) within which the proposed wells will be installed, it is not anticipated that substantial changes in drainage would occur. The construction of proposed facilities would require activities such as pavement breaking, ditching, drilling, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns and could ultimately provide flooding on- or off-site without

preventative measures in place. Compliance with the CGP, SWPPP, or Los Angeles, San Bernardino and Riverside Counties MS4 Permits (WQMP), where applicable would be required; these plans would ensure that drainage and stormwater will not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

However, as stated under issue c(i) above, given the small size in which the wells would be developed, if the anticipated disturbance is less than one acre, the facility would be required to comply with minimum BMPs as specified by the San Bernardino County MS4 Permit, which would implement BMPs to provide erosion control, sediment control, and waste management strategies for construction sites. Without implementation of these BMPs, which would prevent substantial erosion or siltation onsite or offsite as a result of drainage changes, a significant impact would occur. However, compliance with the San Bernardino County MS4 Permit is mandatory, and therefore, compliance thereof would be required as part of implementation of future individual OBMPU projects. The extensometers will be located within wells and therefore would not result in any greater impacts than those outlined above, while the proposed flow meters are small devices that will be installed within surface water and due to this small size, and that these devices would remain fixed in place, would not have a potential to alter the course of a stream or river such that substantial flooding would occur on- or off-site.

During operation of the proposed wells, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Without implementation of drainage improvements within future OBMPU project sites during construction, a significant impact would occur.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as those identified under Project Category 1; however, it is anticipated that the majority of the facilities proposed as part of Project Category 2 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite a significant impact would occur. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for flooding on- or off-site. Operational impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project

Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as those identified under Project Category 1 and 2. As stated under Project Category 2, it is anticipated that the majority of the facilities proposed as part of Project Category 3 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project a significant impact would occur. Additionally, without a management plan for each storage or recharge basin, a potentially significant impact related to the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding during operation could occur.

The recommended recharge program outlined for the Lower Cucamonga Creek Basins (SBFCD System Number 1-310-2A) and Riverside Basin (SBCFCD System Number 1-604-4) may require an Amendment to original Agreement 03-0083, and approval from the San Bernardino County Board of Supervisor on behalf of the SBCFCD. Additionally, IEUA and Watermaster understand that any Amendments must be submitted to, renewed by, and approved by the SBCFCD before such a project can be considered at the Lower Cucamonga Creek and Riverside Basins. Furthermore, Watermaster's Diversion Permits Number 19895 and 20753 with the Stater Water Resources Control Board do not include Lower Cucamonga Creek Basins or Riverside Basins, and may need to be updated with the State Water Resources Control Board prior to project implementation. These actions are required in order to comply with SBCFCD and the State Water Resources Control Board, and would further reduce the potential that these projects could substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite. Obtaining the above permits is a regulatory requirement by which the implementing agency of the above projects would be required to adhere.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in flooding onsite or offsite. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under issue (b) above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be the same as those identified under Project Category 1, 2, and 3.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs is mandatory. The presence of all new facilities at each project

site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. However, without mitigation to ensure that the changes in the extent of permeable or impermeable surfaces are assessed and accounted for as part of project design, thereby reducing on- and off-site flooding potential, a significant impact would result.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable, or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR are Mitigation Measures **4.5-1** and **4.5-6**, and the text for 2000 OBMP PEIR Mitigation Measure **4.5-17** has been modified and updated, as identified in the text below.

As discussed under **Subsection 4.7.5.1(a)**, above, while the majority of the Project related on- and off-site flooding impacts can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding potential Project related on- and off-site flooding impacts. Therefore, the following mitigation measures shall be implemented to prevent potential Project related on- and off-site flooding impacts.

Mitigation Measures **HYD-14** through **HYD-15** and 2000 OBMP PEIR Mitigation Measures **4.5-1** and **4.5-6**, presented under **Subsection 4.7.5.3.1(c[i])**, above, are required to minimize potential on- and off-site flooding impacts in addition to the mitigation provided below.

Mitigation Measure **HYD-14** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. This measure would control urban runoff and thereby reduce potential on- and off-site flooding.

During project design, overland flows and drainage at each OBMPU project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increased potential on- or off-site flooding would occur. Thus, implementation of Mitigation Measure **HYD-15** would reduce impacts to a level of less than significant.

2000 OBMP PEIR Mitigation Measure **4.5-1** would require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may result in on- or off-site flooding. Furthermore, 2000 OBMP PEIR Mitigation Measure **4.5-6** would require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future OBMPU facility sites to minimize the potential for on- or off-site flooding.

Mitigation Measure **HYD-16** is also required to ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding. This measure would further reduce the potential for flooding on- or off-site to a level of less than significant. This measure has been adapted from the 2000 OBMP PEIR (measure 4.5-17):

HYD-16: Operational Risk Management Plan. Prior to commencement of construction of any recharge or stormwater retention basin projects as either existing or new basins, a management plan will be established to the satisfaction of San Bernardino County Flood Control District (SBCFCD), Riverside County Flood Control District (RCFCD), and/or Division of Safety. This plan shall be created specifically for each individual basin to ensure the safety of surrounding property and people from undue risks associated with water-related hazards (i.e., flooding). The Operational Risk Management Plan will firmly establish a priority of flood-control functions over and above recharge or retention-related operations. Weather forecasts of upcoming storm events will be carefully monitored and in the event of a significant forecasted storm-event, water deliveries to the basins will be ceased until further notice is received from SBCFCD or RCFCD that it is safe for deliveries to resume. Additionally, each SBCFCD or RCFCD basin's specific management plan will be developed, to coordinate flood control along with surface water recharge or retention. This mitigation measure will ensure that people and property are not subject to additional risk associated with water-related hazards in the Basin, and will allow SBCFCD or RCFCDWCD to make full utilization of the basin's flood control capacity in the event of a storm.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could experience significant impacts to local drainage systems after rapid development of structures. The proposed OBMPU projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in flooding on- or off-site. Since the Project could result in potential significant impacts, the Project's contribution to cumulative impacts is considered cumulatively considerable.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation as identified above (Mitigation Measures **HYD-14** through **HYD-16**, and 2000 OBMP PEIR Mitigation Measures **4.5-1** and **4.5-6**), would be required, which would reduce the Project's contribution to less than cumulatively considerable, therefore reducing cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.7.5.3.3 c(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Impacts would be the same as those discussed under issues c(i) and c(ii) above. Without the implementation of mitigation to address the potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, a significant impact would occur. Additionally, the closure of abandoned well sites may result in polluted runoff. Therefore, without the implementation of mitigation to address potential contaminated discharge that may result from refurbishing or capping a well, a significant impact would occur.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as those discussed under issues c(i) and c(ii) above. Without the implementation of mitigation to address the potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, a significant impact would occur. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for exceeding the capacity of local stormwater drainage systems.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as those discussed under issues c(i) and c(ii) above. The proposed storage basins would contribute to the overall stormwater drainage system within the Chino Basin as the basins would divert and capture stormwater and dry weather discharges, which would enhance stormwater collection. However, as with facilities proposed as part of Project Categories 1, 2, and 4, without the mitigation to address the potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, a significant impact would occur.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this safe storage capacity expansion are discussed under issue (b) above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be the same as those discussed under issues c(i) and c(ii) above. However, this Project Category includes the development of water treatment facilities that may require brine disposal. Without proper management, brine may be generated that would create a new source of polluted runoff, thereby resulting in a significant impact. Additionally, as with facilities proposed as part of Project Categories 1, 2, and 3, without mitigation to address the potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, a significant impact would occur.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns, which could result in excess runoff. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs is mandatory. The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project to reduce potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, impacts would be significant and unavoidable.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable, or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR are Mitigation Measures **4.5-1**, **4.5-6**, **4.5-7** and **4.5-11**.

As discussed under **Subsection 4.7.5.1(a)**, above, while the majority of the impacts—creation or contribution of runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff—can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding potential Project related impacts. Therefore, the following mitigation measures shall be implemented to prevent the potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation Measures **HYD-14** through **HYD-15** and 2000 OBMP PEIR Mitigation Measures **4.5-1** and **4.5-6** are required to minimize potential for OBMPU facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Mitigation Measure **HYD-14** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. This measure would control urban runoff and thereby reduce potential for substantial polluted runoff.

During project design, overland flows and drainage at each OBMPU project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial contribution of runoff to area drainage systems would occur. Impacts would be less than significant with mitigation.

2000 OBMP PEIR Mitigation Measure **4.5-1** would require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may result in excess runoff. Furthermore, 2000 OBMP PEIR Mitigation Measure **4.5-6** would require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future OBMPU facility sites to minimize the potential for excess runoff.

2000 OBMP PEIR Mitigation Measures **4.5-7** and **4.5-11** are also required to ensure that significant polluted runoff does not occur from contaminated discharge that may result from refurbishing or capping a well. This measure has been abstracted from the 2000 OBMP PEIR (measure 4.5-7 and 4.4-11):

- 4.5-7** *Prior to cleaning out, refurbishing or capping a well, samples will be obtained and chemically analyzed to ensure that the discharge does not contain any contaminants exceeding regulatory thresholds. If contaminants are discovered, then they shall be removed or lowered below the regulatory threshold prior to discharge to the environment. Discharge of non-stormwater into storm drains will require a NPDES permit.*
- 4.5-11** *When closing abandoned wells in the Chino Basin the entity closing the well shall, where technically feasible determine whether the groundwater in the well is contaminated. This shall be accomplished by sampling and analyzing the well water. If contamination is identified, the entity shall report the discovery to the appropriate parties, including the owner (if known) and the regulatory agencies. The Watermaster shall monitor the status of the well until residual contamination is remediated.*

Mitigation Measure **HYD-17** is provided to ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff.

HYD-17: Brine Disposal. *All new and expanded water treatment facilities associated with the OBMPU shall ensure that any brine generated from the water treatment process that cannot be otherwise treated on-site is disposed of in accordance with state and local regulations—such as through disposal to a brine line (Non-Reclaimable Wastewater System, Etiwanda Wastewater Line, and Inland Empire Brine Line, etc.)—to prevent brine from being discharged into the local stormwater collection system.*

Implementation of these mitigation measures would ensure that the Project does not contribute substantial runoff; as such, impacts are less than significant.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could experience significant impacts to local drainage systems after rapid development of structures. The proposed OBMPU projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in substantial contribution of runoff to area drainage systems. Since the Project could result in potential significant impacts, the Project's contribution to cumulative impacts is considered cumulatively considerable.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation as identified above is required (Mitigation Measures **HYD-14** through **HYD-15**, **HYD-17**, and 2000 OBMP PEIR Mitigation Measures **4.5-1**, **4.5-6**, **4.5-7**, and **4.5-11**), which would

reduce the Project's contribution to less than cumulatively considerable, therefore reducing the Project's contribution to cumulative impacts to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.7.5.3.4 c(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Impacts would be the same as those discussed under issues c(i), c(ii), and c(iii) above.

Adequate drainage at future OBMPU sites is necessary to ensure that a significant impact can be avoided. Without mitigation to address the potential for OBMPU facilities to ensure that adequate drainage is developed within future OBMPU sites, thereby minimizing the potential for the project to impede or redirect flows, a significant impact would occur. Furthermore, given that wells and monitoring devices generally encompass small footprints, the potential for such facilities to substantially redirect flood flows is minimal. Regardless, without adequately managed drainage, impacts would be significant.

OBMPU facilities, including wells may have the potential to impact flows if placed above ground within 100-year floodplains, of which several are located in the large expanse of the Chino Basin. Because the location of future OBMPU facilities is not presently known, it is not possible to evaluate all of the potential impacts related to an individual OBMPU project's potential to impede or redirect flows, particularly within known flood hazard areas. Direct impacts to related to flood flows must be assessed through site review and evaluation on a project-by-project basis, after project specifics are known. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) maps provided in the technical appendices will facilitate evaluation of future projects proposed under OBMPU as they are considered. However, without specific performance standards to offset or compensate for both the temporary and permanent impacts that might impede or redirect flood flows as a result of future projects associated with the OBMPU, impacts would be significant and unavoidable.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The construction activities associated with subsurface facilities, such as pipelines, could temporarily impact flows and would require coordination with the respective County Flood Control and other applicable regulatory agencies before implementation if proposed facilities cross or are within jurisdictional waters or adjacent to flood control channels and easements.

Given that development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, the potential for a given conveyance project to impede or redirect flows would be minimized to a level of insignificance.

Regardless, without specific performance standards to offset or compensate for both the temporary and permanent impacts that might impede or redirect flood flows as a result of future above-ground (ancillary facilities) projects associated with the OBMPU, impacts would be significant and unavoidable.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The proposed storage basins would contribute to the overall stormwater drainage system within the Chino Basin as the basins would divert and capture stormwater and dry weather discharges, which would enhance stormwater collection and thereby potentially enhance water supply. The provision of flood control, stormwater detention, and water storage basin facilities is considered beneficial to area stormwater collection systems as it enables greater control of runoff and would ultimately help to prevent flooding. As such, all other impacts would be the both the same as those discussed under issues c(i), c(ii), and c(iii) and as those discussed under Project Categories 1 and 2 above.

The proposed expansion of the safe storage capacity from 700,000 af to up to 900,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under issue (b) above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20

new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be both the same as those discussed under issues c(i), c(ii), and c(iii) and as those discussed under Project Categories 1, 2, and 3 above.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns, which could result in impeding or redirecting flood flows. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs is a mandatory requirement. The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project a potential for OBMPU facilities to impede or redirect flood flows exists, and a significant impact could occur. Furthermore, given that the Chino Basin contains areas that are located within flood hazard zones, the development of several facilities in a given area may, when combined, result in a substantial potential to impede or redirect flows, thereby resulting in a significant impact.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are either no longer applicable, or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR are Mitigation Measures **4.5-1**, **4.5-6**, and **4.5-16**.

As discussed under **Subsection 4.7.5.1(a)**, above, while the majority of the impacts related to flooding on- or off-site can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding potential Project related impacts. Therefore, the following mitigation measures shall be implemented to prevent the potential for OBMPU facilities to result in flooding on- or off-site.

Mitigation Measures **HYD-15** and **HYD-16** and 2000 OBMP PEIR Mitigation Measures **4.5-1** and **4.5-6**, are required to minimize the potential for OBMPU facilities to impede or redirect flows in addition to the mitigation provided below.

During project design, overland flows and drainage at each OBMPU project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increased potential for impeding or redirecting flood flows would occur. Impacts would be less than significant with mitigation.

Mitigation Measure **HYD-16** is also required to ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding. This measure would ensure no substantial increased potential for impeding or redirecting flood flows would occur.

2000 OBMP PEIR Mitigation Measure **4.5-1** would require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may otherwise result in a substantial potential to impede or redirect flows. Furthermore, 2000 OBMP PEIR Mitigation Measure **4.5-6** would require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future OBMPU facility sites to minimize the potential for the Project to result in a substantial potential to impede or redirect flows.

The Chino Basin contains several areas in the 100-year floodplain, particularly given the creeks, channels, and Santa Ana River that are within or along the boundaries of the Chino Basin. As such, 2000 OBMP PEIR Mitigation Measure **4.5-16** would ensure that future OBMPU projects located within a floodplain would be further evaluated to determine their potential to impede or redirect flood flows.

4.5-16: *Whenever possible and feasible, OBMP projects that are highly capital intensive, or that employ workers who are onsite for more than just maintenance activities, shall consider Figure 4.5-47 when siting specific project locations for OBMP facilities. Areas defined on this map that potentially may be affected by flood-hazards shall be avoided, unless conjunctive use and flood-control operations demand that facilities must be located within these areas. If facilities are constructed in a flood zone, the facility will be brought to a level above flood hazards, or hardened against flood related impacts. Additionally, if facilities must be located within flood plains or hazard areas, a flood management program to minimize impacts to people and surrounding property shall be created and implemented for each facility that may occur within these hazard areas.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could experience significant impacts to local drainage systems after rapid development of structures. The proposed OBMPU could result in potentially significant impacts associated with the alteration of drainage patterns that result in flooding that may be impeded or redirected by future projects.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Since the OBMPU could result in potential significant impacts, the Project's contribution to cumulative impacts is considered cumulatively considerable. Therefore, the mitigation identified above must be implemented (Mitigation Measures **HYD-15** and **HYD-16** and 2000 OBMP PEIR Mitigation Measures **4.5-1**, **4.5-6**, and **4.5-16**), which would reduce the Project's contribution to less than cumulatively considerable, therefore reducing cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.7.5.4 d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Due to its distance from the ocean and existing standing bodies of water (i.e., lakes, etc.), the OBMPU would not experience any risk of inundation from tsunami or seiche. The following analysis focuses on the risk of release of pollutants due to project inundation due to flooding hazards.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Impacts would be the same as those discussed under issue c(iii) and c(iv) above.

Construction-related pollutants include, but are not limited to fuels, oils, grease, solvents and paints, sediment, diesel fuel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids. Operations-related pollutants include sodium hypochlorite, household cleaning supplies, and other water and wastewater treatment media which are presently unknown. Improper storage or handling of such materials could risk release during a flooding event.

As stated under issue c(iv) above, OBMPU facilities, including wells may have the potential to be located within a 100-year floodplain, of which several are located within the large expanse of the Chino Basin, or within an area that could be impacted due to dam failure. The San Bernardino Countywide Plan EIR analyzed inundation potential in the County, including from the San Antonio Dam located north of the Chino Basin. The Countywide Plan EIR concluded that the potential for dam inundation would be less than significant in the Valley region. Furthermore, should the Dam fail, most pollutants, including hazardous materials, would be stored inside of structures and the potential for pollutants or contaminants to be incorporated and transported due to inundation is considered to be a less than significant impact.

Due to the distance between the Chino Basin and the Pacific Ocean—a distance of more than 25 miles separated by mountains—the risk for tsunami within the Chino Basin is nil. Furthermore, no large bodies of water are located within the Chino Basin, and as such, there is no seiche risk to proposed OBMPU facilities. Because the location of future OBMPU facilities is not presently known, it is not possible to evaluate all of the potential impacts related to an individual OBMPU

project's potential to risk release of pollutants due to project inundation, particularly within known flood hazard zones. Direct impacts to related to flood flows should be assessed through site review and evaluation on a project-by-project basis, after project specifics are known. Without this cursory review, a significant risk of pollutant release resulting from a flooding event would occur. Additionally, without mitigation that will ensure adequate onsite drainage management is developed to address the potential for OBMPU facilities to release pollutants due to project inundation, a significant impact would occur.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as those discussed under issue c(iii) and c(iv) above and the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The proposed storage basins would contribute to the overall stormwater drainage system within the Chino Basin as the basins would divert and capture stormwater and dry weather discharges, which would enhance stormwater collection. The provision of flood control, stormwater detention, and water storage basin facilities is considered beneficial to area stormwater collection systems as it enables greater control of runoff and would ultimately help to prevent flooding. As such, all other impacts would be the both the same as those discussed under issues c(iii) and c(iv) and as those discussed under Project Categories 1 and 2 above.

The proposed expansion of the safe storage capacity from 700,000 af to up to 900,000 af going forward would not result in any visible above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under issue (b) above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment

facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

Impacts would be both the same as those discussed under issues c(iii) and c(iv), and as those discussed under Project Categories 1, 2, and 3 above. However, this Project Category includes the development of water treatment facilities that may require brine disposal. Without proper management, brine may be generated that would create a new source of polluted runoff, thereby resulting in a significant impact.

Combined Project Categories

The presence of all new facilities at each project site could create a new risk for pollutants within a given site to be released as a result of inundation. Furthermore, given that the Chino Basin contains areas that are located within flood hazard zones, the development of several facilities in a given area may, when combined, result in a substantial potential to release pollutants as a result of inundation. Without mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project, there would be potential for OBMPU facilities to risk release of pollutants from inundation, thereby resulting in a significant impact.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

As discussed under **Subsection 4.7.5.1(a)**, above, while the majority of the impacts related to inundation and release of pollutants can be minimized through compliance with mandatory regulations, it is imperative that such regulations are reinforced through the implementation of specific mitigation measures designed to ensure that full compliance with these regulations is achieved by each future OBMPU facility, thereby avoiding potential Project related impacts. Therefore, the following mitigation measures shall be implemented to prevent the potential for OBMPU facilities to result in inundation and release of pollutants.

Mitigation Measures **HYD-15** through **HYD-17** and 2000 OBMP PEIR Mitigation Measures **4.5-16** are required to minimize the potential for OBMPU facilities to release pollutants as a result of inundation.

As required by Mitigation Measure **HYD-15**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure that pollutants are managed on site and the potential for risk of release thereof due to inundation is minimized. Impacts would be less than significant with mitigation.

Mitigation Measure **HYD-16** is also required to ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding. This measure would ensure no substantial increased potential for release pollutants as a result of inundation would result from implementation of the OBMPU. The Chino Basin contains several areas in the 100-year floodplain, particularly given the creeks, channels, and Santa Ana River that are within or along the boundaries of the Chino Basin. As such, 2000 OBMP PEIR Mitigation Measures **4.5-16** would ensure that future OBMPU projects located within a floodplain would be further evaluated to determine their potential to result in significant impacts related to flood inundation. Mitigation Measure **HYD-17** is provided to ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential to release pollutants as a result of inundation.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in flooding. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to flooding or inundation.

However, cumulative projects could experience significant impacts related to release of pollutants due to flooding and inundation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Since the Project could result in potential significant impacts, the Project's contribution to cumulative impacts is considered cumulatively considerable. Therefore, mitigation as identified above would be required (Mitigation Measures **HYD-15** through **HYD-17** and 2000 OBMP PEIR Mitigation Measures **4.5-16**), which would reduce the Project's contribution to less than cumulatively considerable, therefore reducing the Project's contribution to cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

4.7.5.5 e) Does the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Watermaster and the IEUA are co-permittees for the Chino Basin maximum-benefit SNMP incorporated in the Basin Plan (see **Section 3.4.3.7**). The maximum-benefit SNMP was developed pursuant to PE 7 of the OBMPU to enable the recharge and reuse of recycled water in the Basin. It defines the management actions that Watermaster and IEUA must take to manage total dissolved solids (TDS) and nitrate concentrations in Chino Basin groundwater and in the IEUA's recycled water and the TDS and nitrate concentration limitations for recycled water reuse activities. The Project will be operated such that there is no conflict with or obstruction of the Basin Plan.

Additionally, one of the proposed activities under the 2020 OBMPU is to determine if compliance with the recycled water recharge dilution requirements defined in Watermaster and the IEUA's maximum-benefit SNMP can be achieved under existing management plans and, if not, to develop a plan to achieve compliance. Implementation of the scope of work for this activity as described in the 2020 OBMPU Scoping Report will result in (1) the periodic characterization and understanding of the ability to comply with the TDS and nitrate dilution requirements in the short- and long-term; and if non-compliance is projected, (2) a plan that describes the conceptual designs, operating plans, and costs of alternative salt-offset programs or projects, and (3) implementation of the selected salt-offset program or projects, such as the expansion of the desalter (see Project Category 4). Because the maximum-benefit SNMP is an explicit requirement of Basin Plan, these are required outcomes for Watermaster and the IEUA to continue the recycled water recharge program.

The 2000 OBMP and its subsequent updates, including the 2020 OBMPU, define the sustainable groundwater management plan for the Chino Basin, consistent with the Judgment and other agreements and policies. The current OBMPU contains a set of management programs that will improve the reliability and long-term sustainability of the Chino Basin and the water supply reliability of the Judgment Parties and sets the framework for the next 20 years of basin-management activities. The OBMPU specifically aims for sustainability in Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties. As such, the proposed OBMPU is not anticipated to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

In a way, the projects proposed as part of the OBMPU represent a way in which to cumulatively manage the Chino Basin and the manner of interface with the remainder of the Santa Ana River watershed. Watermaster was established to administer the Judgment, which adjudicated the groundwater rights of the Chino Basin, and as such the Watermaster manages the cumulative changes to the Chino Basin, such as those that may occur from implementation of the OBMPU. Thus, as described under **Subsection 3.8 of the Chapter 3, Project Description** of this RDSEIR, cumulative impacts have been considered as part of the analysis herein. Therefore, the analysis presented as the OBMPU project impacts remain valid when applied on a cumulative basis, and the impact conclusions presented above remain valid.

4.7.6 Avoidance, Minimization and Mitigation Measures

4.7.6.1 2000 OBMPU PEIR Mitigation Measures

As described in **Subsection 4.7.1 and Subsection 4.7.5**, the analysis contained in the 2000 OBMP PEIR, while still applicable, must be updated to reflect the current conditions of the Basin. Not only have regulations changed, but the hydrology of the Chino Basin is better understood at present since the 2000 OBMP PEIR was certified, and furthermore technology to assess the hydrology of the Basin has evolved.

Some of the mitigation measures that were applicable to the 2000 OBMP PEIR are applicable to the OBMPU, while others are no longer applicable or, have been modified and updated to conform to the necessary mitigation measures required to minimize impacts described herein for the OBMPU. The mitigation measures carried forward from the 2000 OBMP PEIR include Mitigation Measures **4.5-1, 4.5-6, 4.5-7, 4.5-11 and 4.5-16**, while the text for 2000 OBMP PEIR Mitigation Measures **4.5-4, 4.5-5, 4.5-15, and 4.5-17** has been modified and updated, as identified in the text provided under **4.7.5, Potential Impacts**, above. All other 2000 OBMP PEIR Mitigation Measures are no longer applicable, as described in greater detail below.

2000 OBMP PEIR Mitigation Measure **4.5-2** pertains to conferring with SBCFCD for recharge programs. This mitigation measure is covered by Mitigation Measure **HYD-16**, and is therefore no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.5-3**, **4.5-9**, and **4.5-10**, reflect existing regulatory requirements for stormwater management, and therefore, are no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.5-8**, **4.5-12**, **4.5-13**, and **4.5-14**, pertain to discharge of recycled water or State Water Project (SWP) water and limiting the constituents of concern (COCs) discharged to surface waters based on the Basin Plan. This is a mandatory requirement of entities, such as IEUA, discharging recycled water to surface waters, recharging recycled water to the Chino Basin, and utilizing recycled water in lieu of potable water for irrigation and other uses. Therefore, 2000 OBMP PEIR Mitigation Measures **4.5-8**, **4.5-12**, **4.5-13**, and **4.5-14** are no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-18** pertains to installation of the Chino Desalters, which has already been accomplished. It is therefore no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-18** pertains to reducing adverse affects of recharge within the Basin. Mitigation Measures **HYD-1** through **HYD-13** require management of the Basin, and enforce monitoring and mitigative actions of Storage and Recovery Program, including recharge activities. Therefore, the intent of 2000 OBMP PEIR Mitigation Measure **4.5-18** is covered by Mitigation Measures **HYD-1** through **HYD-13** and is therefore no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-4** requires the Watermaster to include the estimated amount of water lost from the Basin due to rising water at the low end of the Basin and adjust storage salt balance accounts accordingly. Mitigation Measure **HYD-13** essentially covers the intent of 2000 OBMP PEIR Mitigation Measure **4.5-4** because it addresses the plan of response by Watermaster should the Basin conditions come to vary from the projections that have been modeled as part of the OBMPU (and all supporting documentation). Therefore, 2000 OBMP PEIR Mitigation Measure **4.5-4** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-5** requires an SWPPP be prepared for all OBMP projects, which is rendered unnecessary by Mitigation Measure **HYD-14**, which would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. As compliance with the CGP and SWPPP are required for larger projects, 2000 OBMP PEIR Mitigation Measure **4.5-5** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-15** requires recharge of water within the vicinity of an existing or known groundwater plume to model the impacts of the recharge. This measure is no longer applicable because Mitigation Measures **HYD-11** and **HYD-12** essentially cover the intent of 2000 OBMP PEIR Mitigation Measure **4.5-15**, and better fit under the Watermaster's sequence of review. Therefore, 2000 OBMP PEIR Mitigation Measure **4.5-15** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.5-17** ensures that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding. However, it omits RCFCFCD from the text. Therefore, Mitigation Measure **HYD-16** reflects the adapted text of 2000 OBMP

PEIR Mitigation Measure **4.5-17** and as such, 2000 OBMP PEIR Mitigation Measure **4.5-17** is no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.5-2** through **4.5-5**, **4.5-8** through **4.5-10**, **4.5-12** through **4.5-15**, **4.5-17** and **4.5-18** are no longer applicable for the purposes of the OBMPU.

4.3.7.2 Applicable Project Mitigation Measures

The following mitigation measures from the 2000 OBMP PEIR have been abstracted and are repeated below for reference:

- 4.5-1:** *To minimize potential ground disturbances associated with installation and maintenance of proposed monitoring equipment on existing wells, the equipment shall be installed within or along existing disturbed easements or right-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements.*
- 4.5-6:** *For long-term mitigation of site disturbances at OBMP facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or man-made landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two-year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows. These measures and requirements shall be applied to closure of abandoned well site disturbed areas.*
- 4.5-7** *Prior to cleaning out, refurbishing or capping a well, samples will be obtained and chemically analyzed to ensure that the discharge does not contain any contaminants exceeding regulatory thresholds. If contaminants are discovered, then they shall be removed or lowered below the regulatory threshold prior to discharge to the environment. Discharge of non-stormwater into storm drains will require a NPDES permit.*
- 4.5-11** *When closing abandoned wells in the Chino Basin the entity closing the well shall, where technically feasible determine whether the groundwater in the well is contaminated. This shall be accomplished by sampling and analyzing the well water. If contamination is identified, the entity shall report the discovery to the appropriate parties, including the owner (if known) and the regulatory agencies. The Watermaster shall monitor the status of the well until residual contamination is remediated.*
- 4.5-16:** *Whenever possible and feasible, OBMP projects that are highly capital intensive, or that employ workers who are onsite for more than just maintenance activities, shall consider Figure 4.5-47 when siting specific project locations for OBMP facilities. Areas defined on this map that potentially may be affected by flood-hazards shall be avoided, unless conjunctive use and flood-control operations demand that facilities must be located within these areas. If facilities are constructed in a flood zone, the facility will be brought to a level above flood hazards, or hardened against flood related impacts. Additionally, if facilities must be located within flood plains or hazard areas, a flood management program to minimize impacts to people and surrounding property shall be created and implemented for each facility that may occur within these hazard areas.*

The following mitigation measures are specific to this OBMPU RDSEIR.

- HYD-1:** *Pumping Sustainability Part 1.* Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for loss of pumping sustainability). Watermaster shall then prepare a report that describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for loss of pumping sustainability, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.
- HYD-2:** *Pumping Sustainability Part 2.* To mitigate MPI caused by a proposed Storage and Recovery Program Application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.
- HYD-3:** *New Land Subsidence Part 1.* Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for new land subsidence, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.
- HYD-4:** *New Land Subsidence Part 2.* To mitigate the potential for new land subsidence caused by a proposed Storage and Recovery Program Application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) limiting facilities and operations of the Storage and Recovery Programs to MZ-2 and MZ-3 (2) modifying the put and take cycles to ensure the Storage and Recovery Program does not contribute to the lowering of water levels below the new land

subsidence metric, (3) strategically increasing supplemental water recharge near the affected area (especially in the deep aquifer layers), (4) reducing pumping (especially in the deep aquifer layers) and providing an alternate supply to the affected Parties to ensure Parties can meet their demands in response to any pumping reductions, (5) reallocating pumping from deeper to shallower layers, (6) a combination of (1) through (5), and (7) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-5: *Net Recharge Part 1.* Watermaster shall estimate the reduction in net recharge and Safe Yield for each Storage and Recovery Program/Project and deduct it from water stored in each Storage and Recovery Program storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements pursuant to MM HYD-6 established by Watermaster; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on net recharge and Safe Yield, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.

HYD-6: *Net Recharge Part 2.* To mitigate impacts on net recharge and Safe Yield caused by a proposed Storage and Recovery Program Application (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying put and take cycles to minimize reductions in net recharge, such as executing takes prior to puts, (2) reducing the total volume of takes compared to puts (i.e., "Leave Behind" water), including recharging additional water to mitigate reductions in net recharge, (3) constructing facilities in the southern part of the basin to mitigate the reduction of net recharge, (4) a combination of (1) through (3), and (5) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-7: *Hydraulic Control Part 1.* Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on Hydraulic Control and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-8; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on hydraulic control, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.

HYD-8: *Hydraulic Control Part 2.* To mitigate for potential impacts on Hydraulic Control caused by a proposed Storage and Recovery Program Application (as described above under HYD-7), the Watermaster's comprehensive monitoring and modeling that assesses the state of Hydraulic Control in Chino Basin shall be used to estimate groundwater outflow from Chino North to the Santa Ana River, assess the state of

Hydraulic Control, determine if the Storage and Recovery Program will cause a loss of hydraulic control, and develop mitigation requirements to mitigate for impacts to the state of Hydraulic Control. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (2) construct facilities in the southern part of the basin to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-9: *Riparian Vegetation Part 1. Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on riparian vegetation and habitat in Prado Basin and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-12; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on riparian vegetation and habitat in Prado Basin, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-10: *Riparian Vegetation Part 2. To mitigate for potential impacts on riparian vegetation and habitat in Prado Basin caused by a proposed Storage and Recovery Program Application (as described above under HYD-11), the Watermaster's comprehensive monitoring and modeling that assesses the state of riparian vegetation and habitat in Prado Basin shall be used to estimate groundwater levels in the Prado Basin, assess the health of the riparian vegetation and habitat, determine if the Storage and Recovery Program will adversely impact riparian vegetation and habitat, and develop mitigation requirements to mitigate for impacts to the riparian vegetation and habitat in Prado Basin. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to mitigate groundwater level impacts in Prado Basin, (2) develop areas in the Prado Basin for new riparian vegetation or habitat to offset any effects by Storage and Recovery Program operations, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

HYD-11: *Water Quality Degradation Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for water quality degradation). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster and pursuant to MM HYD-10; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for water quality*

degradation, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-12: Water Quality Degradation Part 2. *To mitigate potential water quality degradation caused by a proposed Storage and Recovery Program Application (as described above under HYD-9), the data gathered through Watermaster's comprehensive groundwater-quality monitoring shall be used to identify changes in the direction and velocity for each plume that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells, and to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation includes but is not limited to: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

HYD-13: Basin Monitoring and Mitigation. *Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected basin conditions assumed in the evaluation of the Storage and Recovery Program application process, compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the Storage and Recovery Program storage agreements. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the Storage and Recover Program storage agreements that will adequately mitigate MPI and related adverse impacts. The Watermaster shall continue to determine what Programs and Projects should be implemented or should be rejected based on their potential to contribute to or cause MPI or other adverse impacts to the Basin.*

HYD-14: Site Stormwater Discharge BMPs. *Prior to the commencement of construction of any OBMPU project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), the Implementing Agency shall require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each OBMPU facility, and to control urban runoff after each OBMPU facility is constructed and the well (if approved for operation post well testing) or other OBMPU facility is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to:*

- *The use of silt fences or coir rolls;*
- *The use of temporary stormwater desilting or retention basins;*
- *The use of water bars to reduce the velocity of stormwater runoff;*
- *The use of wheel washers on construction equipment leaving the site;*
- *The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;*
- *The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and*
- *Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.*

HYD-15: Drainage Plans. Prior to commencement of construction of project facilities, the Implementing Agency shall require that the Project Proponent submit either:

- (1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever possible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not possible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall:
- (2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located.

HYD-16: Operational Risk Management Plan. Prior to commencement of construction of any recharge or stormwater retention basin projects as either existing or new basins, a management plan will be established to the satisfaction of San Bernardino County Flood Control District (SBCFCD), Riverside County Flood Control District (RCFCD), and/or Division of Safety. This plan shall be created specifically for each individual basin to ensure the safety of surrounding property and people from undue risks associated with water-related hazards (i.e., flooding). The Operational Risk Management Plan will firmly establish a priority of flood-control functions over and above recharge or retention-related operations. Weather forecasts of upcoming storm events will be carefully monitored and in the event of a significant forecasted storm-event, water deliveries to the basins will be ceased until further notice is received from SBCFCD or RCFCD that it is safe for deliveries to resume. Additionally, each SBCFCD or RCFCD basin's specific management plan will be developed, to coordinate flood control along with surface water recharge or retention. This mitigation measure will ensure that people and property are not subject to additional risk associated with water-related hazards in the Basin, and will allow SBCFCD or RCFCDWCD to make full utilization of the basin's flood control capacity in the event of a storm.

HYD-17: Brine Disposal. All new and expanded water treatment facilities associated with the OBMPU shall ensure that any brine generated from the water treatment process that cannot be otherwise treated on-site is disposed of in accordance with state and local regulations—such as through disposal to a brine line (Non-Reclaimable Wastewater System, Etiwanda Wastewater Line, and Inland Empire Brine Line, etc.)—to prevent brine from being discharged into the local stormwater collection system.

HYD-18: Recharge and Storage Basin Management Plan Actions. Recharge Basins, Storage Basins, and site-specific infiltration or bioretention basins shall each be required to prepare a Management Plan that shall establish ongoing management actions required to achieve adherence to applicable water quality standards. Management actions shall be identified in the Management Plans, which shall include, but not be limited to the following:

- Oxygenation of the water body;
- Control of sediment accumulation; and,

- *Control of nutrients flowing into the basin to minimize the potential for a basin to support vectors*

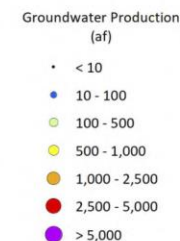
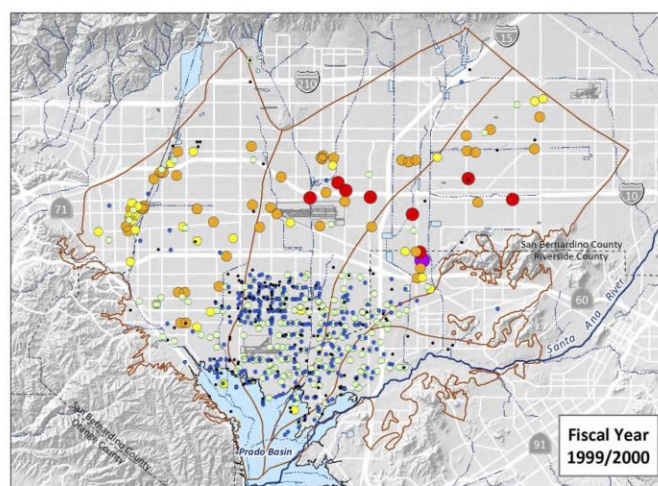
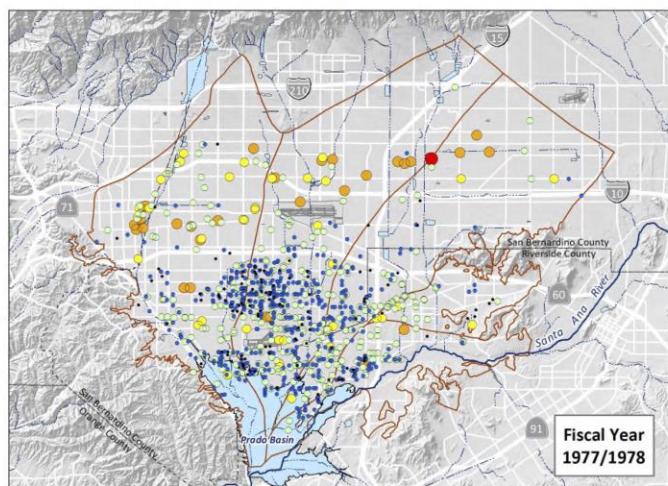
BIO-17: *Permanent Water Diversion Projects.* *The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. The IEUA participates in an ongoing monitoring and mitigation program to avoid adverse impacts to the riparian habitat in the Prado Basin because of implementation of the Peace II Agreement which is currently set to expire in 2030. IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program beyond its expiration in 2030, or shall implement a comparable and equally effective monitoring program in its place to enable OBMPU Implementing Agencies to utilize the monitoring data to address and mitigate any future potential adverse impacts to Prado Basin Habitat due to implementation of the OBMPU. The Implementing Agency shall conduct an evaluation of each water diversion projects associated with the OBMPU to assess the impacts thereof on Prado Basin and wetland, critical, and riparian habitat from implementation of such diversion projects.*

HAZ-1: *Vector Management Plan.* *Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.*

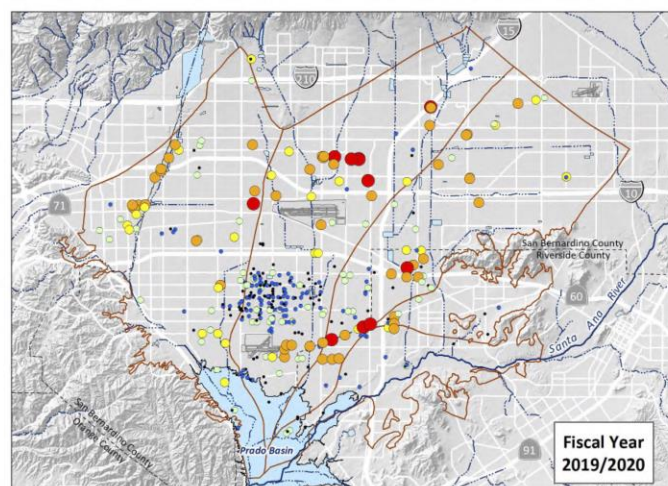
4.7.7 Significant and Unavoidable Impacts

As determined in the preceding evaluation, with the implementation of mitigation, the proposed Project would have no potential to result in significant and unavoidable hydrology and water quality impacts in the Chino Basin.

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Other key map features are described in the legend of Exhibit 1-1.



In FY 1977/1978, production located south of Highway 60 in the Chino Basin was about 93,500 af and production located north of Highway 60 was about 65,300 af, accounting for 59 and 41 percent of total production, respectively. The agricultural production estimate for FY 1977/1978 from the Safe Yield recalculation effort in 2015 was greater than the reported production and primarily occurred south of Highway 60.

Between FY 1977/1978 and FY 1999/2000, groundwater production shifted north, with groundwater production south of Highway 60 declining from 59 to 31 percent of total production. North of Highway 60, production increased from 41 to 69 percent of total production. This shift in production was a result of land use transitions: south of Highway 60, irrigated agricultural land had been largely replaced by dairies, which have lower water use requirements; and north of Highway 60, Appropriative Pool production increased concurrent with urbanization. In FY 1999/2000, after the CDA wells were constructed and came online south of Highway 60 (see Exhibit 3-4), the spatial distribution of pumping began to shift again, south of Highway 60.

The number of wells producing greater than 1,000 afy began to increase from FY 1977/1978 through the present period. This was due to the increase in urbanization, which tends to concentrate production over fewer wells, compared to agricultural production. The construction and operation of the Chino Desalter wells, most of which produce more than 1,000 afy, also contributed to this increase. Despite this increase, the total groundwater production has been declining since 2007 due to the drought conditions, state-mandated water conservation measures, a trend towards greater water conservation, and the economic downturn that occurred in 2008.

Pool	FY 1977/1978 Production		FY 1999/2000 Production		FY 2019/2020 Production	
	af	percentage	af	percentage	af	percentage
Agricultural	87,800	55	44,200	25	15,700	11
Overlying Non-Agricultural	10,100	6	5,600	3	2,300	2
Appropriative	62,400	39	128,900	72	95,400	64
CDA	0	0	0	0	35,600	24
Total	160,300	100	178,700	100	149,000	100

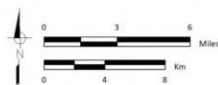
Prepared by:



Author: SO

Date: 6/1/2021

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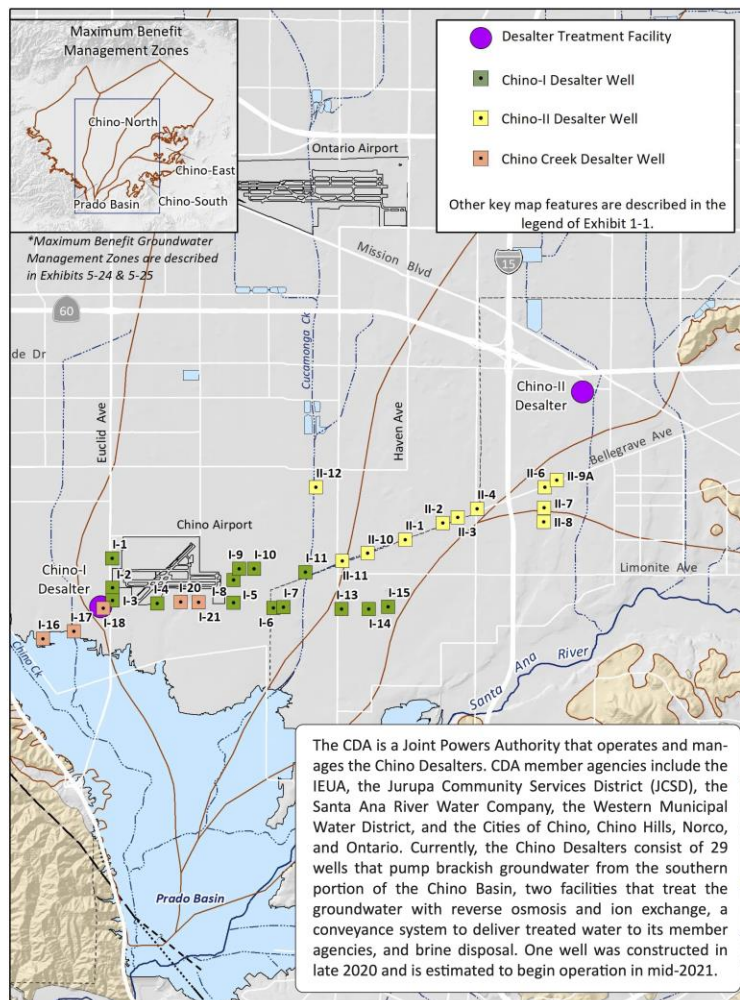
Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge



Groundwater Production by Well
Fiscal Year 1977/1978, 1999/2000, and 2019/2020

Exhibit 3-3

FIGURE 4.7-2



The need for the Chino Desalters was described in the OBMP Phase 1 Report. Throughout the 20th century, land uses in the southern portion of the Chino Basin were primarily agricultural. Over time, groundwater quality degraded in this area, and it is not suitable for municipal use unless it is treated to reduce TDS, nitrate, and other contaminant concentrations. The OBMP recognized that urban land uses would ultimately replace agriculture and that if municipal pumping did not replace agricultural pumping, groundwater levels would rise and discharge to the Santa Ana River. The potential consequences would be the loss of Safe Yield in the Chino Basin and the degradation of the quality of the Santa Ana River—the latter of which could impair downstream beneficial uses in Orange County. Mitigating the lost yield and the subsequent degradation of water quality would come with high costs to the Chino Basin parties.

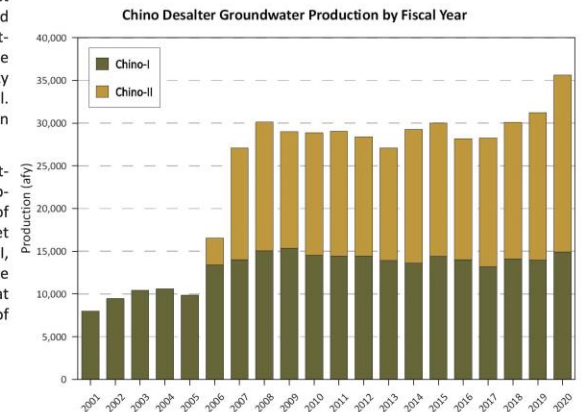
The Chino Desalters were designed to replace the expected decrease in agricultural production and accomplish the following objectives: meet emerging municipal demands in the Chino Basin, maintain or enhance Safe Yield, remove groundwater contaminants, and protect the beneficial uses of the Santa Ana River. Pursuant to the OBMP and the Peace Agreement, Watermaster's goal for desalter production was set at 40,000 afy.

The Chino Desalters also became a fundamental component of the salt and nutrient management plan for the Chino Basin, which was written into the 2004 Water Quality Control Plan for the Santa Ana River Basin ([Basin Plan], Regional Board, 2004). The Basin Plan adopted maximum-benefit based water quality objectives in the Chino Basin, enabling the implementation of large-scale recycled-water reuse projects in the Chino Basin for direct reuse an indirect potable reuse. Watermaster and the IEUA made nine "maximum-benefit commitments," ensuring that beneficial uses in the Chino Basin will not be impaired by TDS and nitrate, and groundwater management in the Chino Basin will not contribute to the impairment of beneficial uses of the Santa Ana River. The operation of the Chino Desalters is necessary to attain "Hydraulic Control" in the southern portion of Chino Basin. Hydraulic Control is achieved when groundwater discharge from the Chino-North Management Zone to the Santa Ana River is eliminated or reduced to de minimis levels by pumping at the Chino Desalter wells. Hydraulic Control is necessary to maximize the Safe Yield and to prevent degraded groundwater from discharging from the Chino Basin to the Santa Ana River. Four of the nine maximum-benefit commitments are related to the Chino Desalters and Hydraulic Control.

The Chino-I Desalter began operating in 2000 with a design capacity of 8 million gallons per day (mgd) (about 9,000 afy). In 2005, the Chino-I Desalter was expanded to 14 mgd (about 16,000 afy). The Chino-II Desalter began operating in June 2006 at a capacity of 15 mgd (about 17,000 afy). In 2012, the CDA completed construction of the Chino Creek Well Field (CCWF). Production at some of the CCWF wells began in mid-2014, and production at the other CCWF wells began in early 2016, reaching the level of production required to achieve Hydraulic Control. In 2015, the CDA completed the construction of two more wells (I-10 and I-11), and production at these wells started in mid-2018.

In 2020, the CDA completed the construction of the last planned well (II-12) and pumping at this well is expected to begin in late 2021. In FY 2019/2020, the Chino Desalters pumped about 35,000 afy of groundwater. In June 2020, the Chino Desalters reached the pumping capacity of 40,000 afy, thus, achieving the OBMP production goal. The chart below shows annual groundwater production by the Chino Desalters.

Pursuant to the Peace II Agreement, Watermaster initiated additional controlled overdraft, referred to as "Re-operation." Re-operation is the controlled overdraft of 400,000 af through 2030, allocated specifically to meet the replenishment obligation of the Chino Desalters (WEI, 2009b). An investigation conducted to evaluate the Peace II Agreement and desalter expansion concluded that Re-operation was required to ensure the attainment of Hydraulic Control (WEI, 2007).



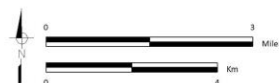
Prepared by:



Author: SO

Date: 5/24/2021

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Prepared for:

Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge



Chino Basin Desalter Well Production

Exhibit 3-4

FIGURE 4.7-3

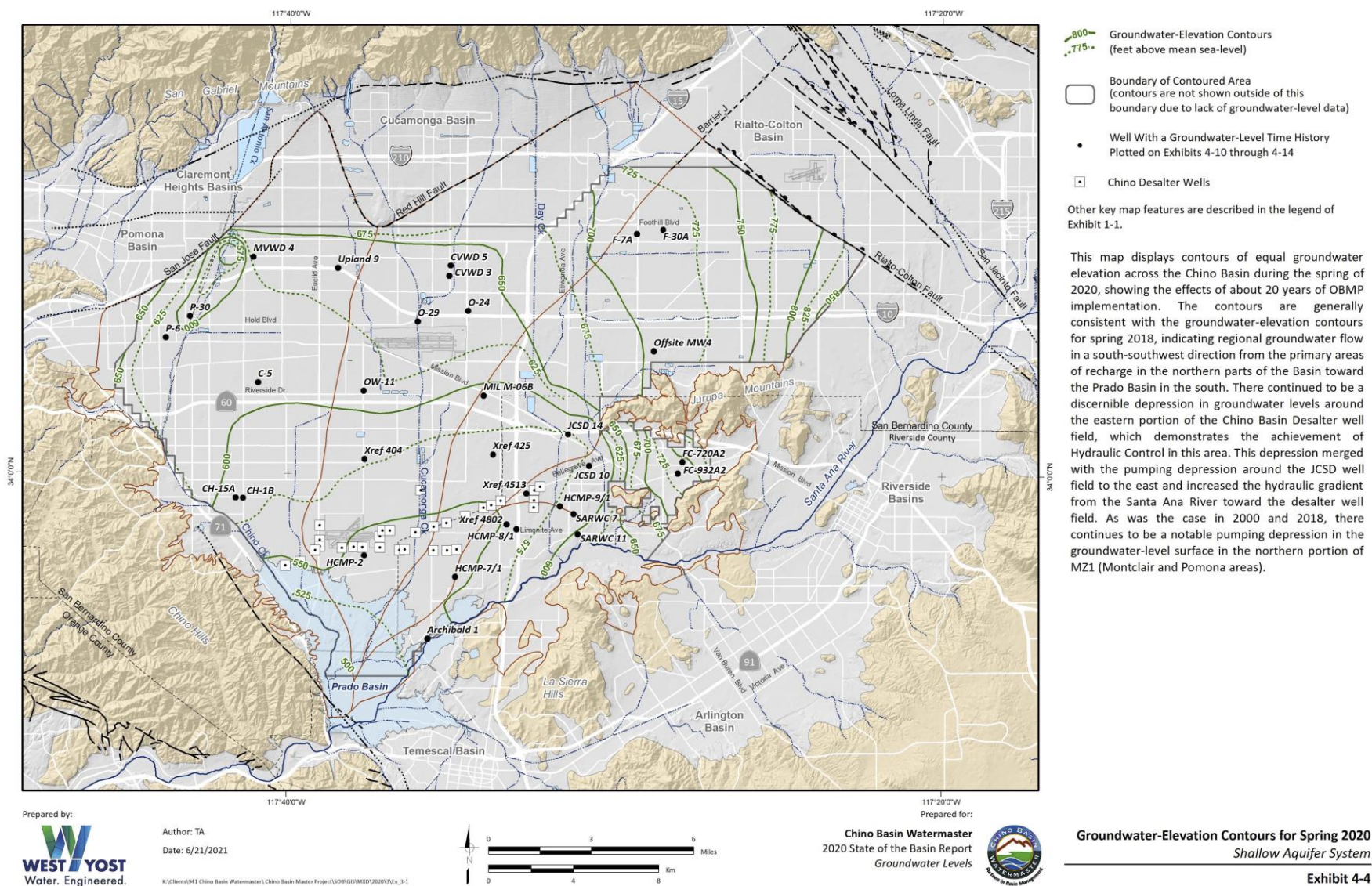


FIGURE 4.7-4

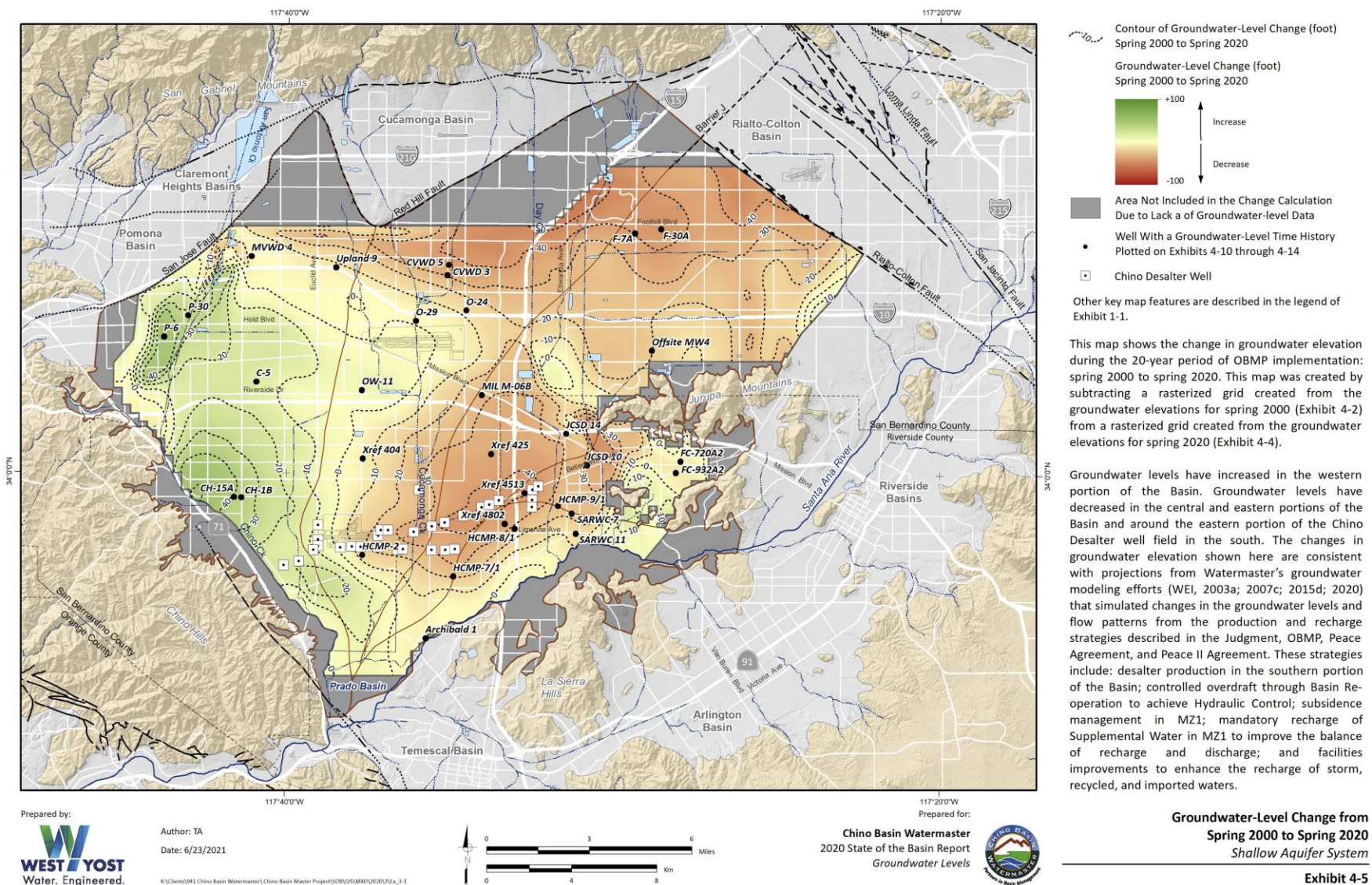
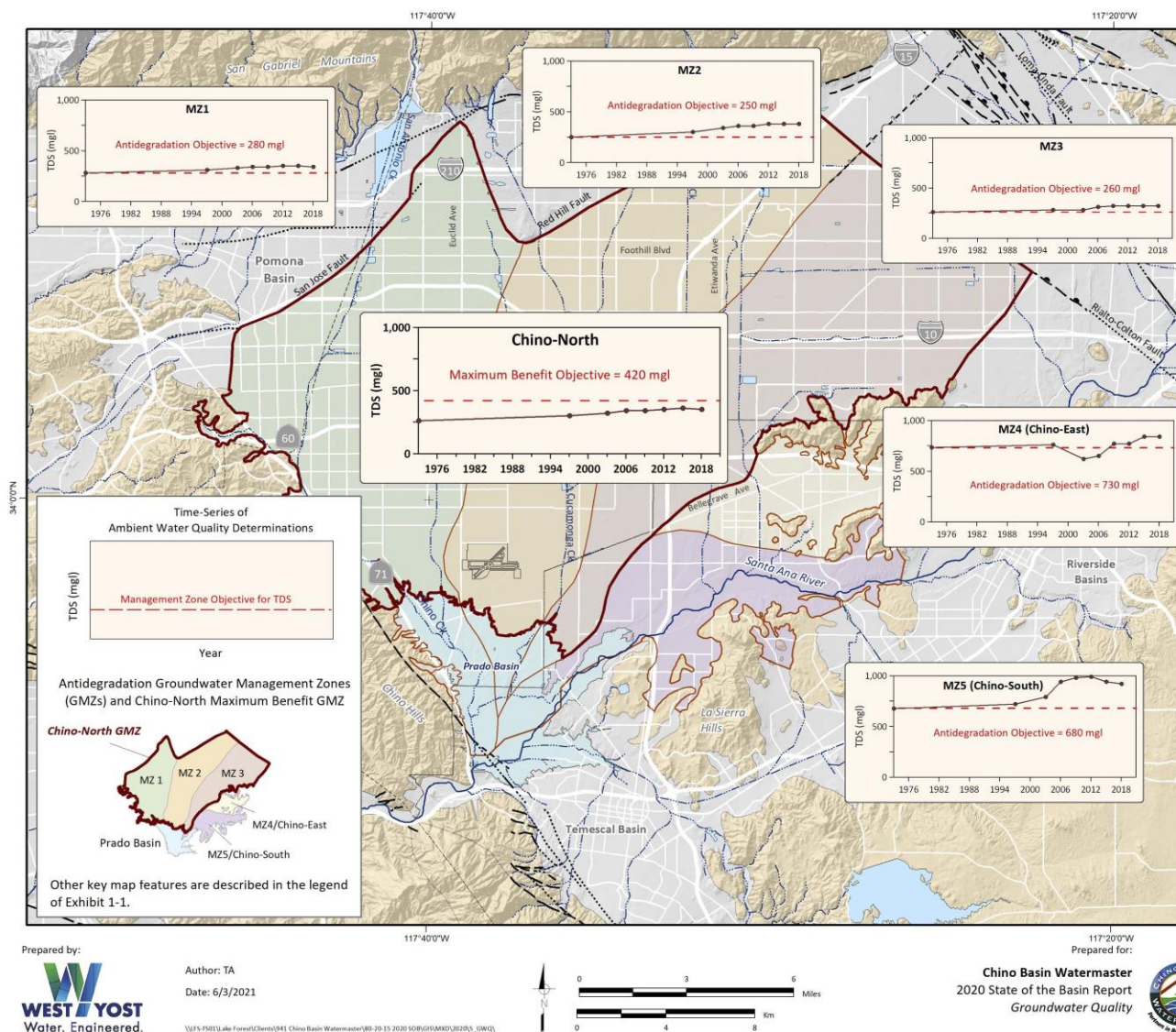


FIGURE 4.7-5



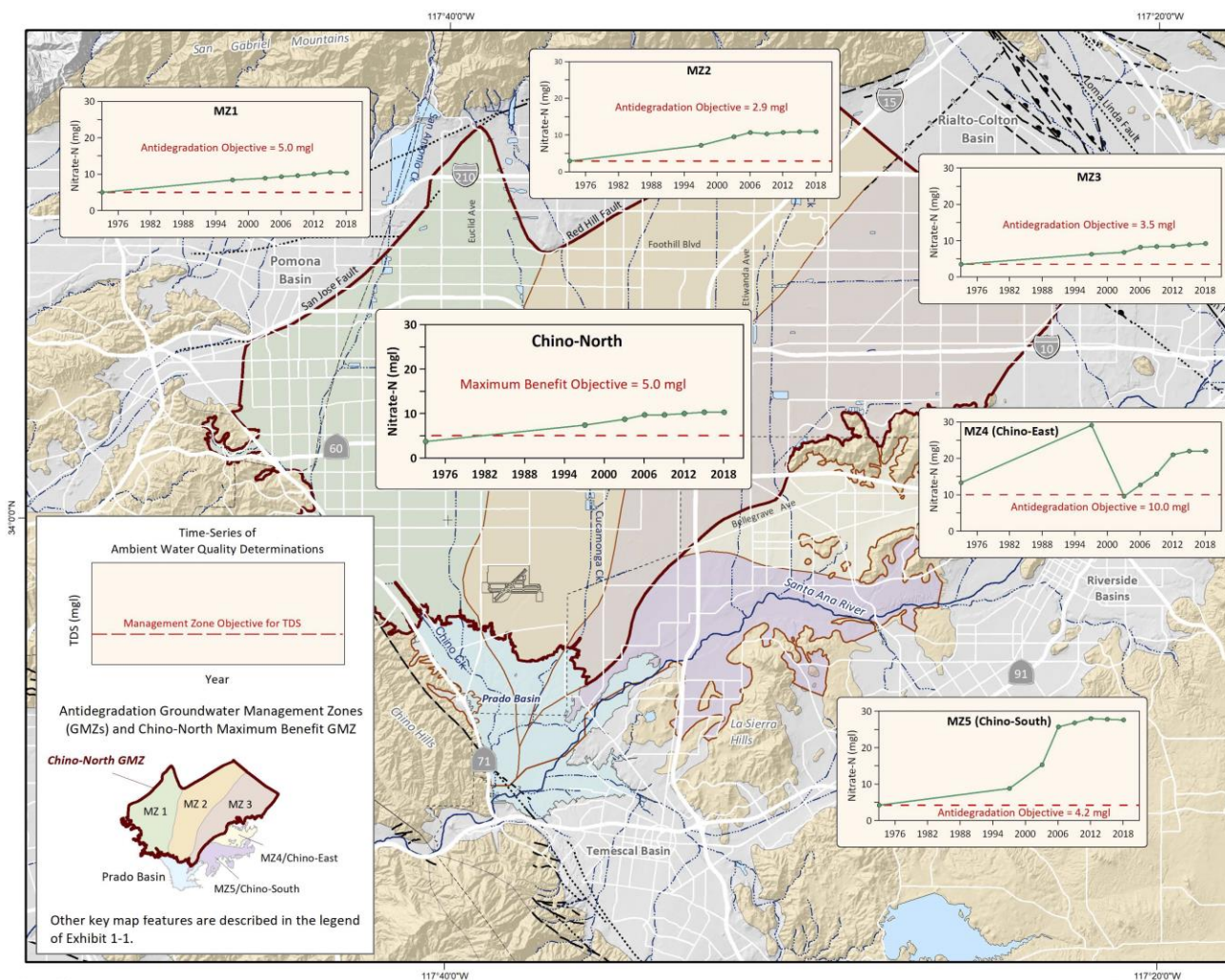
The ambient water quality (AWQ) of GMZs in the Santa Ana Watershed are computed on a triennial basis and compared with the groundwater-quality objectives defined in the Basin Plan to determine assimilative capacity for TDS and nitrate, and to assess if waste discharge requirements are protective of groundwater quality. AWQ represents the volume-weighted average concentration for a GMZ, and is derived from water quality statistics computed at wells based on a 20-year time-history of sample results.

In the Chino Basin, the Chino-North GMZ maximum-benefit objective is used as the measure of compliance to permit recycled water discharge and reuse. The Chino-North GMZ is the combined extent of MZ1, MZ2, and MZ3 up-gradient of the Prado Basin. The Chino-North maximum-benefit objective is numerically higher than the individual anti-degradation objectives set for MZ1, MZ2, and MZ3. If Watermaster and the IEUA do not implement the specific projects and programs described in the Chino Basin maximum-benefit commitments in the Basin Plan (Table 5-8), the anti-degradation objectives will apply, and Watermaster and the IEUA will be required to mitigate TDS and nitrate loading from recycled water discharge and reuse above the anti-degradation objectives.

AWQ determinations have been made for eight 20-year periods: 1954-1973, 1978-1997, 1984-2003, 1987-2006, 1990-2009, 1993-2012 (WEI, 2000; 2005b; 2008a; 2011b; and 2014), 1996-2015 (DBS&A, 2017), and 1999-2018 (WSC, 2020). From 1973 to 2018, the ambient TDS concentration for Chino-North increased from 260 to 350 mg/l, but remains below the maximum-benefit objective of 420 mg/l, and 70 mg/l of assimilative capacity remains. When the current ambient TDS exceeds the maximum-benefit objective, there will be a mitigation requirement for the recharge and direct use of recycled water.

In the Chino-East and Chino-South GMZs, the current ambient TDS concentrations are greater than the objectives. Because the TDS concentration of the recycled water reused by the Chino Basin parties in these GMZs is less than the antidegradation objectives of 730 and 680 mg/l, there are no regulatory compliance challenges.

FIGURE 4.7-7



From 1973 to 2018, the ambient nitrate in Chino-North increased from 3.7 to 10.3 mg/l, and is currently above the maximum benefit objective of 5.0 mg/l. To ensure recycled water recharge in the Chino-North GMZ is in compliance with the maximum benefit objective, Watermaster and the IEUA must recharge low-nitrate imported water and storm waters such that the 12-month, volume-weighted concentration of the all recharge sources (storm water, recycled water, and imported water) is less than or equal to the maximum-benefit objective of 5.0 mg/l.

In the Chino-East GMZ, the current ambient nitrate concentration is about two to three times greater than the antidegradation objective of 10 mg/l, and has been increasing since 1973.

In the Chino-South GMZ, the current ambient nitrate concentration is about six times greater than the antidegradation objective of 4.2 mg/l, and has also been increasing since 1973.

For all GMZs, the increase in ambient concentrations is likely related to an increase in the data available to perform the calculations since the implementation of the OBMP monitoring programs, opposed to actual the degradation of water quality.

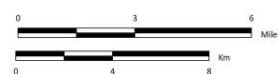
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Author: TA

Date: 6/3/2021

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Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Quality

Prepared for:



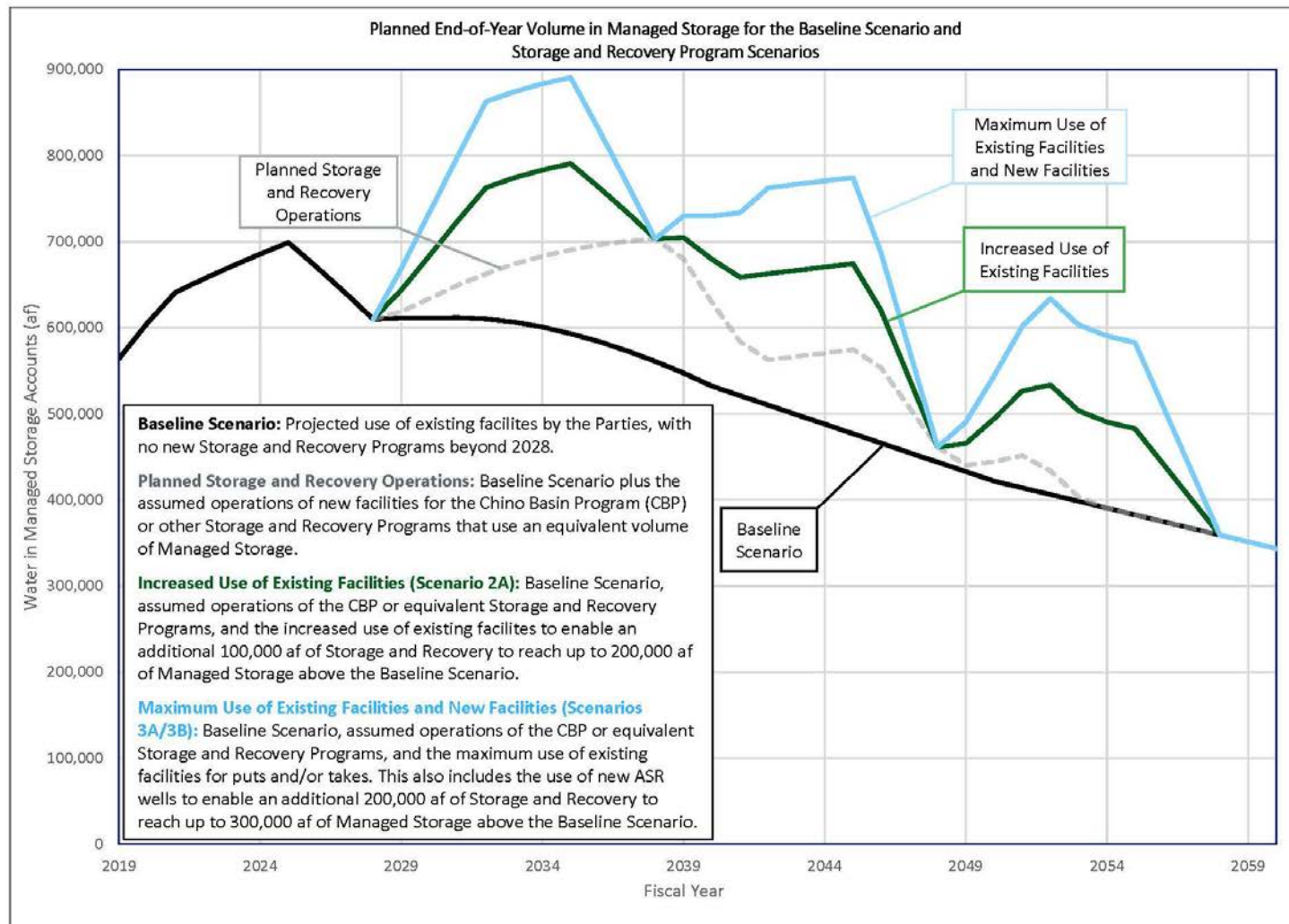
Trends in Ambient Water Quality
Determinations for Nitrate as Nitrogen
By Groundwater Management Zone

Exhibit 5-25

FIGURE 4.7-8

Tom Dodson & Associates
Environmental Consultants

Trends in Ambient Water Quality Determinations for Nitrate as Nitrogen by Groundwater Management Zone



WEST YOST

K:\C943-00-22-11-WP\MCD TM-TBL FIG-9

Chino Basin Watermaster
2023 SFI
Last Revised: 05-08-23

FIGURE 4.7-9

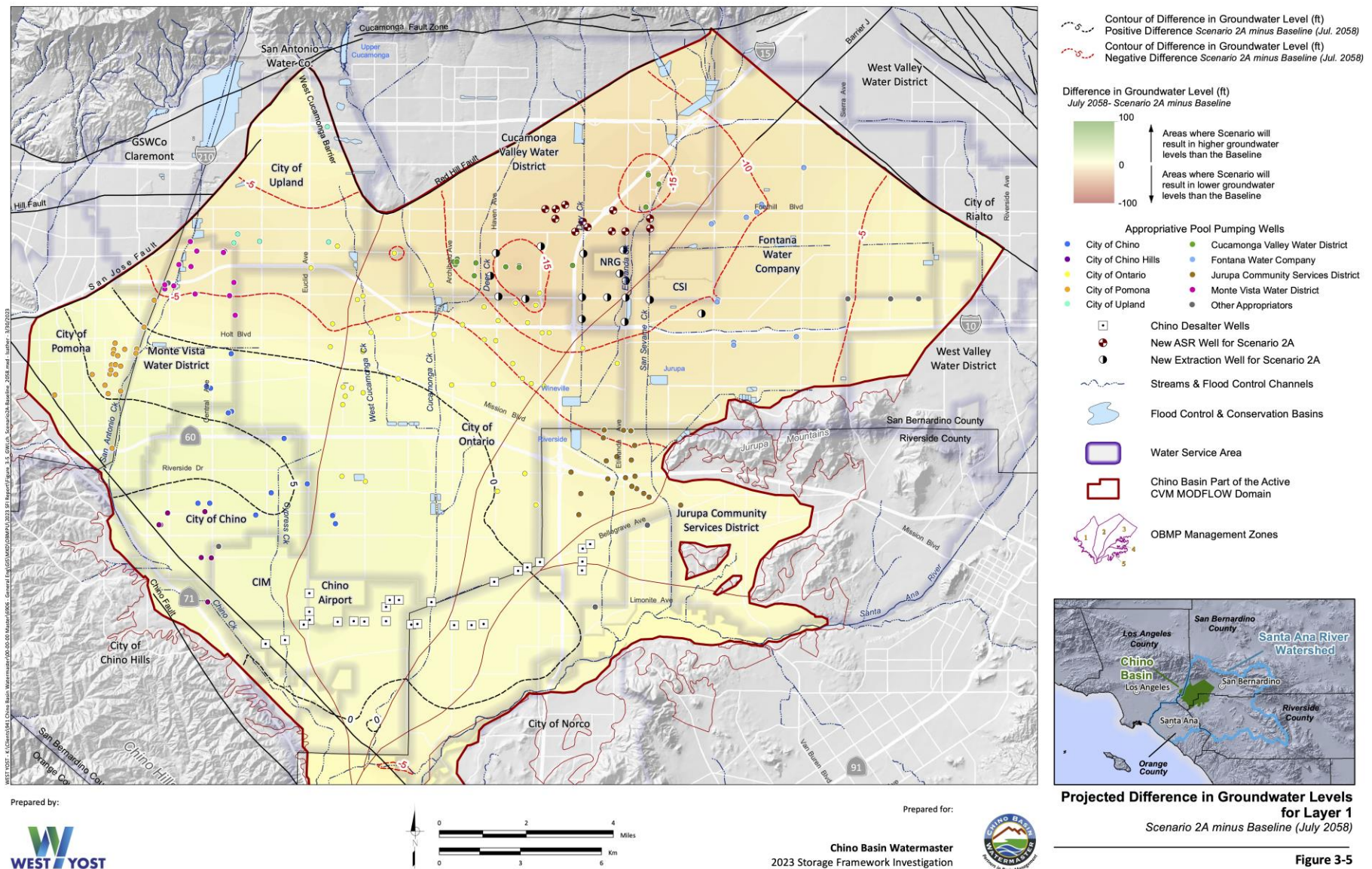


FIGURE 4.7-10

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**Projected Difference in Groundwater Level for Layer 1,
 Scenario 2A Minus Baseline**

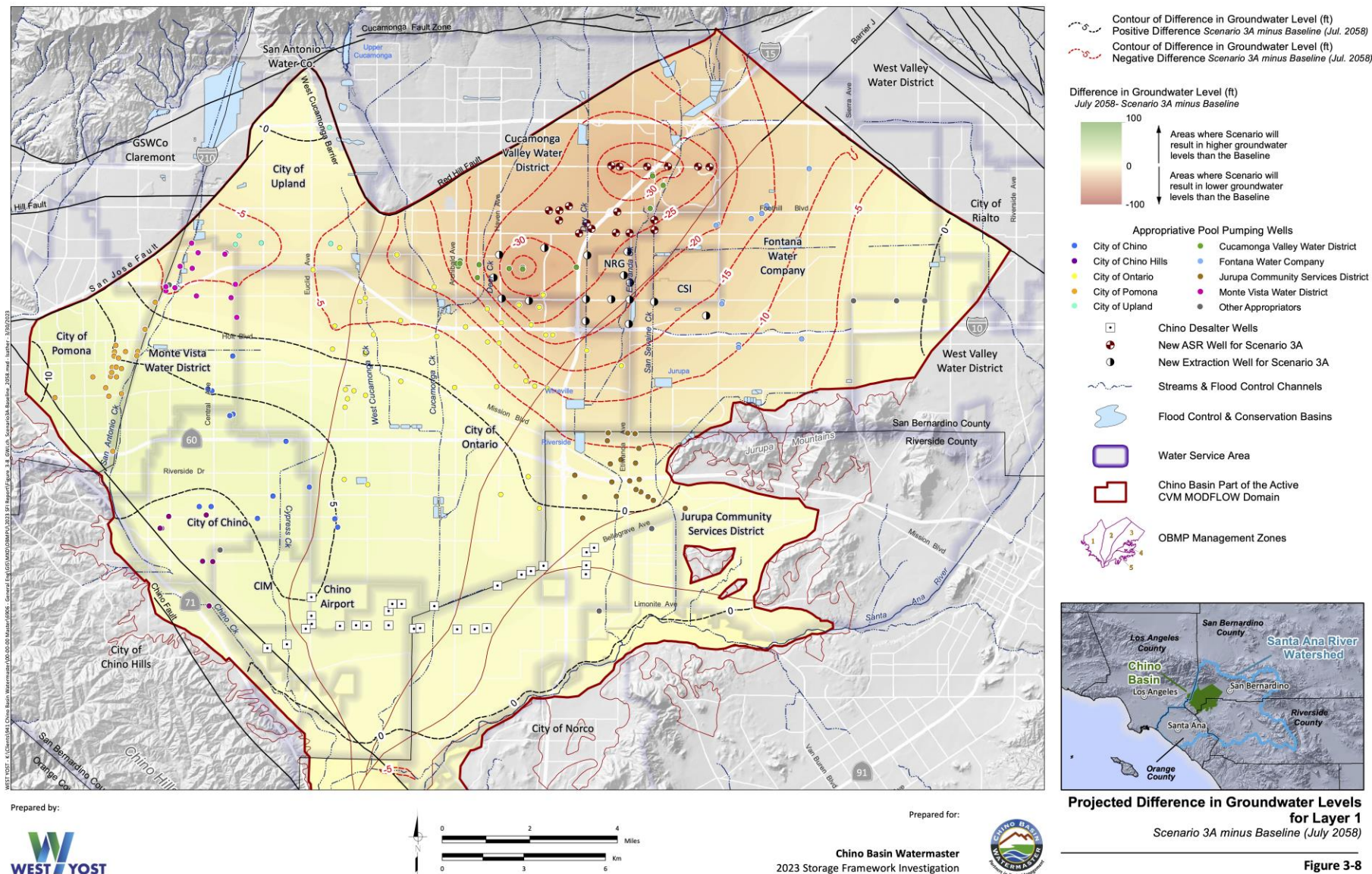


FIGURE 4.7-11

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**Projected Difference in Groundwater Levels for Layer 1,
 Scenario 3A Minus Baseline**

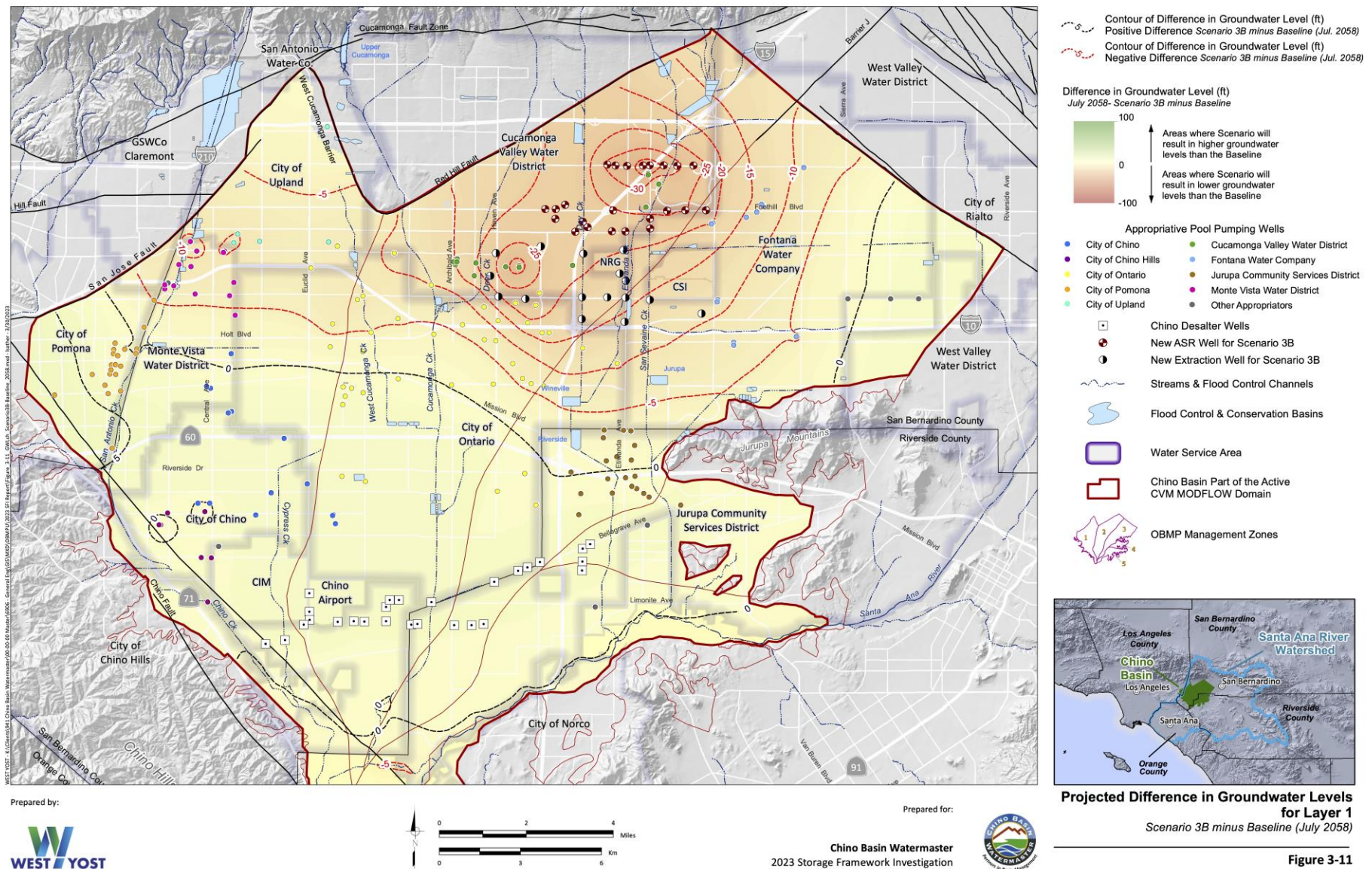


FIGURE 4.7-12

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1,
Scenario 3B Minus Baseline

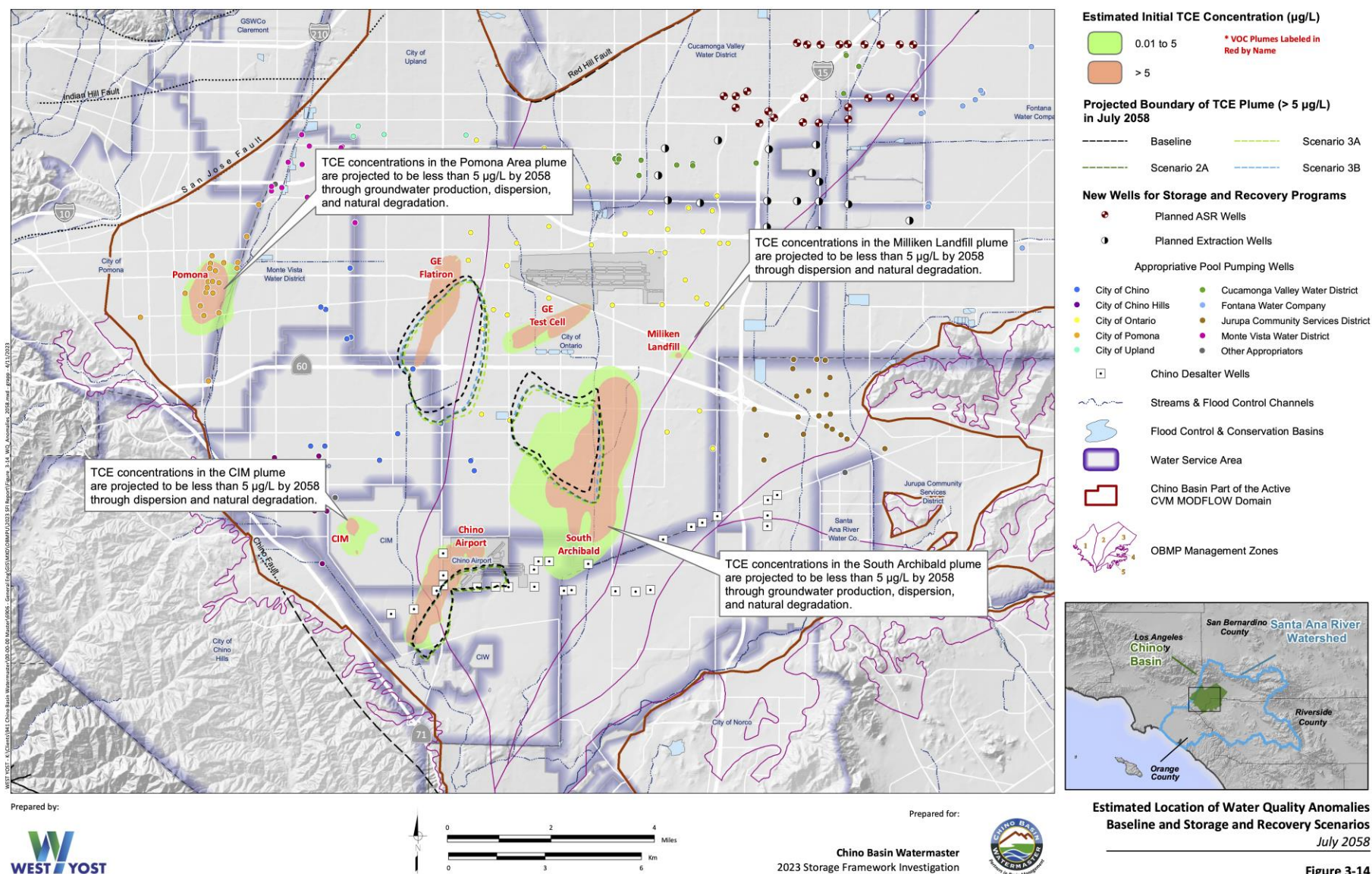


FIGURE 4.7-13

4.8 TRIBAL CULTURAL RESOURCES

4.8.1 Introduction

This Subchapter of the RDSEIR evaluates the potential environmental impacts to tribal cultural resources from implementation of the OBMPU. The tribal cultural resources subchapter was not part of the 2000 OBMP PEIR because it was not an individualized topic required under CEQA at that time. However, tribal cultural resources were discussed and analyzed under the cultural resources subchapter of the 2000 OBMP. In response to the AB 52 consultation initiated in January 2020, the three tribes that were notified (Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation ([formerly known as the San Manuel Band of Mission Indians]) (the “Tribes”) requested consultation. IEUA Staff initiated consultation and reached agreement with all three tribes to incorporate mitigation to address implementation of specific projects under the OBMPU as they are proposed for site-specific implementation. The Tribes requested updated archaeological evaluations in line with current standards and requested the opportunity to participate in the updated evaluations as well as an opportunity to monitor ground-disturbing activities on native soil under site specific circumstances.

These issues will be discussed below as set in the following framework:

- 4.8.1 Introduction
- 4.8.2 Environmental Setting: Cultural Resources
- 4.8.3 Regulatory Setting
- 4.8.4 Thresholds of Significance
- 4.8.5 Potential Impacts
- 4.8.6 Cumulative Impacts
- 4.8.7 Unavoidable Adverse Impacts

References utilized for this section include:

- Bean, Lowell John, and Charles R. Smith, 1978. Gabrielino. In Robert F. Heizer (ed.): *Handbook of North American Indians*, Vol. 8: *California*; pp. 538-549. Smithsonian Institution, Washington, D.C.
- Bean, Lowell John, and Charles R. Smith, 1978. Serrano. In Robert F. Heizer (ed.): *Handbook of North American Indians*, Vol. 8: *California*; pp. 570-574. Smithsonian Institution, Washington, D.C.
- California Governor's Office of Planning and Research, 2005. Final Tribal Guidelines. <https://nahc.ca.gov/wp-content/uploads/2019/04/SB-18-Tribal-Consultation-Guidelines.pdf> (accessed 09/19/23)
- Kroeber, Alfred L, 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Government Printing Office, Washington, D.C.
- Strong, William Duncan, 1929. *Aboriginal Society in Southern California*. University of California Publications in American Archaeology and Ethnology 26. Reprinted by Malki Museum Press, Banning, California, 1972.
- CRM TECH, 2020. Cultural Resources Study incorporated directly into Subchapter 4.4. of this RDSEIR

No comment letters regarding tribal cultural resources issues were received as part of the Notice of Preparation. No comments were received at the scoping meeting held for the proposed Project.

4.8.2 Environmental Setting: Tribal Cultural Resources

The Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation responded to IEUA's consultation requests in January 2020. All three Tribes requested continued participation with this project's CEQA process and future projects implemented under the OBMPU. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures provided below, IEUA concludes that the requests of the Tribes will be met under the OBMPU.

4.8.2.1 Prehistory/Ethnohistory

The Chino Basin region lies mostly within the traditional territory of the Gabrieleño, a Native American group believed to have been the most populous and most powerful ethnic nationality in aboriginal Southern California. Gabrieleño territory was centered in the Los Angeles Basin, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The Gabrieleño's territorial claim in the Riverside-San Bernardino County portion of the planning area overlapped another prominent Native American group, the Serrano, whose traditional homeland was centered in the San Bernardino Mountains, including the slopes and lowlands on the northern and southern flanks of the mountains and extending eastward as far as present-day Twentynine Palms.

Depending on the natural environment in which they were located, native groups adopted different types of subsistence economy, although they were all based on gathering, hunting, and/or fishing. As a result, ancient occupation sites in valleys and foothills often contain portable mortars and pestles along with large projectile points, suggesting a reliance on fleshy nut foods and, to a lesser extent, large game animals. Sites found in the more arid areas in inland Southern California often contain fragments of flat slab metates and plano-convex scrapers along with numerous projectile points, suggesting a reliance on seed resources, plant pulp, and smaller game animals. Temporary use sites tended to be clustered around bay/estuary environments and intermontane drainages such as the Santa Ana River.

The Gabrieleño came into contact with the Spanish as early as 1542, during the expedition of Juan Rodríguez Cabrillo. In the early Spanish period, several Indian villages or rancherías were known to be present amid the foothills and valleys on the southern slopes of the San Gabriel and San Bernardino Mountains. Beginning in 1769, the Spaniards took steps to colonize Gabrielino territory. In the process, most of the Gabrieleño people were incorporated into Mission San Gabriel and other missions in Southern California.

Due to their location further inland and mostly at higher elevations, Spanish influence on Serrano lifeways was minimal until the 1810s, when an asistencia affiliated with Mission San Gabriel was established in present-day Loma Linda, on the southern edge of the Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the San Bernardino Mountains were also moved to the nearby missions.

Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrielino and Serrano populations dwindled rapidly. By 1900, the Gabrieleño had almost ceased to exist as a culturally identifiable group, according to the leading ethnohistoric accounts. The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations. In modern times,

there has been a renaissance of Native American activism and cultural revitalization among the Gabrieleño and the Serrano. Tribal members today are keenly aware of archaeological sites and places of special cultural significance and maintain a high level of interest in how these sites are managed.

4.8.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.8.3.1 Federal Regulations

4.8.3.1.1 Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites which are on federal lands and Indian lands.

4.8.3.1.2 Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian tribes.

4.8.3.2 State

4.8.3.2.1 Public Resources Code

Archaeological resources are protected pursuant to a wide variety of State policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.
- California Public Resources Code 5097.9 states that no public agency or private party on public property shall “interfere with the free expression or exercise of Native American Religion.” The code further states that:

Nor shall any agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine...except on a clear and convincing showing that the public interest and necessity so require.

- County and city lands are exempt from this provision, except for parklands larger than 100 acres.

4.8.3.2.2 Health and Safety Code

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states that:

(b) In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation...until the coroner...has determined...that the remains are not subject to... provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible.... The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains.

(c) If the coroner determines that the remains are not subject to his or her authority and...has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

4.8.3.2.3 Senate Bill 18

Prior to the enactment of Senate Bill 18 (SB 18; California Government Code Sections 65352.3 et seq.) related to traditional tribal cultural places (TTCP) in 2004, State law provided limited protection for Native American prehistoric, archaeological, cultural, spiritual, and ceremonial places. These places may include sanctified cemeteries, religious, ceremonial sites, shrines, burial grounds, prehistoric ruins, archaeological or historic sites, Native American rock art inscriptions, or features of Native American historic, cultural, and sacred sites.

SB 18 placed new requirements upon local governments for developments within or near TTCP. SB 18 requires local jurisdictions to provide opportunities for involvement of California Native Americans tribes in the land planning process for the purpose of preserving traditional tribal cultural places. The Final Tribal Guidelines¹ recommends that the NAHC provide written information as soon as possible but no later than 30 days to inform the lead agency if the proposed project is determined to be in proximity to a TTCP and another 90 days for tribes to respond to if they want to consult with the local government to determine whether the project would have an adverse impact on the TTCP. There is no statutory limit on the consultation duration. Forty-five days before the action is publicly considered by the local government council, the local government refers action to agencies, following the CEQA public review time frame. The CEQA public distribution list may include tribes listed by the NAHC who have requested consultation or it may not. If the NAHC, the tribe, and interested parties agree upon the mitigation measures necessary for the proposed project, it would be included in the project's EIR. If both the lead agency and the tribe agree that adequate mitigation or preservation measures cannot be taken, then neither party is obligated to take action.

SB 18 requires a city or county to consult with the NAHC and any appropriate Native American tribe prior to the adoption, revision, amendment, or update of a city's or county's general plan. While SB 18 does not specifically mention consultation or notice requirements for adoption of a water basin management program such as the OBMPU. In addition, SB 18 provides a new definition of TTCP that requires a traditional association of the site with Native American traditional beliefs, cultural practices, or ceremonies or the site must be shown to actually have been used for activities related to traditional beliefs, cultural practices, or ceremonies. Previously, the site was defined to require only an association with traditional beliefs, practices, lifeways, and ceremonial activities. In addition, SB 18 law amended Civil Code § 815.3 and added California

¹ California Governor's Office of Planning and Research, 2005. Final Tribal Guidelines. <https://nahc.ca.gov/wp-content/uploads/2019/04/SB-18-Tribal-Consultation-Guidelines.pdf> (accessed 09/19/23)

Native American tribes to the list of entities that can acquire and hold conservation easements for the purpose of protecting their cultural places.

4.8.3.2.4 Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCR) into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California tribes. Projects that require a Notice of Preparation of an EIR or Notice of Intent to adopt a ND or MND on or after July 1, 2015 are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact, requiring feasible mitigation measures.

TCRs must have certain characteristics:

- 1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (PRC § 21074(a)(1))
- 2) The lead agency, supported by substantial evidence, chooses to treat the resource as a TCR. (PRC § 21074(a)(2))

The first category requires that the TCR qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource—under the conditions that it support its determination with substantial evidence and consider the resource's significance to a California tribe. The following is a brief outline of the process (PRC §§ 21080.3.1–3.3).

- 1) A California Native American tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.
- 2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all tribes who have requested it.
- 3) A tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.
- 4) The lead agency must initiate consultation within 30 days of receiving the request from the tribe.
- 5) Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.
- 6) Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCRs and discuss feasible alternatives or mitigation that avoid or lessen the impact.

4.8.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the Tribal Cultural Resources environment if the project would:

Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

4.8.5 Environmental Impacts

This subchapter evaluates the level of adverse impact to the tribal cultural resources that is forecast to occur if the OBMPU is implemented as proposed.

4.8.5.1 a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

In response to the AB 52 consultation initiated in January 2020, the three tribes that were notified (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation ([formerly known as the San Manuel Band of Mission Indians]) requested consultation. All three Tribes requested continued participation with this project's CEQA process and future project implemented under the OBMPU. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities.

Based on the sensitivity assessment presented in **Subchapter 4.4, Cultural Resources**, (in **Subsections 4.4.2.3 and 4.4.3.1**) implementation of specific projects in the OBMPU planning area could encounter historical resources of value to California Native American Tribes and cause a significant impact on them. All future OBMPU projects that may impact historical resources of value to California Native American Tribes in the planning area shall be subject to focused studies that cover the entire area of potential effects for each project, including any significant indirect effects.

Due to the Project's proposed soil-disturbing activities that could extend below the topsoil surface level, it is possible that the development of the Project could disturb native soils that may inadvertently uncover historic archaeological resources, including those of tribal heritage. Thus, the OBMPU would result in a significant impact on Tribal Cultural Resources where the input of the Tribes intended to protect such resources is not implemented.

All future OBMPU projects that may impact historical resources of value to California Native American Tribes in the planning area shall be subject to focused studies that cover the entire area of potential effects for each project, including any significant indirect effects.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

None of the mitigation measures identified in the 2000 OBMP PEIR are applicable to reducing impacts under this Subchapter, and furthermore, none of these measures are being carried forward as part of the OBMPU, as the means by which cultural and tribal cultural resources are mitigated has become more sophisticated and streamlined in the time that has elapsed since the 2000 OBMP PEIR was adopted. Thus, to minimize future impacts on tribal cultural resources the following mitigation measures will be implemented.

- TCR-1** *Tribal Cultural Resources Mitigation Level 1. Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site, water treatment facility, or wastewater treatment plant site), the agency implementing the OBMPU project will notify the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation) under AB 52 but will point out that the project falls under the OBMPU evaluation and that the site is fully developed. No further cultural resources or Tribal Cultural Resources investigation will be conducted unless a Tribe identifies specific Tribal Cultural Resources resources/values at such site(s).*
- TCR-2** *Tribal Cultural Resources Mitigation Level 2. Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed at an undisturbed site, the agency implementing the OBMPU project will initiate AB 52 consultation and a records search at the appropriate California Historical Resources Information System (CHRIS) center with at least a 0.5-mile search radius. The Native American Heritage Commission (NAHC) shall also be contacted to identify tribal representatives to contact as part of a Phase 1 cultural resources investigation. Finally, a site-specific survey will be conducted by a qualified professional archaeologist. During the survey, the archaeologist shall engage the designated tribal representative(s) based on responses from the NAHC consultation among the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation).*
- TCR-3** *Tribal Cultural Resources Mitigation Level 3. If the AB 52 consultation results in a request to consult from one or more of the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation), and the consultation results in a request for monitoring from one or more of the Tribes, the agency implementing the OBMPU project, in partnership with qualified historical or archeological professional and/or in partnership with the State Historic Preservation Office Tribal Liaison (reachable by email at tribalaffairs@parks.ca.gov), shall work with the Tribes to determine which entity is more culturally affiliated with the specific OBMPU site, and thus which entity will monitor the site, as only a single Tribe's monitor(s) shall be funded in the monitoring effort. Each of the Tribes shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to enable Tribal input in regards to significance and treatment. Monitoring activities and follow-on management of any discovered tribal cultural resources shall conducted be in accordance with the Cultural Resources Monitoring and Treatment Plan agreed upon for the specific project and specific project site. The Treatment Plan ultimately agreed upon shall be enforced as mitigation applicable to the specific project for which it is created. The Treatment Plan shall include enforceable mitigation measures that shall include components, such as: archaeological monitoring, actions that shall be taken should tribal cultural resources be discovered, treatment of*

resources should they be discovered, preservation actions for discovered resources, procedures for funerary objects and human remains, etc.

To minimize future impacts on historical resources of value to California Native American Tribes the following mitigation measures will be implemented. These measures have been developed to implement as a hierarchy, with Mitigation Measure **TCR-1** being the first level of mitigation implementation, Mitigation Measure **TCR-2** the second level requiring initiation of AB 52 for specific types of follow on CEQA documentation for projects proposed within undisturbed sites, and Mitigation Measure **TCR-3** the third level to be implemented in conjunction with the “Cultural Resources Monitoring and Treatment Plans” (Plan) provided in Appendix 8, Volume 2. Two monitoring and treatment plans are provided in Appendix 8, Volume 2. These are generic plans based on information submitted by two of the Tribes: the Yuhaaviatam of San Manuel Nation and the Gabrieleño Band of Mission Indians – Kizh Nation. They submitted a separate monitoring and treatment plan for circumstances when the monitoring responsibilities are assigned to this a specific Tribe. Ultimately, flexibility in the Treatment Plan shall be enabled through the implementation of Mitigation Measure **TCR-3**. Implementation of Mitigation Measures **TCR-1, TCR-2, and TCR-3**, would ensure that implementation of the OBMPU would not result in a significant impact on historical resources of value to California Native American Tribes.

Level of Significance After Mitigation: Less Than Significant

4.8.5.2 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe)

Please refer to the discussion under issue (a), above, which details the tribal consultation undertaken to comply with AB 52 for the OBMPU.

According to the findings in the **Subchapter 4.4, Cultural Resources**, which contains the detailed findings of and serves as the cultural resources study for the OBMPU, the proposed OBMPU has a modest potential to impact (alter or destroy) a tribal cultural resource. Based on the research results summarized above and direct experience with the Gabrieleño Band of Mission Indians – Kizh Nation, many of the OBMPU infrastructure projects have a potential to expose subsurface tribal cultural resources. In light of the evidence presented by the Tribes in support of this and other projects in the Chino Basin, IEUA finds that there is a potential for significant tribal cultural resources to be unearthed by construction.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

Mitigation Measures **TCR-1, TCR-2, and TCR-3** are required to minimize impacts to tribal cultural resource values that have been determined by the Lead Agency to be significant.

The mitigation identified below will be implemented by future OBMPU specific projects. These measures are intended to address concerns expressed by the Native American Tribes that responded to IEUA's AB 52 consultation process.

As stated above under issue (a), to minimize future impacts on tribal cultural resources determined to be significant by the IEUA in light of the data and tribal history presented in confidence to IEUA by the Tribes, Mitigation Measures **TCR-1, TCR-2, and TCR-3** are necessary to ensure that no significant impacts to such resources will be impacted as a result of implementation of the OBMPU. These measures have been developed to implement as a hierarchy, with Mitigation Measure **TCR-1** being the first level of mitigation implementation, Mitigation Measure **TCR-2** the second level requiring initiation of AB 52 for specific types of follow on CEQA documentation for projects proposed within undisturbed sites, and Mitigation Measure **TCR-3** the third level to be implemented in conjunction with the "Cultural Resources Monitoring and Treatment Plans" (Plan) provided in Appendix 8, Volume 2. Two monitoring and treatment plans are provided in Appendix 8, Volume 2. These are plans based on information submitted by two of the Tribes: the Yuhaaviatam of San Manuel Nation and the Gabrieleño Band of Mission Indians – Kizh Nation. They submitted a separate monitoring and treatment plan for circumstances when the monitoring responsibilities are assigned to this a specific Tribe. Ultimately, flexibility in the Treatment Plan shall be enabled through the implementation of Mitigation Measure **TCR-3**. Implementation of Mitigation Measures **TCR-1, TCR-2, and TCR-3**, would ensure that implementation of the OBMPU would not result in a significant impact on tribal cultural resources.

None of the mitigation measures identified in the 2000 OBMP PEIR are applicable to reducing impacts under this Subchapter, and furthermore, none of these measures are being carried forward as part of the OBMPU, as the means by which cultural and tribal cultural resources are mitigated has become more sophisticated and streamlined in the time that has elapsed since the 2000 OBMP PEIR was adopted. Thus, to minimize future impacts on tribal cultural resources the following mitigation measures will be implemented.

TCR-1 ***Tribal Cultural Resources Mitigation Level 1. Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site, water treatment facility, or wastewater treatment plant site), the agency implementing the OBMPU project will notify the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation) under AB 52 but will point out that the project falls under the OBMPU evaluation and that the site is fully developed. No further cultural resources or Tribal Cultural Resources investigation will be conducted unless a Tribe identifies specific Tribal Cultural Resources resources/values at such site(s).***

TCR-2 ***Tribal Cultural Resources Mitigation Level 2. Where a future discretionary project requiring a Negative Declaration or follow-on EIR is proposed at an undisturbed site, the agency implementing the OBMPU project will initiate AB 52 consultation and a records search at the appropriate California Historical Resources Information System (CHRIS) center with at least a 0.5-mile search radius. The Native American Heritage Commission (NAHC) shall also be contacted to identify tribal representatives to contact as part of a Phase 1 cultural resources investigation. Finally, a site-specific survey will be conducted by a qualified professional archaeologist. During the survey, the archaeologist shall engage the designated tribal representative(s) based on responses from the NAHC consultation among the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation).***

TCR-3 ***Tribal Cultural Resources Mitigation Level 3. If the AB 52 consultation results in a request to consult from one or more of the three Tribes (Gabrieleño Band of Mission Indians – Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation), and the consultation results in a request for monitoring from one or more of the Tribes, the agency implementing the OBMPU project, in partnership with qualified historical or archeological professional and/or in partnership with the State Historic Preservation Office Tribal Liaison (reachable by email at tribalaffairs@parks.ca.gov), shall work with the Tribes to determine which entity is more culturally affiliated with the specific OBMPU site, and thus which entity will monitor the site, as only a single Tribe's monitor(s) shall be funded in the monitoring effort. Each of the Tribes shall be informed in the case of inadvertent discovery, and shall be contacted, and provided information regarding the nature of the find, so as to enable Tribal input in regards to significance and treatment. Monitoring activities and follow-on management of any discovered tribal cultural resources shall conducted be in accordance with the Cultural Resources Monitoring and Treatment Plan agreed upon for the specific project and specific project site. The Treatment Plan ultimately agreed upon shall be enforced as mitigation applicable to the specific project for which it is created. The Treatment Plan shall include enforceable mitigation measures that shall include components, such as: archaeological monitoring, actions that shall be taken should tribal cultural resources be discovered, treatment of resources should they be discovered, preservation actions for discovered resources, procedures for funerary objects and human remains, etc.***

Implementation of these measures will reduce potential tribal cultural resource impacts to a less than significant impact level.

Level of Significance After Mitigation: Less Than Significant

4.8.6 Cumulative Impacts

4.8.6.1 a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

The OBMPU's potential to result in cumulatively considerable impacts to historical resources of value to California Native American Tribes were analyzed in conjunction with the cumulative projects identified in **Chapter 3, Project Description**, in addition to the context of the bulk of projects that may be implemented in the influence areas of the regional Tribes. There is potential for historical resources of value to California Native American Tribes to be uncovered or otherwise impacted during construction activities from the OBMPU, and cumulative development in the region could exacerbate the potential for such resources to be uncovered and destroyed.

Level of Significance Before Mitigation: Potentially Significant

Uncovering such resources is not considered to be a significant impact when mitigation is in place to ensure documentation, management and treatment of such resources is coordinated with the area Tribe(s) because the resources themselves are documented and are not destroyed under this circumstance. Implementation of Mitigation Measures **TCR-1** through **TCR-3** would, as discussed above, minimize OBMPU contributions to cumulative historical resources of value to

California Native American Tribes impacts to a level of less than significant. Thus, because impacts to individual historical resources of value to California Native American Tribes at specific sites would be mitigated and are site specific, the proposed project's contribution to cumulative impacts would not be cumulatively considerable. Any tribal cultural resources discovered on a project site that would be adversely impacted by proposed future projects would be mitigated by implementing one or more of the three mitigation measures listed above. With implementation of the appropriate measures, OBMPU projects are not forecast to cause or contribute to cumulatively considerable impacts to historical resources of value to California Native American Tribes.

Level of Significance After Mitigation: Less Than Significant

4.8.6.2 b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Please refer to the discussion under **Subsection 4.8.7.2(a)**, above, which discusses the potential cumulative impacts to tribal cultural resources determined to be significant by the IEUA in light of the data and tribal history presented in confidence to IEUA by the Tribes from implementation of the OBMPU. The OBMPU's potential to result in cumulatively considerable impacts to tribal cultural resources determined to be significant by the IEUA in light of the data and tribal history presented in confidence to IEUA by the Tribes were analyzed in conjunction with the cumulative projects identified in **Chapter 3, Project Description**, in addition to the context of the bulk of projects that may be implemented in the influence areas of the regional Tribes. There is potential for significant tribal cultural to be uncovered or otherwise impacted during construction activities from the OBMPU, and cumulative development in the region could exacerbate the potential for such resources to be uncovered and destroyed.

Level of Significance Before Mitigation: Potentially Significant

However, uncovering such resources is not considered to be a significant impact when mitigation is in place to ensure documentation, management and treatment of such resources is coordinated with the area Tribe(s) because the resources themselves are documented and are not destroyed under this circumstance. Implementation of Mitigation Measures **TCR-1** through **TCR-3** would, as discussed above, minimize OBMPU contributions to cumulative tribal cultural resources impacts to a level of less than significant. Thus, because impacts to significant tribal cultural resources at specific sites would be mitigated and are site specific, the proposed project's contribution to cumulative impacts would not be cumulatively considerable. Any tribal cultural resources discovered on a project site that would be adversely impacted by proposed future projects would be mitigated by implementing one or more of the three mitigation measures listed above. Thus, Implementation of the proposed project is not forecast to cause any direct, significant adverse impact to any site specific significant tribal cultural resources following implementation of identified mitigation measures, and as a result the proposed project has no potential to make a cumulatively

considerable contribution to tribal cultural resource impacts in the project area, i.e., the Chino Basin.

Level of Significance After Mitigation: Less Than Significant

4.8.7 Significant and Unavoidable Impacts

As discussed throughout this Subchapter, no significant and unavoidable impacts to tribal cultural resources will occur as a result of implementing the proposed project through the implementation of Mitigation Measures **TCR-1, TCR-2, and TCR-3**. These measures are necessary to ensure that no significant impacts to such resources will be impacted as a result of implementation of the OBMPU, and the project's potential impacts on tribal cultural resources will be less than significant.

4.9 UTILITIES AND SERVICE SYSTEMS

4.9.1 Introduction

This Subchapter evaluates the environmental impacts to the issue area of utilities and service systems, specifically pertaining to water supply, and extension of water and wastewater infrastructure from implementation of the proposed Project. The issues of solid waste, wastewater capacity, and extension of energy, natural gas, stormwater, and telecommunications infrastructure were addressed in the Initial Study as part of the NOP, provided as Subchapters 8.2 and 8.1, respectively, to this RDSEIR. These topics will not be discussed further as part of this RDSEIR. Utilities within the Chino Basin are provided by a mix of public agencies, such as IEUA—which is the lead agency for this Project; the stakeholders within the Chino Basin; and also, private companies, such as Southern California Edison (SCE).

The analysis contained in the 2000 OBMP PEIR, while still applicable in ways described herein, must be updated to reflect the current conditions of the Basin. Impacts under the 2000 OBMP PEIR were determined to be less than significant with mitigation incorporated. Not only have regulations changed, but the utility demands of and availability of utilities to residents and businesses within the Chino Basin have evolved as the population of the Chino Basin has increased since the 2000 OBMP PEIR was certified. As such, the following Subchapter analyzes the impacts from implementing the OBMPU as proposed in **Chapter 3, Project Description**, in the context of the existing conditions within the Basin and measures impacts against current regulations.

The following references were used in preparing this Subchapter of the RDSEIR.

- California Gas & Electric Utilities, 2022. *California Gas Report-Southern California Gas Company*. https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf (accessed 08/09/23)
- California Energy Commission. 2018. *Transportation Energy Demand Forecast 2018-2030*.
- California Energy Commission, 2022. *Building Energy Efficiency Standards Frequently Asked Questions*: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency> (accessed 08/09/23)
- City of Chino, 2023. Utilities. Available at: <https://cityofchino.org/379/Utilities> (accessed 08/09/23)
- City of Chino Hills, 2017. City of Chino Hills Water and Recycled Water Rate Study <https://www.chinohills.org/DocumentCenter/View/16511/2018-Water-Rate-Study?bidId=>. (accessed 08/09/23)
- City of Chino Hills, 2021. 2020 Urban Water Management Program
- City of Ontario, 2021. 2020 Urban Water Management Program
- City of Norco, 2021. 2020 Urban Water Management Program
- City of Pomona, 2021. 2020 Urban Water Management Program
- City of Upland, 2021. 2020 Urban Water Management Program
- Cucamonga Valley Water District, 2021. 2020 Urban Water Management Program
- Fontana Water Company, 2021. 2020 Urban Water Management Program
- IEUA, 2017. FMP PEIR
- Jurupa Community Services District, *2020 Urban Water Management Program, 2021*
- Monte Vista Water District, *2020 Urban Water Management Program, 2021*
- SoCalGas, 2023. Company Profile. <https://www.socalgas.com/about-us/company-profile> (accessed 08/09/23)
- Southern California Edison, 2023. *Annual Electric Reliability Report, 2022*, https://www.sce.com/sites/default/files/custom-files/PDF_Files/2022_Annual_Electric_Reliability_Report.pdf (accessed 08/09/23)

- Southern California Edison, 2023. Meeting Demand. <https://www.sce.com/about-us/reliability/meeting-demand> (accessed 08/09/23)
- Tom Dodson & Associates, July 2000. *Final Program Environmental Impact Report for the Optimum Basin Management Program* (SCH#200041047)(2000 OBMP PEIR)
- Water Systems Consulting (WSC), Inc. [West Valley Water District et. al.], *2020 San Bernardino Valley Regional Urban Water Management Program*, 2021
- Three Valleys Municipal Water District, 2021. *Urban Water Management Program*
- Western Municipal Water District, 2021. *Urban Water Management Program*

No comments specific to this topic were received in response to the Notice of Preparation. No comments were received at the scoping meeting held for the proposed project.

4.9.2 **Utilities & Service Systems (Water & Wastewater): Environmental Setting**

4.9.2.1 **Water**

Please also refer to the environmental setting discussion under **Subchapter 4.7, Hydrology and Water Quality**.

As stated in **Chapter 3, Project Description**, growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands of the Chino Basin Parties are expected to increase. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040, which is the horizon year for which data is readily available. Total water demand is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses.

Table 4.9-1
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040¹

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	148,467	139,236	144,314	151,525	164,317	173,522
Non-Chino Basin Groundwater	51,398	55,722	61,741	63,299	64,991	66,783
Local Surface Water	8,108	19,653	19,653	19,653	19,653	19,653
Imported Water from Metropolitan	53,784	90,444	97,657	103,684	105,152	111,036
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000
Recycled Water for Direct Reuse	17,554	23,678	24,323	26,910	30,451	33,953
Total	288,171	338,218	357,782	376,046	395,564	415,947

¹ Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

Table 4.9-1
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040²
(CONT'D)

Percentage						
Chino Basin Groundwater	52%	41%	40%	40%	42%	42%
Non-Chino Basin Groundwater	18%	16%	17%	17%	16%	16%
Local Surface Water	3%	6%	5%	5%	5%	5%
Imported Water from Metropolitan	19%	27%	27%	28%	27%	27%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	100%	100%	100%	100%	100%	100%
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin.

4.9.2.1.1 Water Agencies

The following data has been obtained from each agency's 2020 Urban Water Management Plan, except where otherwise noted.

Inland Empire Utilities Agency

IEUA is a regional wholesale water supplier, providing imported water from Metropolitan Water District of Southern California (MWD) and a regional wastewater treatment agency. As described in the Project Description, IEUA provides the wholesale imported water from MWD to seven retail agencies: the cities of Chino, Chino Hills, Ontario, and Upland; Cucamonga Valley Water District (CVWD), located in the City of Rancho Cucamonga; Fontana Water Company (FWC), located in the City of Fontana; and the Monte Vista Water District (MVWD), located in the City of Montclair. IEUA served approximately 906,046 people in 2020, over 242 square miles in western San Bernardino County.

As stated in the Project Description, approximately 25 percent of the water used in the region is imported from MWD through the State Water Project (SWP). Due to water quality limitations (salinity, total dissolved solids [TDS]) and operation of the regional recycled water program, IEUA only takes water from the SWP.

A diverse portfolio of water supply sources has been developed within IEUA's service area. The region relies on groundwater from the Chino Basin and other basins (Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins), local surface water from creeks originating in the San Gabriel Mountains, recycled water produced locally, and imported water from the SWP via MWD. **Table 4.9-2** (extracted from the Project Description) below provides the current and projected recycled water supplies in AFY through 2040, which is the horizon year for which data is readily available.

² Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

Table 4.9-2
CURRENT AND PROJECTED RECYCLED WATER SUPPLIES (AFY)

Recycled Water Supply	2020	2025	2030	2035	2040
	55,074 ¹	60,150	63,530	64,500	67,140
NOTES: For 2020, this amount is the actual supply. For 2025 to 2040, supply projections are from IEUA 2021 Wastewater and Recycled Water Demand Forecasts based on land use.					

Current and projected recycled water demands through 2040 are provided in **Table 4.9-3** (extracted from the Project Description) below. Recycled water is currently being utilized for meeting the Santa Ana River Base Flow Obligation, direct use, and groundwater recharge.

Table 4.9-3
CURRENT AND PROJECTED RECYCLED WATER DEMAND (AFY)

	FY 2020/2021 Actual ³	2025	2030	2035	2040
Direct Use Demands¹	19,257	20,870	23,275	24,704	27,855
Groundwater Recharge²	16,253	16,420	16,420	16,420	16,420
Total	35,510	37,290	39,695	41,124	44,275
The Santa Ana River Base Flow Obligation shared between IEUA and Western Municipal Water District is approximately 34,000 AFY. IEUA currently meets this obligation with recycled water; (2) From IEUA 2021 Wastewater and Recycled Water Demand Forecasts. 2020/2021 Actual from IEUA staff.					

As a wholesaler, IEUA supplies untreated imported water that is purchased from MWD and supplied to its retail agencies. In fiscal year 2019-2020, 66,438 AF of untreated imported water was supplied to its retail agencies (IEUA, 2021).

Cucamonga Valley Water District

CVWD provides treated potable water and wastewater services to the City of Rancho Cucamonga, portions of the cities of Upland, Ontario and Fontana, and some unincorporated areas of San Bernardino County. It serves an area with a current population of approximately 198,979 with approximately 48,293 water connections to meet an average demand of 48,276 AFY (CVWD, 2021).

Fontana Water Company

FWC serves most of the City of Fontana, portions of the cities of Rialto and Rancho Cucamonga, and unincorporated areas of San Bernardino County. FWC serves a population of more than 237,000 within its 52-square miles service area. FWC has the following existing water supplies:

- Surface water diverted from Lytle Creek, treated at the Summit Plant
- Untreated SWP surface water purchased from IEUA and San Bernardino Valley Municipal Water District (SBVMWD), treated at the Summit Plant
- Recycled water purchased from IEUA
- Groundwater pumped from FWC-owned and operated wells from the underlying Chino Basin, Rialto-Colton/No Man's Land Basins, and Lytle Basin

In 2020, FWC had 48,202 municipal connections, with a volume of water supplied at 39,782 AF (FWC, 2021).

Monte Vista Water District

MVWD provides retail water service to an area with a 2020 population of 57,787. MVWD also has a wholesale service, of which the service population was 82,409 in 2020. The MVWD's service area covers approximately 9.56 square miles encompassing the City of Montclair and a portion of the City of Chino, as well as unincorporated areas of San Bernardino County. The MVWD receives wholesale water supplies from IEUA through Water Facilities Authority (WFA). It serves the communities of Montclair, Chino Hills, portions of Chino, as well as the unincorporated areas lying between the cities of Pomona, Chino Hills, Chino and Ontario. In 2020, MVWD had 11,856 municipal connections, with a volume of water supplied at 10,366 AF (MVWD, 2021).

City of Chino Hills Water Department

The City of Chino Hills Water Department has multiple sources of water supply: groundwater, MVWD, WFA, Chino Desalter Authority (CDA), and IEUA. These five sources provide the City of Chino Hills with over 41 million gallons per day (MGD) capacity. The city's service area is largely coextensive with its boundaries, and provides water service to an area with a current population of 82,409 persons. In 2020, Chino Hills had 21,743 municipal connections, with a volume of water supplied at 13,949 AF (City of Chino Hills, 2021).

City of Chino Utilities Department

The City of Chino is a retail water supplier that serves customers in the City of Chino and a small portion of the City of Ontario, as well as unincorporated areas of San Bernardino County, and portions of a California State correctional facility located within the city's municipal boundaries. The city's service area covers approximately 28.3 square miles, and provides water service to an area with a current population of 80,808 persons. The city is a sub-agency of IEUA, which is a wholesale water agency, and is also a member of the CDA and the WFA, which are also wholesale water agencies. The demand within the city's service area is met primarily from groundwater produced from city-owned wells in the Chino Basin and from CDA. The city also purchases imported surface water from MWD through IEUA which is treated by WFA. Recycled water is also provided by IEUA. In 2020, Chino had 21,126 municipal connections, with a volume of water supplied at 20,101 AF (City of Chino, 2021).

City of Ontario Municipal Utilities Company

The City of Ontario's service area covers approximately 49 square miles, encompassing most of the city, and provides water service to an area with a current population of 178,409. The city is a member agency of various wholesale agencies including the CDA, IEUA, and WFA. Commercial and industrial use accounts for approximately 7,508 acres. Additionally, agricultural use comprises of 6,740 acres. The city's water supply sources include: groundwater pumped from the Chino Basin; treated groundwater from the Chino Basin produced by the Chino Basin Desalter Authority; treated, imported water purchased from MWD through WFA; groundwater and/or surface water purchased from San Antonio Water Company; and recycled water purchased from IEUA. The city's main source of water supply is groundwater pumped from the Chino Basin. In 2020, Ontario had 36,514 municipal connections, with a volume of water supplied at 39,921 AF (City of Ontario, 2021).

City of Upland Water Department

The City of Upland serves potable water to a population of 78,383 people through 19,487 connections. The city's current water supply portfolio consists of several sources: imported water from MWD purchased through IEUA for treatment at WFA (the city is a member agency); groundwater pumped from city-owned wells and West End Consolidated Water Company (WECWC) (the city is shareholder); groundwater purchased from San Antonio Water Company

(SAWCo) (the city is shareholder); surface water purchased from SAWCo (City is shareholder) and treated by the city; and recycled water purchased from IEUA. In 2020, Upland supplied customers a volume of water at 19,134 AF (City of Upland, 2021).

City of Norco

The City of Norco is the sole water purveyor for the residents and businesses of Norco. The City's population was estimated at approximately 27,564 in 2020. The total supplies for the City between averaged 14,400 afy in 2020, and are anticipated to average 14,400 afy from 2020 to 2045. The City is active in regional strategies related to water supply and groundwater management with WMWD, the CDA, City of Corona, JCSD, City of Riverside, and the Chino Basin Watermaster. The City owns 1,000 af per year capacity of reverse-osmosis treated water from the CDA. Water demands were approximately 7,138.3 afy in 2021 with a projected demand of 8,246 af by 2040. The recycled water demand is anticipated to be 0 afy from 2020 to 2040 (City of Norco, 2020).

City of Pomona

The City of Pomona provides water service to an area with a current population of 153,988, and the city's water service area encompasses an area of approximately 22.9 square miles. The city's total water demands (including potable and recycled water) over the past 10 years have ranged from 19,782 AFY to 24,801 AFY, with an average of 21,957 AFY. The 2020 demand was 21,174 AF. The City's water supply sources include: groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from MWD through Three Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts. In 2020, Pomona had 30,041 municipal connections, with a volume of water supplied at 21,174 AF (City of Pomona, 2021).

Jurupa Community Services District

The JCSD's service area covers 40.8 square miles of northwest Riverside County and includes all of the City of Eastvale, approximately 65 percent of the City of Jurupa Valley, and small portions of the City of Norco and unincorporated Riverside County. The service area population in 2020 population was 130,546 persons. In 2020, JCSD had 33,146 municipal connections, with a volume of water supplied at 28,505 AF. JCSD primarily relies on groundwater pumped from the Chino Basin; however, they also obtain water from the Chino Desalter Authority and may obtain water from WMWD in the future (Jurupa Community Services District, 2021).

West Valley Water District

WVWD served a population of 89,101 persons in 2020. WVWD utilizes water from five groundwater basins and treats surface water from Lytle Creek and SWP water at its 14.4-mgd Oliver P. Roemer Water Filtration Facility to serve over 20,000 water service connections. Water demands were approximately 20,098 afy in 2020 with a projected demand of 29,764 sf by 2045. WVWD projects a reasonably available volume of all water sources of 34,299 by 2045 (Water Systems Consulting, Inc. [West Valley Water District et. al.], 2021).

Three Valleys Municipal Water District

Three Valleys Municipal Water District (TVMWD) is a wholesale water supplier providing supplementary supply to its retail member agencies. Except for a small percentage of groundwater supply, TVMWD's primary resource is import water from the MWD. TVMWD is one of 26 member agencies of the MWD. In turn, TVMWD has retail member agencies within its service area to which the District supplies imported water to these retail agencies' individual distribution systems. It is the retail agencies that deliver water directly to the consumer and end users throughout out the entire service area of TVMWD. The population served by the District in

2020 was 513,623 persons, which is projected to grow to 561,782 persons by 2045. Water demands were approximately 76,723 af in 2020 (1,200 af were generated by groundwater) with a projected demand of 57,265 af in 2045. Water supply in 2020 was 76,723 af, while the projected water supply in 2045 is 57,265 af (Three Valleys Municipal Water District, 2021).

Western Municipal Water District

Western Municipal Water District's (WMWD's) water supplies consist primarily of purchased or imported water. The majority of this water is purchased from MWD. WMWD's retail demand for water in 2020 was 31,928 af while the wholesale demand was 74,925 af in 2020. By 2045, the total retail demand is projected to be 85,004 af, and the total wholesale demand is projected to be 121,443 af. Wholesale water supply in 2020 was 74,925 af, while the projected wholesale water supply in 2045 is 121,443 af. Retail water supply in 2020 was 26,741 af, while the projected retail water supply in 2045 is 52,900 af (Western Municipal Water District, 2021).

Water Facilities Authority

The Water Facilities Authority (WFA) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, MVWD, Ontario, and Upland. Its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The WFA owns and operates a surface water treatment plant called Agua de Lejos Treatment Plant, which began operations in 1988 and is located in the City of Upland. This treatment plant treats and disinfects imported water supplies, primarily State project water, purchased to supplement local groundwater supplies. The treatment plant, located on 16 acres in northern Upland, has the capacity to treat and disinfect 81 MGD. However, recent historical flows through the treatment plant are normally 40 to 50 MGD during the peak summer months and can be as low as 9 to 12 MGD. Agua de Lejos Treatment Plant receives imported surface water supplies from the SWP from MWD through IEUA. Through its members, the WFA indirectly serves more than 450,000 people in the west-end of San Bernardino County.³

There are other private and mutual water companies in the Chino Basin, such as San Antonio Water Company, that also supply drinking water to residents within the Chino Basin.

4.9.2.2 Wastewater

4.9.2.2.1 Wastewater Agencies

IEUA

As a regional wastewater treatment agency, IEUA provides sewage utility services to seven sewage collection agencies: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and the Cucamonga Valley Water District. These sewage collection agencies are responsible for wastewater collection within their individual service areas. A system of regional trunk and interceptor sewers that convey sewage to regional wastewater treatment plants is owned and operated by IEUA. IEUA's wastewater collection system is divided into two major service areas: the Northern Service Area and the Southern Service Area.

IEUA receives approximately 50 MGD of wastewater annually at four wastewater treatment and water recycling plants: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5) and Carbon Canyon Water Recycling Facility (CCWRF). Regional Water Recycling Plant No. 2 (RP-2) no longer operates its

³ Water Facilities Authority: <http://www.wfajpa.org/> (accessed 04/03/23)

liquid treatment sections as of 2002, and only treats solid waste. This treatment activity will end when the new, expanded RP-5 facilities becomes operational. Recycled water from the plants is treated to Title 22 California Code of Regulations, overseen by the State Water Resources Control Board's Division of Drinking Water (DDW), and distributed throughout the service area.

In addition to IEUA, there are several other wastewater treatment providers in Chino Basin. The City of Riverside, Inland Empire Brine Line owned by the Orange County Sanitation District, and the Western Riverside County Regional Wastewater Authority (WRCRWA) each treat a portion of the wastewater generated within the JCSD. Finally, the Sanitation Districts of Los Angeles County operates a treatment plant that collects wastewater from the City of Pomona. The respective operational treatment plants are described below.

RP-1 is located at 2662 East Walnut Street in the City of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 MGD. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland, and treats solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 28 MGD. RP-1 includes both liquid and solid treatment processes.

RP-2 is located at 16400 El Prado Road in Chino and has been in operation since 1960. The plant operated both liquids and solids treatment sections until 2002, when RP-5 was constructed to handle the liquids treatment section portion of RP-2. Accordingly, solids are now removed from CCWRF and RP-5 and treated at RP-2. The solids treatment section begins with thickening the solids removed from the RP-5 and CCWRF primary and secondary clarification processes. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility (IERCF) in the City of Rancho Cucamonga for further treatment to produce Class A compost. Note that this treatment activity will end when the new, expanded RP-5 facilities becomes operational. Because RP-2 is below the 100-year flood hazard area behind Prado Dam, almost all operational will be terminated when RP-5 becomes fully operational.

RP-4 is located at 12811 6th Street in the City of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic wastewater treatment capacity to 14 MGD. The plant serves areas of Fontana, Rancho Cucamonga, and unincorporated San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD.

RP-5 is located at 6063 Kimball Avenue, Building C in the City of Chino and has been in operation since 2004. The design hydraulic domestic wastewater treatment capacity is 16.3 MGD, which includes 1.3 MGD of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 9 MGD.

CCWRF is located at 14950 Telephone Avenue in the City of Chino and has been in operation since 1992. The design hydraulic domestic wastewater treatment capacity is 11.4 MGD. The plant serves areas of Chino, Chino Hills, Montclair, and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD.

Chino Desalter Authority (CDA)

Chino I Desalter plant is located at 6905 Kimball Avenue in the City of Chino and commenced operation in 2001. The plant was expanded in 2005 from an 8.4 MGD facility to a 14 MGD facility.

Groundwater is pumped from supply wells throughout the Chino Basin area to the Chino I Desalter. The treatment processes include reverse osmosis and ion-exchange for removal of nitrate and total dissolved solids. Approximately 2 MGD of brine, a byproduct of the reverse osmosis and ion exchange processes is transported by the Santa Ana River Inceptor (SARI line) to Orange County and is subsequently discharged to the ocean. The high-quality water is then pumped into the municipal water supply systems for the cities of Chino and Chino Hills, and into the JCSD water system.

Chino II Desalter plant is located at 11202 Harrell Street in Mira Loma and was initiated by the CDA to provide water deliveries to the cities of Norco and Ontario, JCSD, and Santa Ana River Water Company. The treatment processes include reverse osmosis and ion-exchange. The Chino II Desalter became operational in 2006 and was expanded in 2010. It produced an average of 10.6 MGD of drinking water in 2012 and a little more than 1 MGD of brine that is transported by the SARI line to Orange County and subsequently discharged to the ocean.

City of Riverside

Riverside Water Quality Control Plant (RWQCP) is located at 5950 Acorn Street Riverside, CA 92504. The RWQCP is being expanded; however, it currently consists of two separate treatment plants and one common tertiary filtration plant. These provide preliminary, primary, secondary, and tertiary treatment for a rated capacity of 40 MGD.⁴ The JCSD discharges wastewater to three different treatment plants from three independent sewer systems.⁵

Western Riverside County Regional Wastewater Authority

WRCRWA has the capacity to treat 14 MGD of wastewater.⁶ The Eastvale area (within the JCSD) discharges to the River Road Lift Station, which pumps the wastewater to another regional treatment plant, operated by a joint powers authority known as the WRCRWA. The JCSD proactively operates and maintains its sewer system to convey the wastewater to the treatment plants in a reliable and cost-effective manner in accordance with the recently adopted Sewer Management Plan.

Sanitation Districts of Los Angeles County

Pomona Water Reclamation Plant is located at 295 Humane Way in the City of Pomona and is managed by the Sanitation Districts of Los Angeles County. The plant occupies 14 acres northeast of the intersection of State Route (SR)-60 and SR-57. The Pomona Water Reclamation Plant (WRP) provides primary, secondary, and tertiary treatment for 15 MGD of wastewater. The plant serves a population of approximately 130,000 people. Approximately 8 MGD of the recycled water is used at over 190 different sites. Reuse applications include landscape irrigation of parks, schools, golf courses, greenbelts, etc.; irrigation and dust control at the Spadra Landfill; and industrial use by local manufacturers. The remainder of the recycled water is discharged into the San Jose Creek, where it is allowed to percolate into the groundwater in the unlined portions of the San Gabriel River before flowing into the ocean.

⁴ City of Riverside, 2023. Regional Water Quality Control Plant. <https://riversideca.gov/publicworks/sewer/regional-water-quality-control-plant#:~:text=The%20Riverside%20Water%20Quality%20Control,Acorn%20Street%20Riverside%2C%20CA%2092504> (accessed 06/01/23)

⁵ JCSD, 2023. Sewer/Wastewater. <https://www.jcsd.us/customers/sewer-wastewater> (accessed 06/01/23)

⁶ WRCRWA, 2023. Treatment Plant Overview. <https://www.wrcrwa.org/152/Treatment-Plant-Overview> (accessed 06/01/23)

4.9.2.2.2 Brine Disposal Agencies

Non-Reclaimable Wastewater System (NRWS) is operated by IEUA. It is infrastructure for disposal of high-salinity wastewater (brine) and other non-reclaimable high-strength wastewater. The NRWS is comprised of three pipelines shown on Figure 3: the NRWS pipeline, the Etiwanda Wastewater Line (EWL), and the Inland Empire Brine Line (IEBL). The NRWS is split into two service areas within IEUA's jurisdiction. The North NRWS is comprised of the NRWS pipeline and EWL, while the South NRWS is comprised of the IEBL. The NRWS pipeline and the EWL ultimately convey flow to the Sanitation Districts of Los Angeles County (LACSD) through the Joint Outfall System (JOS). The IEBL directly conveys flow to the Orange County Sanitation District (OCSd) by gravity.

4.9.2.2 Other Utilities: Electricity and Natural Gas

Please refer to the discussion under **Subchapter 4.5, Energy**, specifically **Section 4.5.2, Existing Conditions**.

4.9.3 Utilities & Service Systems (Water & Wastewater): Regulatory Setting

For a comprehensive list of international, federal, state, and local Energy Standards, please refer to the discussion under **Subchapter 4.5, Energy**, specifically **Section 4.5.3, Regulatory Setting**.

4.9.3.1 Federal

Clean Water Act

The Federal Water Pollution Control Act or Clean Water Act (CWA) serves to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA was created in 1972, and then amended in 1977, and again in 1987 when the NPDES program was created. NPDES requires a permit for discharge of pollutants from industrial sources and publicly owned treatment works into navigable waters. The discharge must meet applicable requirements, which are outlined in the CWA and which reflect the need to meet federal effluent limitations and state water quality standards.

Section 303 (d) of the CWA states that each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301 (b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The state shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such water (see Subchapter 4.7, *Hydrology and Water Quality*, of this RDSEIR).

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the federal law that protects drinking water supplies and applies to every public water system in the United States. The law requires many actions to protect drinking water including source water protection, treatment, distribution system integrity, and public information. Source water may include rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA authorizes the U.S. EPA to set national health-based standards for drinking water to protect against both naturally-occurring and human-made contaminants that may be found in drinking water. The National Primary Drinking Water Regulations set enforceable maximum contaminant levels (MCLs) for particular contaminants in drinking water or required

ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved.

National Pollutant Discharge Elimination System (NPDES) Program

As stated above, the NPDES permit program is administered in the State of California by the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) under the delegated authority of the USEPA pursuant to the CWA to control water pollution by regulating point sources that discharge pollutants into Waters of the US. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The Construction General Permit NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit) regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. Note that the CGP was updated and a new version takes effect on September 1, 2023 (Order WQ 2022-0057-DWQ; NPDES NO. CAS000002).⁷ The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

⁷ https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction/docs/2022-0057-dwg-with-attachments/cgp2022_order.pdf (accessed 08/03/23)

Industrial General Permit

The Industrial General Permit (IGP) became effective July 1, 2020 as amended in 2015 and 2018 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 Code of Federal Regulations Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP). MS4 Permits were issued to both San Bernardino County (Order No. R8-2010-0036, NPDES Permit No. CAS618036), and Riverside County (Order No. R8-2010-0033, NPDES Permit No. CAS618033).⁸

4.9.3.2 State

State Water Resources Control Board Division of Drinking Water

The U.S. EPA has granted the State of California the authority to implement SDWA within its jurisdiction. The SWRCB *Division of Drinking Water* regulates public drinking water systems and is responsible for making sure water systems test for contaminants, reviewing plans for water system improvements, conducting on-site inspections and sanitary surveys, providing training and technical assistance, and taking action against water systems not meeting standards.

The SWRCB's *Safe Drinking Water Plan* provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The plan, which is updated every five years, represents the SWRCB's assessment of the overall quality of the State's drinking water, the identification of specific water quality problems, an analysis of the known and potential health risks that may be associated with drinking water contamination in California, and recommendations to improve drinking water quality. The plan also identifies and evaluates existing and proposed statewide water demand management and water supply augmentation programs and projects to address the State's water needs. The plan provides resource management strategies and recommendations to strengthen integrated regional water management. These strategies can reduce water demand, improve operational efficiency, increase water supply, improve water quality, practice resource stewardship, and improve flood management.

⁸ Santa Ana RWQCB, 2023. Stormwater Program.
https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/ (08/04/23)

California Code of Regulations (CCR)

Pursuant to CCR Title 23, Division 3, Article 2 (Waste Classification and Management) and Article 3 (Waste Unit Classification and Siting), Class III (municipal solid waste) landfills are sited in accordance with criteria that are similar to those found in Subtitle D of RCRA. CCR Title 27 includes various regulations pertaining to siting, design, construction, and operation of solid waste landfills.

CCR Title 22, Division 4, Sections 60301 through 60355 (Articles 1 through 9), includes descriptions of overall allowable sources of and uses for recycled water, as well as specific use descriptions depending on treatments. Title 22 also includes specific treatment pathways including disinfection procedures, oxidation, soils and bed filter media, and requirements for impoundments. It covers use area requirements, water testing and analysis, and plant design and operational requirements.

Protection of Underground Infrastructure

The California Government Code Section 4216-4216.9 “Protection of Underground Infrastructure” requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California.

Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Health and Safety Code

California Health and Safety Code Section 116815 requires all pipes carrying recycled water to be colored purple or wrapped in purple tape. This requirement stems from a concern in cross-contamination and potential public health risks similar to those discussed for Title 17, Sections 7583-7586 and 7601-7605 of the California Code of Regulations. It is also discussed in the California Health Laws Related to Recycled Water.

Regional Water Quality Control Board (RWQCB)

The primary responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and nine RWQCBs. The SWRCB sets statewide policy for the implementation of state and federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The program area is within the jurisdiction of the Santa Ana Region.

California Department of Water Resources (DWR)

The California DWR is a department within the California Resources Agency. The DWR is responsible for the State of California's management and regulation of water usage.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

Senate Bill 610 and Senate Bill 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an

evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection.

4.9.3.3 Local

The Chino Basin area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and Riverside County and eleven incorporated cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding utilities.

San Bernardino County Flood Control District (SBCFCD)

Any encroachments on the SBCFCD's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the SBCFCD prior to start of construction.

Riverside County Flood Control and Water Conservation District (RCFCWCD)

Any encroachments on the RCFCWCD's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the RCFCWCD prior to start of construction.

4.9.4 Utilities & Service Systems (Water & Wastewater): Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:⁹

- a) Require or result in the relocation or construction of new or expanded water, wastewater facilities, electric power, or natural gas facilities, the construction or relocation of which could cause significant environmental effects?
- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

4.9.5 Utilities & Service Systems (Water & Wastewater): Project Impacts

4.9.5.1 a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater, electric power, or natural gas facilities, the construction or relocation of which could cause significant environmental effects?

WATER

The OBMPU includes the construction of the following facilities: 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow

⁹ As noted at the beginning of the chapter, the issues of solid waste, wastewater capacities, and extension of stormwater and telecommunications infrastructure were addressed in the Initial Study as part of the NOP and are provided as Subchapter 8.1 to this RDSEIR. Accordingly, the Appendix G Utilities and Service Systems impact thresholds (c), (d), and (e), which address wastewater and solid waste, are not discussed in this chapter. Furthermore, the Appendix G Utilities and Service Systems impact threshold a, as it pertains to extension of stormwater and telecommunications infrastructure, is not discussed in this chapter.

meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells), up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG, minor appurtenances, 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

The development of the above facilities constitutes the construction of new and expansion or modifications to existing water infrastructure facilities. The environmental effects associated with the proposed Project are documented throughout this RDSEIR, including the Initial Study provided as Subchapter 8.2 of this RDSEIR. As such, given that the proposed OBMPU is anticipated to result in a significant and unavoidable impact related to the generation of nitrogen oxides (NO_x) air quality emissions from construction of the OBMPU facilities, the construction of the proposed water facilities associated with the OBMPU is anticipated to cause a significant impact. Furthermore, implementation of the OBMPU is forecast to contribute to significant adverse impacts to biological resources because of the potential that a future OBMPU facility may be constructed within an area containing biological resources that cannot be avoided, even at the design level. Therefore, impacts under this issue are considered significant and unavoidable.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

No 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue.

Mitigation measures designed to reduce NO_x emissions from construction and operation of OBMPU are identified in Subchapter 4.2, Air Quality, of this RDSEIR (MMs **AQ-1** through **AQ-3**). No additional mitigation measures are recommended or required that would reduce significant and unavoidable impacts related to construction or new or expansion or modifications to existing water facilities. However, all mitigation measures identified throughout this RDSEIR and within the Initial Study prepared as part of the NOP would otherwise reduce impacts related to the construction of water facilities under all remaining issues included in the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.)

No feasible mitigation measures have been identified that would reduce impacts related to the generation of NO_x emissions from construction of the proposed water facilities as part of the OBMPU. As such, though MMs **AQ-1** through **AQ-3** would reduce NO_x emissions from construction equipment, in addition to the reduction of exhaust emissions, and would ensure minimization of fugitive dust during construction of OBMPU related facilities, construction-related air quality (NO_x) emissions have a potential to exceed the SCAQMD thresholds as a result of implementation of the proposed OBMPU, and therefore the proposed Program would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing water facilities.

Furthermore, MMs **BIO-1** through **BIO-17**, and 2000 OBMP PEIR Mitigation Measures **4.8-1**, **4.8-2**, **4.8-3**, **4.8-6**, **4.8-7**, **4.8-9**, and **4.8-11** would minimize biological resources impacts to the maximum extent feasible from construction of the water facilities proposed by the Project, but there are certain areas within the overall Project area of potential impact where the biological resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse impact on biological resources, and therefore the proposed Program would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing water facilities.

Level of Significance After Mitigation: Significant and Unavoidable

Cumulative Impact Analysis

As discussed throughout this RDSEIR, the proposed OBMPU would not result in any cumulative impacts from developing the proposed water facilities except those identified under Air Quality.

Level of Significance Before Mitigation: Potentially Significant

Program Air Quality impacts are mitigated to the greatest extent feasible (as identified above, through the implementation of Mitigation Measures **AQ-1** through **AQ-3**), but the OBMPU will still contribute to regional cumulative air quality emissions during construction of the OBMPU facilities through a cumulatively considerable contribution of NO_x within the South Coast Air Basin (SCAB). Since the OBMPU would also result in potentially significant impacts on special-status species as a result of both construction and operation of the OBMPU, the Project's contribution is considered cumulatively considerable, however, for all species except the Santa Ana sucker, the OBMPU's contributions to cumulatively considerable significant impacts under this issue, can be mitigated to a level of less than cumulatively considerable through the implementation of Mitigation Measures **BIO-1** through **BIO-17**. Regardless, impacts to the Santa Ana sucker are forecast to potentially experience an unavoidable cumulatively significant impact based on the findings in the SAR HCP DEIR due to the inability to ensure that all future HCP management measures for SAR will be successful. As such, the proposed project would result in a cumulatively considerable/significant adverse impact related to construction or new or expansion or modifications to existing water facilities.

Level of Significance After Mitigation: Cumulatively Significant Impact

WASTEWATER

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU includes construction of wells and installation of monitoring devices. Construction workers would temporarily require use of portable sanitary units during construction of the proposed wells and potentially during the installation of the proposed monitoring devices. Wastewater generated during construction of the proposed projects would be minimal and would not require the construction of new wastewater or water treatment facilities. Because construction of new or expanded facilities is not required to accommodate the OBMPU Project Category 1 projects, there would be no construction impacts associated with the provision of these facilities to serve the proposed OBMPU facilities.

During operation, the proposed wells and monitoring devices would not require a permanent staff, and as such will not require connection to the sewer system. Therefore, the facilities proposed under this Project Category would not require the expansion or construction of a new wastewater treatment facilities. Because construction of new or expanded facilities is not required to accommodate the facilities proposed under this Project Category, there would be no operation impacts associated with the provision of these facilities to serve the OBMPU projects.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The facilities under Project Categories 2 and 4 that would be constructed as part of the OBMPU would constitute “construction of wastewater treatment facilities” because these facilities treat recycled water/wastewater and/or would otherwise discharge brine waste that would result from treating groundwater/recycled water. It is anticipated that many of the above facilities would require connection to the Inland Empire Brine Line (IEBL) or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Ocean. As such, pipeline associated with implementation of the OBMPU would also constitute construction of wastewater treatment facilities under the OBMPU, as would the booster pump stations and other minor appurtenances required to operate such facilities. The environmental effects associated with the proposed project are documented throughout this RDSEIR, including the Initial Study provided as Subchapter 8.2 of this RDSEIR. As such, given that the proposed OBMPU is anticipated to result in a significant and unavoidable impact related to the generation of nitrogen oxides (NO_x) air quality emissions from construction of the OBMPU facilities, the construction of the proposed wastewater facilities associated with the OBMPU is anticipated to cause a significant impact. Furthermore, implementation of the OBMPU is forecast to contribute to significant adverse impacts to biological resources because of the potential that a future OBMPU facility may be constructed within an area containing biological resources that cannot be avoided, even at the design level.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project

Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded wastewater facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites and 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities.

As stated above, upgrades to IEUA's existing treatment plants were discussed in IEUA's 2017 FMP PEIR; as such though the upgrades at these facilities would constitute "construction of wastewater treatment facilities," impacts thereof were analyzed previously and will not be included within the OBMPU.

Refer to the discussion under Project Category 2. The improvements to the Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would constitute "construction of wastewater treatment facilities" because these facilities treat recycled water/wastewater and/or would otherwise discharge brine waste that would result from treating groundwater/recycled water. It is anticipated that many of the above facilities would require connection to the Inland Empire Brine Line (IEBL) or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Ocean. These facilities are not individually anticipated to result in significant impacts. The environmental effects associated with the proposed Project are documented throughout this RDSEIR, including the Initial Study provided as Subchapter 8.2 of this RDSEIR. As such, given that the proposed OBMPU is anticipated to result in a significant and unavoidable impact related to the generation of nitrogen oxides (NO_x) air quality emissions from construction of the OBMPU facilities, the construction of the proposed wastewater facilities associated with the OBMPU is anticipated to cause a significant impact. Furthermore, implementation of the OBMPU is forecast to contribute to significant adverse impacts to biological resources because of the potential that a future OBMPU facility may be constructed within an area containing biological resources that cannot be avoided, even at the design level.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

No 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue.

Mitigation measures designed to reduce NO_x emissions from construction and operation of OBMPU are identified in Subchapter 4.2, Air Quality, of this RDSEIR (MMs **AQ-1** through **AQ-3**). No additional mitigation measures are recommended or required that would reduce significant and unavoidable impacts related to construction or new or expansion or modifications to existing wastewater facilities. However, all mitigation measures identified throughout this RDSEIR and within the Initial Study prepared as part of the NOP would otherwise reduce impacts related to the construction of wastewater facilities under all remaining issues included in the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.)

No feasible mitigation measures have been identified that would reduce impacts related to the generation of NO_x emissions from construction of the proposed wastewater facilities as part of the OBMPU. As such, though MMs **AQ-1** through **AQ-3** would reduce NO_x emissions from construction equipment, in addition to the reduction of exhaust emissions, and would ensure minimization of fugitive dust during construction of OBMPU related facilities, construction-related air quality (NO_x) emissions have a potential to exceed the SCAQMD thresholds as a result of implementation of the proposed OBMPU, and therefore the proposed Program would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing wastewater facilities.

Furthermore, MMs **BIO-1** through **BIO-17**, and 2000 OBMP PEIR Mitigation Measures **4.8-1**, **4.8-2**, **4.8-3**, **4.8-6**, **4.8-7**, **4.8-9**, and **4.8-11** would minimize biological resources impacts to the maximum extent feasible from construction of the wastewater facilities proposed by the Project, but there are certain areas within the overall Project area of potential impact where the biological resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse impact on biological resources, and therefore the proposed Program would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing wastewater facilities.

Level of Significance After Mitigation: Significant and Unavoidable

Cumulative Impact Analysis

As discussed throughout this RDSEIR, the proposed OBMPU would not result in any cumulative impacts from developing the proposed wastewater facilities except those identified under Air Quality.

Level of Significance Before Mitigation: Potentially Significant

OBMPU Air Quality impacts are mitigated to the greatest extent feasible (as identified above, through the implementation of Mitigation Measures **AQ-1** through **AQ-3**), but the Program will still contribute to regional cumulative air quality emissions during construction of the OBMPU facilities through a cumulatively considerable contribution of NO_x within the SCAB. Since the OBMPU would also result in potentially significant impacts on special-status species as a result of both construction and operation of the OBMPU, the Project's contribution is considered cumulatively considerable, however, for all species except the Santa Ana sucker, the OBMPU's contributions to cumulatively considerable significant impacts under this issue, can be mitigated to a level of

less than cumulatively considerable through the implementation of Mitigation Measures **BIO-1** through **BIO-17**. Regardless, impacts to the Santa Ana sucker are forecast to potentially experience an unavoidable cumulatively significant impact based on the findings in the SAR HCP DEIR due to the inability to ensure that all future HCP management measures for SAR will be successful. As such, the proposed project would result in a cumulatively considerable/significant adverse impact related to construction or new or expansion or modifications to existing wastewater facilities.

Level of Significance After Mitigation: Cumulatively Significant Impact

ENERGY AND NATURAL GAS

The proposed OBMPU includes the development of various types of water and wastewater infrastructure facilities, as described in Chapter 3 of the Recirculated DSEIR. The development of the facilities associated with the OBMPU would result in the construction of new and expansion of existing energy infrastructure to serve the new OBMPU facilities; however, as discussed above under **Subchapter 4.5, Energy** and **Chapter 3, Project Description** of the RDSEIR, the proposed OBMPU would not cause or result in the need for additional energy producing facilities or energy delivery systems, which includes electricity and natural gas. Given that connection to the electrical power grid and connection to natural gas, where a connection to natural gas is required at future facilities, are minor components of the overall construction of OBMPU facilities and that the energy analysis concluded that impacts thereof would be less than significant, the provision of these facilities as part of the overall OBMPU would not cause a significant environmental effect.

However, there is a potential for a significant impact to occur as a result of development of specific OBMPU facilities that would not have access to electrical connection or natural gas, and would therefore require either extension of infrastructure or creation of new infrastructure to meet electricity and/or natural gas needs at an OBMPU facility site. This significant impact could occur as a result of unknown construction and operational requirements that would need to be extended to the specific OBMPU facility site, that may result in unknown significant impacts as part of the electricity or natural gas infrastructure development. The proposed OBMPU projects that would require extension of electricity and natural gas services would be required to prepare project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to electricity and natural gas connections. This is a requirement in accordance with CEQA, and thereby, impacts related to the extension of electricity and natural gas infrastructure would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures:

No 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue and no mitigation measures are required to reduce impacts for energy and natural gas in this subchapter.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Cumulative energy and natural gas infrastructure development in the region may be significant as the region continues to be developed with uses that require such connections. The cumulative impact of the connection to electricity and natural gas services required to implement the proposed OBMPU could be significant and avoidable. Unknown construction and operational requirements that would need to be extended to the specific OBMPU facility site, that may result in unknown significant impacts as part of the electricity or natural gas infrastructure development. The proposed OBMPU projects that would require extension of electricity and natural gas services would be required to prepare project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to telecommunication connections. This is a requirement in accordance with CEQA, and thereby, the OBMPU would have contribute a less than significant potential to result in cumulative impacts related to future electricity and natural gas services infrastructure. The contribution of the OBMPU to future electricity and natural gas services infrastructure is considered a benefit to the overall Chino Basin as it may enable expanded supply for other uses surrounding future OBMPU facilities.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

4.9.5.2 b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Introduction: Overall Impacts from OBMPU Implementation

The purpose of the proposed OBMPU is to address the drivers and trends that are shaping water management, specifically within Chino Basin. These drivers and trends have implications for the Parties who extract water from the Chino Basin and rely upon Safe Yield of the Chino Basin to serve the Parties' individual service areas. As stated in **Chapter 3, Project Description**, "Drivers" are external forces that cause changes in the Chino Basin water space, such as climate change, regulations, and funding. Grouped under each driver are expected trends that emanate from that driver. For example, trends associated with climate change include reduced groundwater recharge, increased evaporation, and reduced imported water supply. The relationship of the drivers/trends to the management implications are shown by arcs that connect trends to implications. For example, a management implication of reduced groundwater recharge is the reduction of the Chino Basin Safe Yield. As such, when envisioning the scope of the OBMPU, Watermaster and the Parties included specific projects that could be implemented to minimize the impacts to the following from the drivers, trends, and implications that may adversely impact management of the Basin:

- Reductions in Chino Basin Safe Yield
- Reduced imported water availability and increased cost
- Imported water quality degradation
- Chino Basin water quality degradation
- Inability to pump groundwater with existing infrastructure
- Increased cost of groundwater use
- Recycled water quality degradation
- Reduced recycled water availability and increased cost
- Increased cost of Basin Plan compliance

The OBMPU proposes the implementation of a variety of Projects, as outlined in the Project Description, and listed above under issue (a), Water. The purpose of implementing the proposed OBMPU facilities over a 20-year horizon (2020 - 2040) is to enhance management of the Chino Basin through enhancing basin water supply and to improve water supply reliability, protect and enhance water quality, encourage sustainable management of the Basin to avoid MPI, and identify and use efficient and equitable methods to fund OBMPU implementation.

As stated under the Project Description, growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands of the Chino Basin Parties are expected to increase. Total water demand is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040, which is the horizon year for which data is readily available, is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses. The proposed OBMPU addresses anticipated growth through the provision of facilities that would ensure adequate water supply is available to meet demand for the foreseeable future.

Given that the proposed OBMPU is a groundwater basin management plan, the Program in and of itself is designed to ensure that the Parties that utilize Chino Basin groundwater have sufficient supply available to serve the demand of each individual service area. The OBMPU would manage, augment, and improve accessibility of existing, and would create new sources of water supplies through normal, dry, and multiple dry years. In such a way, water supplies do not “serve” the Project in the traditional sense; instead, the OBMPU would serve to further the availability of water under all hydrological conditions for water users in the Chino Basin. It is the responsibility of each of the Parties to utilize the data contained herein, and within the technical studies provided as Appendices to this OBMPU RDSEIR, and the *2020 Optimum Basin Management Program Update Report* to project future demand within their individual service areas and determine how to meet demand given the circumstances within the Basin. However, as described within **Subchapter 4.7, Hydrology and Water Quality**, implementation of the OBMPU requires adequate management of the Basin as the individual OBMPU facilities are developed. Without Watermaster periodically reviewing current and projected Basin conditions, comparing the information contained in the 2023 SFI and herein to the projected Basin conditions, a significant potential to impede sustainable groundwater management of the Basin. Furthermore, without flexibility in how Watermaster approaches minimizing the groundwater issues outlined herein to maintain sustainable groundwater management, a significant impact would occur. Furthermore, without mitigation that addresses pumping sustainability, hydraulic control, and reduction in net recharge, variability in available supply to Chino Basin parties could result, which would be a significant impact.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The development of wells and monitoring devices will require minimal water usage for dust control activities should grading be required to install the wells. The monitoring devices are anticipated

to be installed within surface water, and will not require substantial construction activities or operational activities beyond maintenance visits. As such, the monitoring devices are not anticipated to demand substantial water supply. The installation of wells may require up to 60 days of construction to complete. Therefore, given the short period of construction, water demand during construction would not be substantial and would not require new or expanded water supply resources. Furthermore, the development of the proposed well would not require expanded supply to operate beyond those created by the implementation of OBMPU facilities as discussed above. Therefore, impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction of the proposed pipelines and ancillary facilities would require minimal water usage for dust control and concrete washout activities. Pipeline construction would occur in phases and is expected to be relatively short, lasting from several months to a year. Therefore, water demand during construction would not be substantial and would not require new or expanded water supply resources.

The proposed pipeline and ancillary facilities would distribute water extracted from the Chino Groundwater Basin as described as part of the OBMPU. These facilities would not require additional water for operation. Conveyance and distribution of water through the proposed pipelines and ancillary facilities would provide expanded water sources for the Parties. Therefore, impacts related to new or expanded water supply resources or entitlements would be less than significant beyond those created by the implementation of OBMPU facilities as discussed above.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Groundwater recharge and storage facilities would require minimal water usage for dust control and concrete washout activities. These proposed facilities would aid in the recharge and storage of the groundwater basin and would not require additional water for operation. Storage of the groundwater would enable sustainable management of the basin by preventing overdraft and protecting water quality of the basin, and also ensuring that Basin Water and storage capacity are put to maximum beneficial use while causing no MPI. Therefore, impacts from storage basin and recharge facilities related to new or expanded water supply resources or entitlements would be less than significant.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward is discussed in the introduction above.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Stormwater construction/relocation impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts would be the same as those discussed under Project Categories 1, 2, and 3 above.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant
Mitigation Measures:

One of the mitigation measures that was applicable to the 2000 OBMP PEIR is applicable to reducing water supply impacts described herein for the OBMPU. The mitigation measure carried forward from the 2000 OBMP PEIR is Mitigation Measures **4.13-11**.

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.13-11):

- 4.13-11** *All Plan-related development/redevelopment projects including exterior landscape elements shall employ xeriscape plant design and water conservation concepts. At a minimum, xeriscape requirements shall include the following:*
- a. The use of drought-tolerant species, drip irrigation systems, soil moisture sensors, and automatic irrigation systems, when appropriate.*
 - b. Extensive use of mulch in all landscaped areas. Use of mulch will improve water holding capacities of the soil by reducing evaporation and erosion.*
 - c. A minimal use of lawn, except to accommodate-lawn dependent uses such as playing fields. Warm-season grasses shall be used.*
 - d. The use of gray water separation storage and transmission systems when feasible for irrigation purposes.*

2000 OBMP PEIR Mitigation Measures **4.13-1** would minimize water use by the proposed projects under the OBMPU. While not projected to be water demanding projects, in general, the above mitigation measure would further reduce the minimal amount of water demanded by the proposed OBMPU facilities.

Watermaster will periodically review current and projected basin conditions, compare this information to the projected basin conditions assumed in the evaluation of the Storage and Recovery Program application process, compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations. Watermaster will then make findings regarding the efficacy of the mitigation program and requirements required herein and by the Storage and Recovery Program storage agreements. Based on Watermaster's review and subsequent findings, where applicable, Watermaster will then require changes and/or modifications in the Storage and Recovery Program storage agreements that would adequately mitigate MPI and adverse impacts. The mitigation provided under **Subchapter 4.7, Hydrology**

and Water Quality, issue (b), Mitigation Measures **HYD-1, HYD-2, HYD-5, HYD-6, HYD-7, HYD-8, HYD-9, HYD-10, and HYD-11**, would create a hierarchy of checks and balances as part of the sustainable management of the Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact. Mitigation Measures **HYD-1** through **HYD-13** are required to minimize impacts related to pumping sustainability, net recharge and safe yield, riparian vegetation and habitat in Prado Basin, hydraulic control, and overall basin management. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties within the Chino Basin. No further mitigation is required to ensure that sufficient water supplies are available to serve the Parties within the Chino Basin.

Based on this information, with the implementation of Mitigation Measures **HYD-1** through **HYD-13** the proposed OBMPU would have a less than significant potential to have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years, once mitigation is implemented.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Future cumulative development within the Chino Basin is expected to require new or expanded water supply resources or entitlements to serve the increase in urban development. However, a goal of the OBMPU is to ensure that water supply is reliable within the Chino Basin for the foreseeable future. Management actions to ensure adequate water supplies were evaluated based on various demand factors such as land development and community density.

The proposed OBMPU projects would accommodate increasing water demand and would not contribute to the need for new or expanded water supply resources or entitlements. Because the project would result in a potentially significant impact related to expanded water supply resources, the project's contribution to cumulative impacts could be considered cumulatively considerable.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures **HYD-1** through **HYD-13** require Watermaster to continue monitoring efforts to manage the Chino Basin, and to respond to the data gathered through these monitoring efforts with mitigation that would protect MPI and other constraints from occurring to the Chino Basin that could hinder ensuring sufficient water supplies are available to serve the Parties of the Chino Basin. As such, with implementation of the above mitigation, the OBMPU would not contribute to significant cumulative water supply impacts.

Level of Significance After Mitigation: Less Than Significant

4.9.6 Avoidance, Minimization and Mitigation Measures

4.9.6.1 2000 OBMPU PEIR Mitigation Measures

As described in **Subsection 4.9.1** and **Subsection 4.9.5**, the analysis contained in the 2000 OBMP PEIR, while still applicable, must be updated to reflect the current conditions of the Basin.

Most of the mitigation measures that were applicable to the 2000 OBMP PEIR are not applicable to the OBMPU, while one remains applicable to this impact discussion. Note that under Utilities

and Service Systems in the 2000 OBMP PEIR identified 6 mitigation measures that are applicable to the “Energy” analysis presented in **Subchapter 4.5, Energy**. The mitigation measures carried forward from the 2000 OBMP PEIR under **Subchapter 4.5, Energy** include Mitigation Measures **4.13-1**, and **4.13-3** through **4.13-5**. 2000 OBMP PEIR Mitigation Measures **4.13-2** and **4.13-6** are no longer applicable to the Energy analysis presented in **Subchapter 4.5, Energy**, as described therein.

The mitigation measure carried forward from the 2000 OBMP PEIR applicable to Utilities and Service Systems includes Mitigation Measures **4.13-11**. 2000 OBMP PEIR Mitigation Measure **4.13-12** is no longer applicable, as described in greater detail below.

2000 OBMP PEIR Mitigation Measures **4.13-12** was considered for implementation and consideration over the long term, requiring water conservation. Based on the current regulations governing water conservation, and that the facilities proposed under the OBMPU do not require substantial water supplies, as discussed above, 2000 OBMP PEIR Mitigation Measures **4.13-12** is no longer applicable.

4.3.6.2 Applicable Project Mitigation Measures

The following mitigation measures from the 2000 OBMP PEIR have been abstracted and are repeated below for reference:

- 4.13-11** *All Plan-related development/redevelopment projects including exterior landscape elements shall employ xeriscape plant design and water conservation concepts. At a minimum, xeriscape requirements shall include the following:*
- a. The use of drought-tolerant species, drip irrigation systems, soil moisture sensors, and automatic irrigation systems, when appropriate.*
 - b. Extensive use of mulch in all landscaped areas. Use of mulch will improve water holding capacities of the soil by reducing evaporation and erosion.*
 - c. A minimal use of lawn, except to accommodate-lawn dependent uses such as playing fields. Warm-season grasses shall be used.*
 - d. The use of gray water separation storage and transmission systems when feasible for irrigation purposes.*

The following mitigation measures are specific to this OBMPU RDSEIR:

AQ-1: **Tier 4 Equipment.** *All construction equipment greater than 100 horsepower shall comply with the Environmental Protection Agency (EPA)/California Air Resources Board (CARB) Tier 4 emissions standards or equivalent.*

AQ-2: **Fugitive Dust Control**

- Apply soil stabilizers or moisten inactive areas.*
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).*
- Cover all stock piles with tarps at the end of each day or as needed.*
- Provide water spray during loading and unloading of earthen materials.*
- Minimize in-out traffic from construction zone*
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard*
- Sweep streets daily if visible soil material is carried out from the construction site*

AQ-3: Exhaust Emissions Control

- *Utilize well-tuned off-road construction equipment.*
- *Establish a preference for contractors using Tier 3 or better rated heavy equipment.*
- *Enforce 5-minute idling limits for both on-road trucks and off-road equipment*

HYD-1: Pumping Sustainability Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for loss of pumping sustainability). Watermaster shall then prepare a report that describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for loss of pumping sustainability, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-2: Pumping Sustainability Part 2. To mitigate MPI caused by a proposed Storage and Recovery Program Application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-3: New Land Subsidence Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for new land subsidence, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-4: New Land Subsidence Part 2. To mitigate the potential for new land subsidence caused by a proposed Storage and Recovery Program Application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) limiting facilities and operations of the Storage and Recovery Programs to MZ-2 and MZ-3 (2) modifying the put and take cycles to ensure the Storage and Recovery Program does not contribute to the lowering of water levels below the new land subsidence metric, (3) strategically increasing supplemental water recharge

near the affected area (especially in the deep aquifer layers), (4) reducing pumping (especially in the deep aquifer layers) and providing an alternate supply to the affected Parties to ensure Parties can meet their demands in response to any pumping reductions, (5) reallocating pumping from deeper to shallower layers, (6) a combination of (1) through (5), and (7) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-5: *Net Recharge Part 1.* *Watermaster shall estimate the reduction in net recharge and Safe Yield for each Storage and Recovery Program/Project and deduct it from water stored in each Storage and Recovery Program storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements pursuant to MM HYD-6 established by Watermaster; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on net recharge and Safe Yield, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-6: *Net Recharge Part 2.* *To mitigate impacts on net recharge and Safe Yield caused by a proposed Storage and Recovery Program Application (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying put and take cycles to minimize reductions in net recharge, such as executing takes prior to puts, (2) reducing the total volume of takes compared to puts (i.e., "Leave Behind" water), including recharging additional water to mitigate reductions in net recharge, (3) constructing facilities in the southern part of the basin to mitigate the reduction of net recharge, (4) a combination of (1) through (3), and (5) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.*

HYD-7: *Hydraulic Control Part 1.* *Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on Hydraulic Control and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-8; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on hydraulic control, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.*

HYD-8: *Hydraulic Control Part 2.* *To mitigate for potential impacts on Hydraulic Control caused by a proposed Storage and Recovery Program Application (as described above under HYD-7), the Watermaster's comprehensive monitoring and modeling that assesses the state of Hydraulic Control in Chino Basin shall be used to estimate groundwater outflow from Chino North to the Santa Ana River, assess the state of Hydraulic Control, determine if the Storage and Recovery Program will cause a loss of hydraulic control, and develop mitigation requirements to mitigate for impacts to the state of Hydraulic Control. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to minimize*

discharges to the Santa Ana River and maintain Hydraulic Control, (2) construct facilities in the southern part of the basin to minimize discharges to the Santa Ana River and maintain Hydraulic Control, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-9: Riparian Vegetation Part 1. Watermaster shall estimate the projected impacts that each Storage and Recovery Program may have on riparian vegetation and habitat in Prado Basin and review these impacts and develop mitigation requirements for the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to the requirements established by Watermaster and MM HYD-12; these measures shall be incorporated into the Applicant's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate adverse impacts on riparian vegetation and habitat in Prado Basin, which will be determined by Watermaster, shall not be accepted, and therefore will not be developed.

HYD-10: Riparian Vegetation Part 2. To mitigate for potential impacts on riparian vegetation and habitat in Prado Basin caused by a proposed Storage and Recovery Program Application (as described above under HYD-11), the Watermaster's comprehensive monitoring and modeling that assesses the state of riparian vegetation and habitat in Prado Basin shall be used to estimate groundwater levels in the Prado Basin, assess the health of the riparian vegetation and habitat, determine if the Storage and Recovery Program will adversely impact riparian vegetation and habitat, and develop mitigation requirements to mitigate for impacts to the riparian vegetation and habitat in Prado Basin. Potential mitigation includes, but is not limited to: (1) modifying the put and take cycles to mitigate groundwater level impacts in Prado Basin, (2) develop areas in the Prado Basin for new riparian vegetation or habitat to offset any effects by Storage and Recovery Program operations, (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description contains facilities and their operations that can be used to implement these mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-11: Water Quality Degradation Part 1. Watermaster shall review each Storage and Recovery Program application and estimate the surface and ground water systems response (estimate the potential for water quality degradation). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. The Storage and Recovery Program Applicant (Implementing Agency) will develop mitigation measures pursuant to these requirements established by the Watermaster and pursuant to MM HYD-10; these measures shall be incorporated into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement. Applications that do not adequately mitigate the potential for water quality degradation, which will be determined by the Watermaster, shall not be accepted, and therefore will not be developed.

HYD-12: Water Quality Degradation Part 2. To mitigate potential water quality degradation caused by a proposed Storage and Recovery Program Application (as described above under HYD-9), the data gathered through Watermaster's comprehensive groundwater-quality monitoring shall be used to identify changes in the direction and velocity for each plume

that can be attributed to a Storage and Recovery Program that may impact its remediation or the water quality at wells, and to develop mitigation requirements to mitigate for any impacts related to the change in direction or velocity attributed to a Storage and Recovery Program. Potential mitigation includes but is not limited to: (1) modifying the put and take cycles to minimize changes in the plume's direction and velocity that may impact remediation, (2) constructing facility improvements to mitigate impacts on existing remediation, or (3) a combination of (1) and (2), and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The operation of certain facilities proposed as part of the OBMPU can be used to implement these mitigation actions.

HYD-13: Basin Monitoring and Mitigation. *Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected basin conditions assumed in the evaluation of the Storage and Recovery Program application process, compare the projected Storage and Recovery Program operations to actual Storage and Recovery Program operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the Storage and Recovery Program storage agreements. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the Storage and Recover Program storage agreements that will adequately mitigate MPI and related adverse impacts. The Watermaster shall continue to determine what Programs and Projects should be implemented or should be rejected based on their potential to contribute to or cause MPI or other adverse impacts to the Basin.*

4.9.7 Unavoidable Significant Adverse Impacts

The foregoing evaluation demonstrates that the construction of the proposed water and wastewater facilities would result in a significant impact, thereby, a significant impact under Utilities and Service Systems is anticipated as a result of implementation of the OBMPU. This is because the OBMPU would develop water and wastewater facilities that could contribute NO_x emissions that exceed the SCAQMD thresholds of 100 pounds per day. No feasible mitigation measures are available that would reduce construction emissions to below a level of significance. Furthermore, though substantial mitigation is provided to minimize impacts on Biological Resources as a result of construction and operation of the Project, there are certain areas within the overall Project area of potential impact where the biological resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, the OBMPU could cause an unavoidable significant adverse impact on biological resources as a result of extension of water and wastewater infrastructure. Therefore, the proposed OBMPU would result in significant and unavoidable impacts related to construction or new or expansion or modifications to existing water and wastewater facilities. All other impacts related to Utilities and Service systems have been determined to be less than significant with implementation of mitigation identified herein.

CHAPTER 5 – ALTERNATIVES

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) and CEQA Guidelines require an evaluation of alternatives to the proposed action when a project may cause a significant adverse impact on the environment. The OBMPU has been evaluated for potential significant adverse impacts in **Chapter 4, Environmental Impact Evaluation** of this document and the Initial Study in **Subchapter 8.2**. This chapter of the EIR describes and evaluates alternatives to the Project and is intended to implement the requirements set forth in the CEQA Guidelines. This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines Section 15126.6(e)(2).

5.1.1 Rationale for Alternatives Selection

The purpose of the alternatives' evaluation under CEQA is to determine whether one or more feasible alternatives are capable of reducing these potentially significant impacts of a preferred project to a less than significant level. The applicable text in the CEQA Guidelines is as follows:

Section 15126.6(a): Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decisionmaking and public participation.

Section 15126.6(b): Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The range of feasible alternatives to the OBMPU is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, regulatory limitations, jurisdictional boundaries and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative option. (CEQA Guidelines § 15126.6(f)(1).)

Additionally, a No Project Alternative is required to be included in the range of alternatives. An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, or one that would not achieve most of the basic Proposed Project objectives. Finally, the Environmentally Superior Alternative shall be identified and if it is the No Project Alternative, an Environmentally Superior Alternative shall also be identified.

Based on the analysis in **Chapter 4** of the RDSEIR, implementation of the OBMPU is forecast to contribute to significant adverse impacts to Biological Resources because of the potential that a

future OBMPU facility may be developed within an area containing biological resources that cannot be avoided, even at the design level. Therefore, the Program's contribution is considered cumulatively considerable, and would result in a significant or cumulatively considerable adverse impact under Biological Resources. Additionally, it was concluded that, even with the implementation of mitigation measures designed to reduce air quality (NO_x) emissions, the Program could still have a potential to exceed the SCAQMD thresholds of 100 pounds per day. Given the small gap between the OBMPU construction emissions modeled herein and the SCAQMD significance thresholds for NO_x (6 lbs/day or 94% of the NO_x SCAQMD threshold), this analysis assumes that there is a potential for the implementation of a significant number and type of OBMPU facilities to be constructed on the given "worst day" of construction such that NO_x emissions could be considered both significant and unavoidable at a Project-specific and cumulative level. Thus, exceedances of applicable SCAQMD NO_x thresholds and the subsequent lack of consistency with the AQMP are considered significant and unavoidable, and the OBMPU could create a significant cumulative impact under the Air Quality analysis from construction of the Program over the 20-year planning period. Finally, it was concluded that the proposed OBMPU could result in significant impacts related to the construction-related NO_x emissions that would result from the extension of water and wastewater related infrastructure, as such water and wastewater infrastructure impacts under Utilities and Service Systems are considered significant and unavoidable.

Implementation of feasible mitigation measures or Project design features would reduce potentially significant impacts to the following to less than significant: Cultural Resources, Energy, Greenhouse Gas, Hydrology and Water Quality, and Tribal Cultural Resources. No other potential significant adverse environmental impacts are forecast to result from the OBMPU's implementation after implementation of the recommended mitigation measures.

As described in **Chapter 1, Executive Summary**, the OBMPU's goals remain the same as the 2000 OBMP's goals:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

The OBMPU is an integrated program/plan designed to incrementally implement the water infrastructure required to create a sustainable water supply and meet the forecast increase in water demand from growth in the Chino Basin over the next 20 years. As indicated in **Chapter 3, Project Description** of this environmental document, the Watermaster and the Stakeholders have developed an integrated program to achieve sustainability of water resources in the Chino Basin.

The *2020 Optimum Basin Management Program Update Report* (2020 OBMP Update Report), approved in October 2020 by CBWM, documents the stakeholder process that was used to update the OBMP and it describes the 2020 OBMP Management Plan. The management plan is intended to form the basis for the 2020 OBMP Implementation Plan Update. Through this process, the stakeholders concluded that the goals of the 2020 OBMP Update should be identical to the 2000 OBMP goals.

Even though the Project goals remain the same as originally defined in the OBMP, the 9 Program Elements in the OBMPU contain a different mix of future projects, which reflects the Basin's new environmental setting and the water management achievement over the past 20 years. The 2020 OBMPU incorporates both new activities and ongoing activities from the 2000 OBMP (i.e., baseline conditions). These facilities are listed in Exhibit 5 and are outlined in further detail below.

The implementation of the facilities proposed as part of the OBMPU consists of construction and operation of the various facilities that will be summarized below. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities. Below are general descriptions of the facilities and operations proposed as part of the OBMPU.

Project Category 1: Well Development and Monitoring Devices

This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and groundwater quality wells, associated well housing, as well as monitoring devices such as flow meters and extensometers. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Well development includes up to 66 new ASR wells, 12 wells relocated to adjust up to about 25,000 af of pumping, 8 new wells to expand desalter capacity, 10 injection wells and 9 extraction wells in support of the proposed AWPf for a total of 105 new wells. In addition, the OBMPU anticipates reconstruction and/or modification of up to 5 wells to mitigate loss of pumping capacity, and destruction and replacement of 5 wells. This category also includes the development of 102 monitoring wells, with 2 intended to support the proposed AWPf, for a total of up to 207 wells, which serve the varying purposes listed above and outlined below. The monitoring devices proposed as part of the OBMPU include up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells.

Project Category 2: Conveyance Facilities and Related Infrastructure

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Project Category 3: Storage Basins and Recharge Facilities and Storage Bands

This Project Category includes the construction of up to 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af within this range of storage. The specific locations of the new and existing storage basins are described in

the Project Description; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Project Category 4: Desalters and Water Treatment Facilities

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (previously analyzed in IEUA's 2017 FMP PEIR), a new up to 9,000 afy advanced water purification facility, improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites, 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities. Impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR are assumed to be part of the baseline and will not be analyzed further as part of the OBMPU.

As shown in the preceding discussion, the OBMPU consists of a complex, complicated and integrated program that incorporates a mix of projects and operations that are designed to meet the primary re-stated objectives of the OBMPU to meet sustainable and sufficient water supply though about 2040. Although minor tweaks or modifications to the OBMPU are likely to occur over the next 20 years, no major changes in the program have been identified at this stage that can be implemented without harming its ability to meet each of the four essential OBMPU program goals.

Section 5.2 describes alternatives that were considered but rejected. **Section 5.3** describes the No Project/Baseline Alternative, and **Section 5.4** describes the Reduced Storage Alternative (SSC up to 800,000 af). **Section 5.5** compares the alternatives to the OBMPU Project.

5.2 ALTERNATIVES CONSIDERED BUT REJECTED

5.2.1 Alternate Location

Since management of water resources in the Chino Basin is an activity that cannot be conducted at another location and the Chino Basin is part of every one of the Project objectives, this evaluation will not give further consideration to an alternative location for the Program because implementation outside the Chino Basin would fail to meet any of the basic Program objectives. Thus, an alternative location evaluation in this RDSEIR is rejected as infeasible and unable to meet basic Project objectives, i.e., the objective of managing the Chino Basin groundwater resources in a manner to sustain future water supply and water quality demands/requirements within the Basin. A project outside of the Chino Basin cannot achieve this fundamental and essential objective. Accordingly, an alternate location alternative has been excluded from further evaluation because it is infeasible.

5.2.2 Demand Management

A demand management alternative would attempt to accomplish sustainable Basin management by focusing on reducing water demand through techniques such as turf replacement, drought tolerant landscaping, installing aerators on sink fixtures, testing and fixing leaks, implementing a localized water conservation campaign to educate residents about the severity of the current drought and the need to make water conservation a permanent, daily practice, etc. While this alternative would likely have less significant environmental impacts and costs than the OBMPU, demand management has been excluded from further evaluation because it would not meet most of the basic Project objectives:

- Goal No. 1- Enhance Basin Water Supplies: Demand management would not increase water supplies beyond decreasing use of existing supplies, but could improve water reliability by reducing the baseline demand for water within the Basin. However, this decrease in baseline demand would likely be eliminated over time as growth in the Basin occurs and increase the water needs throughout the Basin. Thus, demand management would only partially meet OBMPU Goal No. 1.
- Goal No. 2- Protect and Enhance Water Quality: Demand management would not protect and enhance water quality. Without targeted groundwater pumping and treatment, such as provided by the desalters, concentrations of constituents of concern (COCs) such as TDS and Nitrate would not be reduced. Thus, demand management would not meet OBMPU Goal No. 2.
- Goal No. 3- Enhance Management of the Basin: Sustainable management of the Basin requires Basin recharge in order to reduce subsidence and avoid MPI. As demand management would not include most of the actions required to achieve sustainable management of the Basin as a whole, demand management would not meet OBMPU Goal No. 3.
- Goal No. 4- Equitably Finance the OBMP: Demand management could reduce revenues to the Stakeholders of the Basin by reducing water and sewer service charges due to reduced demand. While this is likely only a temporary reduction, as discussed above, due to anticipated growth, there will be large financial costs required to manage Basin without an updated cohesive plan like the OBMPU. Thus, demand management could harm the financial stability of the Basin, and would not meet OBMPU Goal No. 4.

Additionally, Watermaster cannot compel Basin Parties to implement demand management within their service areas, and Basin Stakeholders cannot compel customers to avail themselves of demand management techniques. Thus, demand management also is not feasible as an alternative.

5.2.3 Imported Water

An imported water alternative would allocate financial resources to secure imported water instead of using Basin management to increase SSC. This alternative would include the components of the OBMPU intended to recharge water to the groundwater basin, such as ASR wells and recharge basins, and the pipeline necessary to convey imported water to the recharge facilities and to convey recovered water to customers extracted from the ASR wells (some of the facilities needed to meet Program Elements 2 and 8/9 [refer to **Exhibit 6**]). It would also include the components of the OBMPU intended to enhance monitoring (some of the facilities needed to meet Program Element 1). New production wells may be contemplated, as would expansion of existing water treatment facilities, in addition to the pipeline necessary to convey water extracted from the new wells (some of the facilities needed to meet Program Element 4). This alternative would not include expansion/upgrades to the Chino Desalters (Program Element 7), new regional or local groundwater treatment facilities (Program Element 6), and would not include the new AWPf (Program Element 5), nor would it maximize recycled water use through expansion of indirect reuse or direct potable use (Program Element 5). It is expected that the injection, extraction, and ASR wells would not be installed in as great of number, nor would the length of pipeline as the OBMPU to facilitate imported water storage in the Chino Basin, as less recharge would be anticipated to be necessary given that imported water can be conveyed to customers utilizing existing facilities. An Imported Water alternative would not meet most of the basic Project objectives.

- Goal No. 1: Imported water would increase water supplies in years where imported water is available in sufficient amounts to satisfy Basin demand, but it would not improve water

reliability because it would introduce uncertainty of supply in drought years. Thus, imported water would not meet OBMPU Goal No. 1.

- Goal No. 2: Imported water would not protect and enhance water quality. The use of imported water requires treatment before it enters the Stakeholder water systems. Thus, imported water would not enhance water quality, and therefore would not meet OBMPU Goal No. 2.
- Goal No. 3: Sustainable management of the Basin would require local control, which includes moving away from reliance on imported water. Thus, imported water would not meet OBMPU Goal No. 3.
- Goal No. 4: Imported water use would require increased fees in order to obtain sufficient supply for Stakeholders of the Basin, which would be especially steep during periods of drought when importable water is scarce. These cost fluctuations would affect those living at the margins more acutely than those with more resources. Accordingly, it would not be an equitable manner by which to finance management of the Chino Basin. Thus, imported water would not meet OBMPU Goal No. 4.

Importing water may not reduce significant impacts, and in fact, may create new significant impacts related to GHG emissions as a result of the greater energy-intensity of imported water. Biological impacts within the Basin may be avoided, however, that reduction in biological resource impacts may be offset by biological resource impacts outside the Basin. Accordingly, an Imported Water alternative has been excluded from further evaluation because it would not meet most of the basic Project objectives.

5.2.4 Import Water to Meet the Santa Ana River Base Flow Obligation at Prado Dam

The City of Ontario has previously proposed utilizing imported water to meet the Santa Ana River (SAR) Base Flow Obligation in order to free up additional recycled water supply for local use by IEUA customer agencies. This alternative would be the same as the Project, but would acquire imported water to meet the SAR Base Flow Obligation. After evaluating this SAR Base Flow Obligation Alternative, it was concluded that it would not meet most of the basic Project objectives.

- Goal No. 1: While use of imported water to meet the SAR Base Flow obligation could increase water supplies available in years when water transfers are feasible, it would not improve water reliability because it would introduce uncertainty of supply in drought years. Thus, use of imported water to meet the SAR Base Flow obligation would not meet OBMPU Goal No. 1.
- Goal No. 2: Use of imported water to meet the SAR Base Flow obligation would not protect and enhance water quality because it would not facilitate an action that would contribute to enhancing water quality of the Chino Basin itself. It is anticipated that this action would free up additional recycled water for use within the Chino Basin beyond that which is planned as part of the OBMPU. As the intent of this alternative is to swap water sources for use to meet the SAR Base Flow obligation, this alternative would not contribute to protecting the long-term beneficial uses of Chino Basin groundwater, nor would it hinder actions that would otherwise contribute to enhancing water quality. Thus, use of imported water to meet the SAR Base Flow obligation would not directly enhance water quality or add protection thereof, and therefore would not meet OBMPU Goal No. 2.
- Goal No. 3: Sustainable management of the Basin would require local control, which includes moving away from reliance on imported water due to its uncertainty. Thus, use of imported water to meet the SAR Base Flow obligation would not meet OBMPU Goal No. 3.
- Goal No. 4: Imported water use would require increased fees in order to obtain sufficient supply to meet the SAR Base Flow obligation, which would be especially steep during

periods of drought when importable water is scarce. These cost fluctuations would affect those living at the margins more acutely than those with more resources. Accordingly, it would not be an equitable manner by which to manage this responsibility. Thus, use of imported water to meet the SAR Base Flow obligation would not meet OBMPU Goal No. 4.

Importing water may not reduce significant impacts, and in fact, may create new significant impacts related to GHG emissions as a result of the greater energy-intensity of imported water. Biological impacts from infrastructure may be avoided, though biological resource impacts from diversion of additional recycled water from the SAR, which may occur as a result of only meeting the SAR Base Flow Obligation rather than going above and beyond that obligation which occurs at present, may occur. Accordingly, an Imported Water for SAR Base Flow alternative has been excluded from further evaluation because it would not meet most of the basic Project objectives, and may not avoid or substantially lessen of the significant impacts of the Project.

5.3 NO PROJECT / BASELINE ALTERNATIVE

Under this alternative, the environmental impacts are those that would occur if the OBMPU Project is not implemented. However, under a no project alternative, water management activities in the Chino Basin do not go away. By default, the Chino Basin Stakeholders would continue to implement the “Baseline Alternative,” which represents the “business as usual” approach to water resources management in the Basin. This alternative represents the continuation of OBMP programs under the approved Peace I and Peace II Agreements. The approved 2021 Addendum to the 2000 PEIR enables a short-term, tiered increase in groundwater storage. The 2021 Addendum was prepared, and enabled the increase in Safe Storage Capacity to 700,000 af through June 30, 2030, and to 620,000 af from July 1, 2030 through June 30, 2035. This alternative includes the installation of water infrastructure on an as-needed basis to meet the Peace I and II Agreement programs outlined in the OBMP, without installing those facilities required to achieve the proposed Project. Furthermore, this alternative was analyzed as part of the 2023 SFI, which includes a Baseline Scenario that consists of the projected use of existing facilities by the Parties, with no new Storage and Recovery Programs, and contemplates the SSC to 700,000 af.

When the No Project Alternative is compared at a general level with the proposed OBMPU facilities, the primary differences are:

- Project Category 1 wells, a few wells may be installed to support continued OBMP implementation whereas the OBMPU envisions up to 207 new wells and support equipment of various types of purposes, including up to 66 ASR wells to support expanded storage and recovery capacity (not included under the OBMP);
- Project Category 2 pipelines and support facilities, up to 620,600 LF of new pipeline would be installed to interconnect various new OBMPU facilities, whereas under the OBMP some additional pipelines might be installed; without the new OBMPU facilities the amount of pipeline installation would likely be less;
- Project Category 3 storage basins, recharge facilities and storage bands, six new storage basins (310 acres estimated) and increased groundwater storage of up to 900,000 af, whereas no new storage basins are envisioned under the OBMP, and maximum groundwater storage under the OBMP will be at 700,000 af through June 30, 2030, and then will be at 620,000 af from July 1, 2030 through June 30, 2035 500,000 af, returning to 500,000 af thereafter;

- Project Category 4 AWPf, desalter facility and water treatment facility development or expansions are envisioned under the OBMPU and none of these expansions or new facilities are envisioned under the OBMP.

Furthermore, in terms of Basin Management, the No Project/Baseline Alternative is compared to the OBMPU in terms of ability to accommodate the future increased demand for local water supplies, ability to minimize Basin-wide water quality concerns (e.g., emerging contaminants, salinity), and equitably and effectively manage the Chino Basin. As such, the No Project/Baseline Alternative assumes that the Watermaster Stakeholders and Basin as a whole would likely increase current reliance on imported water to accommodate increased demand for water caused by future growth.

A summary comparative discussion of the No Project/Baseline Alternative in terms of the specific issues evaluated in this RDSEIR (air quality, biological resources, cultural resources, energy, greenhouse gas, hydrology and water quality, tribal cultural resources, and utilities/service systems [water, electricity, and natural gas]) is provided below.

Air Quality: Based on the preceding comparative evaluation of OBMPU and OBMP Project activities, the level of construction air quality impact is forecast to be substantially reduced for the No Project/Baseline Alternative because it would implement substantially fewer facilities. Similarly, it is forecast that this alternative's operations would require substantially less electricity that would cause air emissions because most of the energy consuming facilities would not be constructed under this alternative. However, the No Project/Baseline Alternative would potentially result in unplanned greater reliance on imported water to meet demand by the whole of the Chino Basin Stakeholders, and as such, overall operational emissions would be greater than that which were identified in herein for the OBMPU. Even when mitigation is implemented—primarily minimization of construction emissions through limiting potential sources of fugitive dust and through minimization of construction equipment emissions and reduction of NO_x through use of tier 4 equipment—the impact of the OBMPU would be significant, while the No Project/Baseline Alternative would be less than significant. As such, under this evaluation and set of assumptions the No Project/Baseline Alternative would have less overall construction emissions, but may result in greater operational emissions than the proposed Project. Regardless, this alternative would avoid a significant impact related to construction generated NO_x emissions and would not otherwise result in significant air quality impacts.

Biological Resources: By eliminating the surface water storage facilities, the No Project/Baseline Alternative will have substantially less general biological resource impacts. In particular the elimination of surface water facilities in the vicinity of Prado Basin and related surface water diversions has a potential to eliminate the potentially significant impacts to “critical habitat” in Prado Basin. When mitigation is implemented—primarily avoidance of biologically sensitive areas or compensation to offset losses to sensitive biological resources—the proposed Project approaches the No Project/Baseline Alternative biological resource impacts, but a potential still exists for significant impacts due to siting needs having an unavoidable adverse biological resource impact. This is because it is assumed that in order to achieve management of water resources in the Basin under the OBMPU, a given project may be required at a specific location that may contain significant biological resources that cannot be avoided. As such, under this evaluation and set of assumptions, the OBMPU effects on biological resources are considered to be greater than the No Project/Baseline Alternative. As such, under this evaluation and set of assumptions the No Project/Baseline Alternative would avoid a significant impact related to biological resources.

Cultural Resources: Simply because the proposed Project will disturb a greater amount of area, the potential for encountering cultural resources is greater under the proposed Project. The No Project/Baseline Alternative will have similar impacts from continued development, but not as extensive due to the smaller area of disturbance. When mitigation is implemented—primarily avoidance of culturally sensitive areas, further site-specific study of large scale OBMPU projects, and specific treatment requirements for buried cultural materials that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to cultural resources. Under this evaluation and set of assumptions the No Project/Baseline Alternative would have slightly less impacts on cultural resources to the proposed OBMPU, but neither would result in significant and unavoidable impacts.

Energy: As stated under Air Quality, above, the No Project/Baseline Alternative will create substantially less direct demand for energy because it will implement fewer infrastructure facilities that require energy. The electricity required for future projects under the No Project/Baseline Alternative involves the construction of far fewer energy consuming facilities than the proposed Project. However, the No Project/Baseline Alternative may result in an additional indirect demand for energy by way of increased imported water from the State Water Project (SWP), which requires more energy to reach the Chino Basin than would locally sourced water. IEUA and other OBMPU Stakeholders in the Chino Basin have installed and are continuing to install alternative (non-fossil fuel energy generation systems) power generating systems (primarily solar photovoltaic systems and digesters that utilize biosolids), which OBMPU projects would utilize since they would be connected to the grid. Through adherence to and implementation of the air quality mitigation measures, local General Plan policies, State and Federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the proposed Project's potential energy cumulative and Program-specific impacts can be controlled and will be below a level of significance. The same is assumed for projects that may be developed and even the indirect energy use that may occur from continued or increased use of imported water under the No Project/Baseline Alternative. Under this evaluation and set of assumptions neither the No Project/Baseline Alternative nor the OBMPU would result in significant energy impacts; in either case energy impacts will be less than significant.

Greenhouse Gas: Based on the preceding comparative evaluation of OBMPU and OBMP Project activities, the level of construction GHG impact is forecast to be substantially reduced for the No Project/Baseline Alternative because it would implement substantially fewer facilities, and would therefore result in lesser construction related GHG emissions. It is forecast that this alternative's operations would require substantially greater electricity that would cause air emissions due to the likelihood that, without the OBMPU, the Basin would rely on imported water supplies to meet its future needs, although these air quality emissions may occur outside the Basin. There would be a minor increase in emissions that would be attributable to the ongoing implementation of baseline conditions, but the energy associated with increased use of imported water would be anticipated to result in an increase in GHG emissions, and not just within the Basin. Operational GHG impacts attributable to the OBMPU were evaluated qualitatively, and were determined to be less than significant. This is because, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 AF would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5 and 4.6-6**, the OBMPU would offset Project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Neither the No Project/Baseline Alternative would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, while the OBMPU would offset Project specific and cumulative GHG emissions, neither alternative would result in a significant GHG impact. As such, the impact of the

two alternatives would be equal. Under this evaluation and set of assumptions the No Project/Baseline Alternative would have substantially less overall construction emissions when compared to the OBMPU, while OBMPU would result in less operational emissions, but the impact of both alternatives may still be considered to be less than significant.

Hydrology and Water Quality: It is under this environmental issue where the OBMPU and No Project/Baseline Alternative, diverge in their potential environmental impacts. Under the OBMPU, the expansion of the range in managed storage used for Storage and Recovery programs presents several potential challenges that, without mitigation, could result in significant impacts, including potential new pumping sustainability challenges and potential material physical injury (MPI) related to the plumes above 700,000 AF of managed storage. Under the No Project/Baseline Alternative, however, there are other challenges with managing the Basin, including that total water demand is projected to grow from about 340,000 afy in 2020 to about 420,000 afy by 2040, for which several of the management programs proposed as part of the OBMPU address. As such, under the No Project/Baseline Alternative, the facilities required to ensure that ample water supply is available to meet future demand in a sustainable manner may not be developed, and as such a significant impact could occur under this alternative. Furthermore, without implementation of the OBMPU, drivers and trends shaping the management of the Basin going forward would not be taken into account regarding future management of the Basin; these drivers and trends include climate change, which can result in reduced groundwater recharge, increased evaporation, and reduced imported water supply. The Stakeholders' collective ability to address Basin-wide water quality concerns (e.g., emerging contaminants, salinity) would be impaired without the implementation of the OBMPU. Under the No Project/Baseline Alternative, the Stakeholders would address water quality impacts in a reactive and/or less coordinated manner, resulting in increased costs, increased implementation time, and lack of equitable solutions, which could potentially result in a significant impact. As such, going forward with management of the Basin in a "business as usual" approach would not address these potential challenges, and therefore, may result in a significant impact to the Basin's hydrology resources and water quality characteristics.

Regarding flood hazards and contribution thereof, the No Project/Baseline Alternative, with a smaller overall footprint, has less potential to install facilities within flood hazard areas. Regardless, both of these alternatives are forecast to have less than significant adverse impact under this environmental topic.

Under the No Project/Baseline Alternative scenario, the ability to attain the Basin water supply and sustainability goals and objectives as described under **Chapter 3, Project Description**, in this RDSEIR would be virtually eliminated. The stakeholders in the Basin would be disabled in their attempt to collectively correct and mitigate drivers and trends in today's water management space that may challenge the ability of the Stakeholders to protect their collective interests in the Chino Basin and their water supply reliability.

In the final analysis, the No Project/Baseline Alternative clearly cannot be considered the environmentally superior alternative to the proposed Project for the hydrology and water quality issue. Under the Project/Baseline Alternative, substantial environmental damage from continued implementation of this alternative could cause a significant adverse impact on hydrology and water quality when compared to implementing the OBMPU.

Tribal Cultural Resources: Simply because the proposed Project will disturb a greater amount of area, the potential for encountering Tribal Cultural Resources is greater under the proposed Project. The No Project/Baseline Alternative will have similar impacts from continued

development, but not as extensive due to the smaller area of disturbance. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale OBMPU projects, and specific mitigation treatment requirements for buried Tribal cultural materials that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to tribal cultural resources. Under this evaluation and set of assumptions the No Project/Baseline Alternative would have slightly less impacts on tribal cultural resources to the proposed OBMPU, but both would ultimately result in less than significant impacts to tribal cultural resources.

Utilities and Service Systems: As stated under Hydrology and Water Quality, above, Utilities and Service Systems is another environmental issue where the two alternatives, OBMPU and No Project/Baseline Alternative, diverge in their potential environmental impacts. Under the No Project/Baseline Alternative it is anticipated that there would be challenges with managing the Basin, including that total water demand is projected to grow from about 340,000 afy in 2020 to about 420,000 afy by 2040, for which several of the management programs proposed as part of the OBMPU address. As such, under the No Project/Baseline Alternative, the Basin-wide facilities required to ensure that ample water supply of sufficient quality is available to meet future demand may not be developed, and as such a significant impact could occur, potentially resulting in the Basin's inability to meet the increased demands. Under the OBMPU, unlike the No Project/Baseline Alternative, the Chino Basin would have sufficient water supplies available to serve current development and reasonably foreseeable future development during normal, dry and multiple dry years, once mitigation is implemented.

For all other Utilities and Service Systems impacts discussed in this RDSEIR and the Initial Study that is provided as Appendix 8.2 to this RDSEIR, including extension of infrastructure (electricity, natural gas, and water), it is anticipated that the No Project/Baseline Alternative would result in substantially lower impacts. This is inclusive of the significant impact related to extension of water infrastructure that would result due to construction related GHG emissions.

As the No Project/Baseline Alternative would reduce impacts related to NO_x emissions as a part of extension of infrastructure that falls under Utilities and Service Systems, the No Project/Baseline Alternative would avoid a significant impact thereof. However, the No Project/Baseline Alternative would have a potential to cause a significant impact to the Basin's hydrology resources and water quality characteristics, and may impact the sustainability of the Basin's groundwater supply, thereby resulting in significant Hydrology and Water Quality and Utilities and Service Systems impacts. As such, the No Project/Baseline Alternative is not considered to be the environmentally superior alternative.

5.4 NO PROJECT PLUS PLAUSIBLY FORESEEABLE PROJECTS ALTERNATIVE (NO PROJECT PLUS ALTERNATIVE)

The No Project Plus Plausibly Foreseeable Projects Alternative (No Project Plus Alternative) analyzes the impacts from a scenario in which the OBMPU is not implemented, and plausibly foreseeable projects—meaning those that have undergone CEQA determinations, and have been certified—with wide reaching (regional) impacts on the Basin, are implemented. In this case, the only project that has been put forth in this manner is the Chino Basin Program (CBP). As such, this No Project Plus Alternative assesses the impacts on the Basin should the OBMPU not be implemented, where, as described under the No Project/Baseline Alternative, Chino Basin Stakeholders would continue to implement the “Baseline Alternative,” which represents the “business as usual” approach to water resources management in the Basin, and where the Chino

Basin Program (CBP), as a plausibly foreseeable Project to be implemented in the Basin, does go forward.

The No Project components of this Alternative would be precisely the same scenario as that which is presented under Subsection 5.4, No Project/Baseline Alternative, above. However, those components would be combined with the CBP, the description of which is presented below.

The CBP was submitted for by IEUA for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded \$206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 AFY of recycled water in the Chino Basin and extract the water during call years, likely during dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new AWPf and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPf for Chino Basin use to provide for an exchange of SWP supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits. Additionally, new water stored in the Chino Basin would also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic events that disrupt imported water infrastructure.

IEUA's partner and the State Water Project Contractor that will facilitate the exchange for the CBP is Metropolitan Water District of Southern California (MWD). The Program would rely on water transfer agreements through MWD. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD. MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years

The CBP proposes the following facilities to allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure:

- 16 injection wells (12 duty, 4 standby)
- The CBP would install a maximum of 17 extraction wells.
- 4 monitoring wells
- Use of existing wells including the following:
 - Use of existing Rialto Pipeline
 - Use of up to 9 existing member agency wells
 - Use of existing Agua de Lejos WTP Clearwell (HGL 1,632 ft)
 - Use of existing Lloyd Michael WTP Clearwell

- A total of about 30 miles or 158,400 lineal feet (LF) of various types of pipelines (potable, recycled water, and brine pipelines)
- A maximum of 6 that would be between 12" and 72" in size turnouts
- A circular, prestressed tank storage reservoir with a maximum capacity of 5 MG with possible and in-conduit hydropower facility
- Up to 4 pump stations serving various PUT and TAKE facilities. One pump station would serve PUT facilities, while up to three pump stations would support TAKE facilities.
- An AWPf at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity 15,000 AFY
- 3 wellhead treatment facilities at a location that has yet to be selected up to 3,000 AFY each, with no more than 6,000 AFY treated in total through biological or other wellhead treatment mechanisms

Additionally, the proposed CBP would require an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate the additional managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) required to operate the CBP. As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as existing known Watermaster stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

When the No Project Plus Alternative is compared at a general level with the proposed OBMPU facilities, the primary differences are:

- Project Category 1 Wells and Monitoring Devices, about 25 wells, of which would be ASR wells may be installed to the No Project Plus Alternative, whereas the OBMPU envisions up to 207 new wells and support equipment of various types of purposes, as well as various types of monitoring devices;
- Project Category 2 pipelines and support facilities, up to 620,600 lineal feet of new pipeline would be installed to interconnect various new OBMPU facilities, as would up to 18 booster pump stations, and 14 water storage reservoirs, whereas under the No Project Plus Alternative some about 175,000 LF of pipelines might be installed, with 6 turn outs, 4 pump stations, and one 5 MG reservoir.
- Project Category 3 storage basins, recharge facilities and storage bands, six new storage basins (310 acres estimated) and increased groundwater storage of up to 900,000 af would occur under the OBMPU, whereas no new storage basins are envisioned under the No Project Plus Alternative, and maximum groundwater storage under the No Project Plus Alternative would be at 700,000 AF through June 30, 2039, and to 580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter;
- Project Category 4, desalters and water treatment facilities, under the OBMPU, a 9,000 AF AWPf, upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites, 4 new groundwater treatment facilities at regionally located sites, and improvements to existing groundwater treatment facilities are envisioned, and under the No Project Plus Alternative, a 15,000 AF AWPf and up to 3 wellhead treatment facilities would be implemented.

Furthermore, in terms of Basin Management, the No Project Plus Alternative is compared to the OBMPU in terms of ability to accommodate the future increased demand for local water supplies,

ability to minimize Basin-wide water quality concerns (e.g., emerging contaminants, salinity), and equitably and effectively manage the Chino Basin. As such, the No Project Plus Alternative assumes that, even with the imported water offsets put forth by the CBP, the Watermaster Stakeholders and Basin as a whole would likely increase or maintain current reliance on imported water to accommodate increased demand for water caused by future growth.

A summary comparative discussion of the No Project Plus Alternative in terms of the specific issues evaluated in this RDSEIR (air quality, biological resources, cultural resources, energy, greenhouse gas, hydrology and water quality, tribal cultural resources, and utilities/service systems [water, electricity, and natural gas]) is provided below. The 2022 CBP PEIR and findings therein prepared for IEUA by Tom Dodson & Associates are hereby incorporated by reference in support of the analysis presented below. The findings in the CBP PEIR have been used directly in support of the alternatives impact analysis.

Air Quality: Based on the preceding comparative evaluation of the components making up both the OBMPU and No Project Plus Alternative, the level of construction air quality impact is forecast to be lesser for the No Project Plus Alternative on a per year basis. During the worst-case year of construction, the OBMPU would exceed the SCAQMD significance thresholds for NO_x. The CBP, when combined with ongoing implementation of the baseline conditions, would not likely result in this same exceedance because the CBP PEIR determined that, through the implementation of mitigation, construction of the CBP would not result in exceedances of NO_x, while VOC, carbon monoxide, sulfur oxide, PM₁₀, and PM_{2.5}, emissions would not exceed the maximum daily thresholds without the need for added mitigation. The addition of the facilities that would constitute continuation of baseline conditions under this No Project Plus Alternative, when combined with the impacts of implementing the CBP, would likely not exceed the SCAQMD emissions thresholds for construction for any criteria pollutant, particularly when the implementation of CBP PEIR Mitigation Measure **AQ-1** is employed to minimize NO_x emissions for CBP projects, and when OBMPU Mitigation Measure **AQ-1** is employed to minimize NO_x emissions for OBMP facilities. Similarly, it is forecast that the operation of facilities proposed under the No Project Plus Alternative's would require less electricity that would cause air emissions because fewer overall facilities would be constructed, and furthermore, the CBP PEIR accounted for an offset of energy usage as a result of the reduction in energy required to import water that would be offset by the utilization of CBP Product Water that would be utilized locally. However, even with the energy offset by the CBP, the No Project Plus Alternative would potentially result in unplanned continued or greater reliance on imported water to meet demand by the whole of the Chino Basin Stakeholders (rather than just by IEUA's service area), thereby resulting in air emissions related to the energy require to convey imported from water its source to the Chino Basin. However, for the OBMPU, even when mitigation is implemented—primarily minimization of construction emissions through limiting potential sources of fugitive dust and through minimization of construction equipment emissions and reduction of NO_x through use of tier 4 equipment—the construction impact of the OBMPU would be significant, while the No Project Plus Alternative would be less than significant for the reasons described above. As such, under this evaluation and set of assumptions the No Project Plus Alternative would have less overall construction emissions, but may result in greater operational emissions, through regardless would avoid a significant impact related to construction generated NO_x emissions and would not otherwise result in significant air quality impacts.

Biological Resources: By eliminating the surface water facilities in the vicinity of Prado Basin under the No Project Plus Alternative, the No Project Plus Alternative would have less impacts on “critical habitat” in Prado Basin than that which was identified in the OBMPU. The CBP PEIR included an analysis, presented in response to comments made on the Draft PEIR, that concluded

that the CBP would not have a significant impact on Prado Basin riparian and critical habitat, and would not have a significant impact on biological resources downstream of Prado Basin. As the ongoing implementation of the baseline conditions does not include any additional surface water diversions, the determination that no significant impacts to Prado Basin riparian and critical habitat identified in the CBP PEIR applies to this No Project Plus Alternative. However, similar to the OBMPU, the CBP will contribute cumulatively to potential significant impacts to the Santa Ana Sucker due to the reduction in cumulative flows to the Santa Ana River. As such, the No Project Plus Alternative and the OBMPU would both contribute to this unavoidable adverse biological resource impact. For all other potential biological resource impacts associated with both the No Project Plus Alternative and the OBMPU, when mitigation is implemented—primarily avoidance of biologically sensitive areas or compensation to offset losses to sensitive biological resources—each Alternative would avoid significant impacts to biological resources. Based on the above discussion, under this evaluation and set of assumptions the OBMPU effects on biological resources are considered to be greater than the No Project Plus Alternative; however, both alternatives would result in significant biological resource impacts, and therefore, the No Project Plus Alternative would not avoid a significant impact related to biological resources.

Cultural Resources: Simply because the proposed Project will disturb a greater amount of area, the potential for encountering cultural resources is greater under the proposed Project. The No Project Plus Alternative and the OBMPU will have similar impacts from development under the CBP and continuation of the baseline conditions, but development as a whole would not as extensive due to the smaller area of disturbance that would occur under the No Project Plus Alternative. When mitigation is implemented, particularly given that the CBP and OBMPU propose similar cultural resource mitigation strategies—primarily avoidance of culturally sensitive areas, further site-specific study of large-scale projects, and specific treatment requirements for buried cultural materials that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to cultural resources. Under this evaluation and set of assumptions the No Project Plus Alternative would have slightly less impacts on cultural resources to the proposed OBMPU, but neither would result in significant and unavoidable impacts.

Energy: As stated under Air Quality, above, the No Project Plus Alternative will create less direct demand for energy because it will not only implement fewer infrastructure facilities that require energy than that which is proposed under the OBMPU, but the CBP PEIR accounted for an offset of energy usage as a result of the reduction in energy required to import water that would be offset by the utilization of CBP Product Water that would be utilized locally. The CBP would also support the IEUA Climate Change Action Plan (CCAP) objective to strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources, further reducing the energy impacts from implementation of the No Project Plus Alternative. However, the No Project Plus Alternative may result in an additional indirect demand for energy by way of increased imported water from the SWP, which is more energy intensive, and thereby requires greater energy to reach the Chino Basin than would locally sourced water. IEUA and other OBMPU Stakeholders in the Chino Basin have installed and are continuing to install alternative (non-fossil fuel energy generation systems) power generating systems (primarily solar photovoltaic systems and digesters that utilize biosolids). Regardless, through adherence to and implementation of the air quality mitigation measures, adherence to local General Plan policies, State and Federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the proposed OBMPU's potential cumulative and Program-specific energy impacts can be controlled and will be below a level of significance. The same is projected for the facilities that may be developed and even the indirect energy use that may occur from continued or increased use of imported water under the No Project Plus Alternative. Under this evaluation and set of

assumptions neither the No Project Plus Alternative nor the OBMPU would result in significant energy impacts, though the OBMPU would likely result in lesser operational energy impacts than would No Project Plus Alternative.

Greenhouse Gas: Based on the preceding comparative evaluation of OBMPU and OBMP Project activities, as a result of the accelerated construction schedule proposed under the CBP—developing the whole of the CBP facilities over a period of 3 years—when compared to the 20 year horizon of the OBMPU, even with the frontloaded construction scenario presented in the GHG analysis in Subchapter 4.6., the OBMPU would have a less than significant impact on construction related greenhouse gas emissions, because, if the Project’s annual amortized construction emissions (683.46 MTCO_{2e} per year) are added to any of the projected GHG generation for local sources of water (as found in the Water-Energy Nexus Report¹), the resulting annual GHG emissions would be substantially less than the amount of GHG emissions for the same amount of water conveyed from either the Colorado River Deliveries or State Water Project Deliveries. Contrastingly, the CBP PEIR determined that the CBP would contribute significant construction related GHG emissions. As such, when the CBP GHG emissions are combined with the ongoing implementation of the baseline conditions, a significant construction-related GHG impact would occur. Therefore, under the No Project Plus Alternative, a significant adverse impact on construction related GHG emissions would occur, when compared to implementing the OBMPU.

Operational GHG emissions for the CBP were determined to be less than significant due to the analysis accounting for an offset in emissions attributable to importing water from the Sacramento Delta to the IEUA’s service area, as such, the minor increase in emissions that would be attributable to the ongoing implementation of the baseline conditions and the energy associated with ongoing or increased use of imported water, when combined with the operational CBP GHG emissions, would remain less than significant. Operational GHG impacts attributable to the OBMPU were evaluated qualitatively, and were determined to be less than significant. This is because, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 AF would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5** and **4.6-6**, the OBMPU would offset Project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Neither the No Project Plus Alternative nor the OBMPU would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, while the OBMPU would offset Project specific and cumulative GHG emissions, neither Alternative would result in a significant operational GHG impact. As such, operational GHG emissions impacts from both the OBMPU and No Project Plus Alternative would be less than significant, and therefore impacts would be equal.

The CBP was determined to comply with CARB’s 2017 CCAP because it would augment local water supplies, which is called for in the Scoping Plan. Similarly, the ongoing implementation of the baseline conditions would comply with this Scoping Plan for the same reasons, even if implementation would not achieve the same breadth of water augmentation achievable by the OBMPU. The CBP was also determined to comply with the IEUA Climate Change Action Plan by directly supporting the CCAP goals to maximize recycled water production and storage and maintain the health of the groundwater aquifer as well as the associated objectives to expand recycled water infrastructure and enhance groundwater replenishment capabilities within the

¹ Next 10, September 2021. The Future of California Water-Energy Nexus
https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

Chino Basin. Ongoing implementation of the baseline conditions and the OBMPU would not be required to comply with IEUA's CCAP because, while IEUA serves as Lead Agency for both the OBMP and OBMPU, it is not the only agency that could implement projects under either iteration of the Program. Regardless, neither the No Project Plus Alternative nor the OBMPU would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Based on the above discussion, under this evaluation and set of assumptions the OBMPU would have substantially less overall construction GHG emissions when compared against the No Project Plus Alternative, and would therefore avoid the significant and unavoidable impact generated by the No Project Plus Alternative.

Hydrology and Water Quality: Under the OBMPU, the expansion of the range in managed storage used for Storage and Recovery programs presents several potential challenges that, without mitigation, could result in significant impacts, including potential new pumping sustainability challenges and potential material physical injury (MPI) related to the plumes above 700,000 AF of managed storage. Under the No Project Plus Alternative, however, there are other challenges with managing the Basin, including that total water demand is projected to grow from about 340,000 afy in 2020 to about 420,000 afy by 2040, by which several of the management programs proposed as part of the OBMPU address. The OBMPU would contribute to meeting this additional 80,000 AFY demand through 2040 and beyond, while the CBP alone would contribute to providing a new annual water supply of 15,000 AFY, and within the 25-year water exchange commitment period, this new water supply will be committed to environmental purposes through an exchange for imported water supplies delivered by MWD. As such under the CBP, even when combined with the ongoing implementation of the baseline conditions, the facilities required to ensure that ample water supply is available to meet future demand in a sustainable manner may not be developed, and imported water supply reliability may be decreased as climate change impacts the available supply allocated to area wholesale water agencies, such as IEUA, and as such a significant impact could occur under this alternative.

Furthermore, without implementation of the OBMPU, drivers and trends shaping the management of the Basin going forward would not be taken into account at the regional level regarding future management of the Basin. While the CBP itself would contribute to enhancing the usage of storage within the Basin, thereby creating a new local water supply, this is one of many actions needed to achieve the enhanced 900,000 AF safe storage capacity envisioned by the OBMPU. Drivers and trends include climate change, which can result in reduced groundwater recharge, increased evaporation, and reduced imported water supply. The Stakeholders' collective ability to address Basin-wide water quality concerns (e.g., emerging contaminants, salinity) would be impaired without the implementation of the OBMPU. Under the No Project Plus Alternative, some of the water quality challenges within the Basin would be addressed, in that the CBP would develop a new AWPf that would have a potential to reduce recycled water TDS levels to 100 milligrams per liter (mg/L), with an overall blended target of 500 – 515 mg/L. Thus, the proposed CBP, and by extension the No Project Plus Alternative would provide a benefit to area water quality. However, other issues, such as Basin management and water supplies may not be approached in the coordinated manner proposed under the OBMPU. The Stakeholders would address potential Basin impacts in a reactive and/or less coordinated manner, resulting in increased costs, increased implementation time, and lack of equitable solutions, which could potentially result in a significant impact. As such, going forward with management of the Basin in a "business as usual" approach, with individual agencies addressing potential challenges within the Basin as challenges arise and projects to address these challenges are developed (such as the CBP), would not address these potential challenges on a holistic basis thereby enhancing the ability of the Stakeholders to protect their collective interests in the Chino Basin and their water supply reliability the and therefore. Thus, the No Project Plus Alternative may result in a significant

impact to the Basin's hydrology resources and water quality characteristics, which would be avoided by the implementation of the OBMPU.

Regarding flood hazards and contribution thereof, the No Project Plus Alternative, with a smaller overall footprint, has less potential to install facilities within flood hazard areas. Regardless, both of these alternatives are forecast to have less than significant adverse impact under this environmental topic.

Based on the discussion above, the No Project Plus Alternative clearly cannot be considered the environmentally superior alternative to the OBMPU for the hydrology and water quality issue. Under this evaluation and set of assumptions the OBMPU would have substantially less potential to result in substantial impacts under hydrology and water quality when compared against the No Project Plus Alternative, and would therefore avoid the significant and unavoidable impact that could be generated by the No Project Plus Alternative.

Tribal Cultural Resources: Simply because the proposed Project will disturb a greater amount of area, the potential for encountering Tribal Cultural Resources is greater under the OBMPU. The No Project Plus Alternative will have similar impacts from continued development, but not as extensive due to the smaller area of disturbance. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale OBMPU projects, and specific mitigation treatment requirements for buried Tribal cultural materials that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to tribal cultural resources. Under this evaluation and set of assumptions the No Project Plus Alternative would have slightly less impacts on tribal cultural resources to the proposed OBMPU, but both would ultimately result in less than significant impacts to tribal cultural resources.

Utilities and Service Systems: Under the No Project Plus Alternative it is anticipated that there would be challenges with managing the Basin, including that total water demand is projected to grow from about 340,000 afy in 2020 to about 420,000 afy by 2040, for which several of the management programs proposed as part of the OBMPU address. As stated in the discussion under Hydrology, the OBMPU would contribute to meeting this additional 80,000 AFY demand through 2040 and beyond, while under the No Project Plus Alternative, may not be develop the facilities required to ensure that ample water supply is available to meet future demand across the Chino Basin, and as such a significant impact could occur under this alternative. While the CBP itself would contribute to enhancing the usage of storage within the Basin, thereby creating a new local water supply, this is one of many actions needed to achieve the enhanced 900,000 AF safe storage capacity envisioned by the OBMPU. Under the OBMPU, the Chino Basin as a whole, would have sufficient water supplies available to serve current development and reasonably foreseeable future development during normal, dry and multiple dry years, once mitigation is implemented. Under the CBP, and by extension the No Project Plus Alternative, as determined in the CBP PEIR, IEUA would have sufficient water supplies available to serve current development and reasonably foreseeable future development during normal, dry and multiple dry years, once mitigation is implemented. However, as the OBMPU is a Watermaster and Chino Basin-wide program, when compared to the No Project Plus Alternative, the OBMPU would not only be the environmentally superior alternative, but the facilities required to ensure that ample water supply is available to meet future demand in a sustainable manner may not be developed under the No Project Plus Alternative, and imported water supply reliability may be decreased as climate change impacts the available supply allocated to area wholesale water agencies, such as IEUA, and as such a significant impact on water supply within the Basin to accommodate future growth could occur under this alternative.

The CBP PEIR determined that the CBP could result in significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD thresholds, and therefore the CBP would result in significant and unavoidable GHG impacts related to construction of new or expansion or modifications to existing water and wastewater facilities. This same determination was made in this RDSEIR for the OBMPU. Therefore, both the OBMPU and No Project Plus Alternative would result in significant impacts related to construction of new or expansion or modifications to existing water and wastewater facilities.

For all other Utilities and Service Systems impacts discussed in this RDSEIR and the Initial Study that is provided as Subchapter 8.2 to this RDSEIR, including extension of infrastructure (electricity, natural gas, telecommunication facilities, and stormwater), it is anticipated that the No Project Plus Alternative would result in substantially lower impacts because the No Project Plus Alternative would result in construction and operation of fewer overall facilities. Based on the above discussion, under this evaluation and set of assumptions the OBMPU effects on biological resources are considered to be lesser than the No Project Plus Alternative; however, both Alternatives would result in significant utilities and service systems impacts, and therefore, the No Project Plus Alternative would not avoid a significant impact related to utilities and service systems.

While the No Project Plus Alternative would reduce impacts related to construction-generated NO_x emissions, it would have a potential to cause a significant impact to the Basin's hydrology resources and water quality characteristics, and may impact the sustainability of the Basin's groundwater supply, thereby resulting in significant Hydrology and Water Quality and Utilities and Service Systems impacts. As such, the No Project Plus Alternative is not considered to be the environmentally superior alternative.

5.5 REDUCED STORAGE ALTERNATIVE (SSC UP TO 800,000 AF; OPERATIONAL BAND 2²; SCENARIO 2A)

The Reduced Storage Alternative analyzes the impacts from Increased Use of Existing Facilities (Scenario 2A of the 2023 SFI), which includes the Baseline Scenario as defined in the 2023 SFI study, assumed Chino Basin Program (CBP)³ operations, and the increased use of existing facilities to enable an additional 100,000 af of Storage and Recovery above the assumed CBP operations. Thus, the Reduced Storage Alternative analyzes the increased SSC to 800,000 af through 2040. **Table 5-1** outlines the allocation of puts and takes among existing facilities and new facilities for storage and recovery program Scenario 2a (i.e. the Reduced Storage Alternative). In essence, the Reduced Storage Alternative assumes the same infrastructure scenario as the No Project/Baseline Alternative, while maximizing the use of those existing facilities to achieve the OBMPU goals.

² Based on the work done in the 2023 SFI, the storage space was divided into three Operational Bands: Operational Band 1 characterizes the storage space used by the Chino Basin Parties and Metropolitan of up to 700,000 af; Operational Bands 2 and 3 characterize the use of up to 800,000 af and 900,000 af, respectively, for use by future Storage and Recovery Programs. The OBMPU analyzes storage up to 900,000 af (Operational Band 1).

³ While the CBP PEIR is presently being challenged in CEQA litigation as of the publication of this RDSEIR, the CBP is a reasonably foreseeable project that would be implemented within the Basin. Thus, for forecasting purposes, the projected CBP Storage and Recovery operations were utilized to develop model scenarios in which 800,000 af (band 2A) and 900,000 af (band 3A/3B) of storage could be achieved. However, should the CBP be withdrawn from implementation, this analysis assumes that a combination of other Storage and Recovery projects (such as ASR wells, recharge basins, etc.) analyzed as part of the OBMPU and outlined in the Project Description under Summary of All Facilities could be implemented to achieve the same or similar results.

Maximizing the use of existing facilities would differ completely from the OBMPU, in that, none of the facilities (including modifications to existing facilities, upgrades to existing facilities, and new facilities) proposed under the OBMPU would be necessary to achieve the increase in storage capacity to 800,000 af. The 2023 SFI envisioned that in order to achieve storage capacity between 700,000 af to 800,000 af, existing recharge facilities within the Basin that are presently underutilized, would enable the maximum utilization of available additional recharge capacity through increased use of imported water during wet years, when demand for imported water is low and as such, supply is available for purchase, in addition to maximizing the recharge of recycled water from IEUA. These two sources of water would be acquired and conveyed by way of existing pipelines, and would be utilized to recharge the Basin by way of existing recharge basins, injection and ASR wells, etc., which would enable the achievement of the increased SSC to 800,000 af through 2040 contemplated under this Reduced Storage Alternative.

Table 5-1
ALLOCATION OF PUTS AND TAKES AMONG EXISTING AND NEW FACILITIES FOR STORAGE AND RECOVERY PROGRAM SCENARIO 2A (I.E. THE REDUCED STORAGE ALTERNATIVE)

	Operational Band 2 (up to 800,000 af)
	Scenario 2a
Cumulative storage used in each scenario (af)	800,000
Annual Put ⁴	25,000
Existing in-lieu capacity used	12,500
Existing spreading basin recharge capacity used	9,760
Existing ASR capacity used	2,740
Total Existing PUT capacity used	25,000
Annual Take ⁵	33,333
Take through existing facilities	33,333

Source: West Yost, 2023 SFI (Appendix 6b, Volume 2)

5.5.1 Facility and Operating Assumptions for Puts

The facility and operational assumptions for the Reduced Storage Alternative are based on the assumptions used in the put and take operations facilitating the use of Operational Band 2 in the 2018 SFI.⁶ Puts for this alternative were assumed to be conducted half by wet-water recharge and half by in-lieu recharge, which is identical to the assumption used in the 2018 SFI for the first 100,000 af of storage space used in excess of that projected to be used by the Parties. **Table 5-1** shows the assumed allocation of the puts. Each Stakeholder's annual in-lieu recharge was assumed to be identical to the assumptions used for the Storage and Recovery operations in the 2018 SFI. About 2,740 afy of puts were assumed to occur at the MVWD's ASR wells and about 9,760 afy of puts were assumed to be recharged in existing spreading basins (see **Figure 5-1** for locations). Wet-water recharge in spreading basins was conducted using the following schedule: recharge occurs in MZ-1 first up to its spreading capacity, then in MZ-3 up to its spreading capacity, and finally in MZ-2.

⁴ PUTs (the components to recharge water to the Chino Basin)

⁵ TAKEs (the components to extract groundwater and convey potable water supply)

⁶ See Scenario 2C of the 2018 SFI (WEI, 2018).

5.5.2 Facility and Operating Assumptions for Takes

All takes for the Reduced Storage Alternative are assumed to occur through existing wells. Pumping is distributed based on the IEUA's and the Appropriative Pool Parties' contractual obligations for the Dry-Year Yield Program (DYYP). This alternative assumes maximum annual takes of 33,333 afy, consistent with the takes specified in the DYYP contract. **Table 5-2** shows the allocation of takes by Appropriative Pool Party for this alternative. All takes are assumed to occur through the respective Parties' existing facilities.

Table 5-2
TOTAL VOLUME OF TAKES FROM EXISTING WELLS IN AFY

Stakeholder	Reduced Storage Alternative
Chino	0
Chino Hills	1,462
Pomona	1,402
Monta Vista Water District	5,174
Upland	3,031
Ontario	8,158
Cucamonga Valley Water District	11,468
Fontana Water Company	2,638
Total	33,333

5.5.3 Alternative 1: Reduced Storage Alternative Analysis

The following evaluation also includes identification of an environmentally superior alternative to the Project as required by the CEQA Guidelines. A summary comparative discussion of the Reduced Storage Alternative in terms of the specific issues evaluated in this RDSEIR (air quality, biological resources, cultural resources, energy, greenhouse gas, hydrology and water quality, tribal cultural resources, and utilities/service systems [water, electricity, and natural gas]) is provided below.

Air Quality: Construction of new facilities is not anticipated under the Reduced Storage Alternative, and any construction would be minimal at existing facilities to achieve the increased capacities described above. Therefore, the construction air quality impact is forecast to be reduced for the Reduced Storage Alternative, and would avoid a significant and unavoidable impact for construction emissions when compared to the OBMPU. Similarly, it is forecast that more intensive operational use of existing facilities as proposed under this alternative would require less overall electricity to operate than it would to operate the facilities proposed under the OBMPU, that could generate air emissions. This is because this alternative would increase the use of existing facilities, but would not include the operation of new facilities, thereby minimizing potential electricity consumption. However, the Reduced Storage Alternative would potentially result in unplanned continued or greater reliance on imported water to the meet demand gap that could result from not going forward with the full Safe Storage Capacity increase to 900,000 AF proposed under the OBMPU. This could therefore result in air emissions related to the energy require to convey imported from water its source to the Chino Basin. As no new facilities would be proposed under the Reduced Storage Alternative, no mitigation would be required to reduce construction emissions. However, mitigation is required to be implemented—primarily minimization of construction emissions through limiting potential sources of fugitive dust, through minimization of construction equipment emissions, and through the use of Tier 4 equipment to

reduce NO_x emissions—to minimize the impact of the OBMPU, but would ultimately result in a significant and unavoidable impact related to NO_x emissions during construction. As such, under this evaluation and set of assumptions the Reduced Storage Alternative would have less overall construction emissions, but may result in greater operational emissions than the proposed Project. Regardless, this alternative would avoid a significant impact related to construction generated NO_x emissions and would not otherwise result in significant air quality impacts.

Biological Resources: Both direct and indirect impacts to Biological Resources would be substantially reduced and less than significant under the Reduced Storage Alternative because this Alternative would increase use of existing facilities, and therefore would not require new disturbance of biological resources. The impacts identified under the OBMPU from SAR diversions would likely be reduced to less than significant, and the increased use of existing facilities is not anticipated to result in additional diversions from the SAR. When mitigation is implemented—primarily avoidance of biologically sensitive areas or compensation to offset losses to sensitive biological resources—a potential for significant impacts to occur exists under the OBMPU, which could be avoided under the Reduced Storage Alternative. As such, under this evaluation and set of assumptions the proposed Project's effects on biological resources are considered to be greater than the Reduced Storage Alternative. As such, under this evaluation and set of assumptions, the Reduced Storage Alternative would avoid a significant impact related to biological resources.

Cultural Resources: The OBMPU will disturb a greater amount of area, whereas the Reduced Storage Alternative would not involve construction of new facilities, and any construction would be minimal at existing facilities to achieve the increased capacities described above. As such, the potential for encountering cultural resources is greater under the OBMPU when compared to the Reduced Storage Alternative. The Reduced Storage Alternative would only result in a minimal potential to impact cultural resources as any ground disturbance would occur within existing disturbed facilities. When mitigation is implemented—primarily avoidance of culturally sensitive areas, further site-specific study of large scale OBMPU projects, and specific treatment requirements for buried cultural materials that may be uncovered during construction of future projects—the OBMPU is forecast to cause less than significant impacts to cultural resources, and the same would be applied to the Reduced Storage Alternative. Under this evaluation and set of assumptions the Reduced Storage Alternative would have less impacts on cultural resources when compared to the proposed OBMPU.

Energy: As stated under Air Quality, above, the Reduced Storage Alternative will demand less overall energy because it will not construct new facilities. However, the Reduced Storage Alternative would require additional electricity to operate existing facilities in the manner presented under the description of the Reduced Storage Alternative, above. Furthermore, the Reduced Storage Alternative would potentially result in unplanned continued or greater reliance on imported water to meet demand gap that could result from not going forward with the full Safe Storage Capacity increase to 900,000 AF proposed under the OBMPU. This could, in turn, result in an additional indirect demand for energy by way of increased imported water from the SWP, which is more energy intensive, and thereby requires greater energy to reach the Chino Basin than would locally sourced water. However, IEUA and other OBMPU stakeholders in the Chino Basin have installed and are continuing to install alternative (non-fossil fuel energy generation systems) power generating systems (primarily solar photovoltaic systems and digesters that utilize biosolids). Regardless, through adherence to and implementation of the GHG and energy mitigation measures, local General Plan policies, State and Federal regulations pertaining to energy conservation, SCE programs, and other existing regulations, the OBMPU's potential energy-related cumulative and Program-specific impacts can be controlled and will be

reduced below a level of significance. The same is assumed for projects that may be developed under the Reduced Storage Alternative. Under this evaluation and set of assumptions, neither the Reduced Storage Alternative nor the OBMPU would result in significant energy impacts, though the OBMPU would likely result in lesser operational energy impacts than would the Reduced Storage Alternative.

Greenhouse Gas: GHG emissions from construction would be minimal and reduced under the Reduced Storage Alternative, as construction of new facilities is not anticipated to be required. Thus, any construction would be minimal at existing facilities to achieve the increased capacities described above. Operational GHG impacts attributable to the OBMPU were evaluated qualitatively, and were determined to be less than significant. This is because, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 AF would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5** and **4.6-6**, the OBMPU would offset Project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Based on the preceding comparative evaluation of OBMPU and Reduced Storage Alternative activities, the level of construction GHG impact is forecast to be substantially reduced for the Reduced Storage Alternative. However, it is forecast that this alternative's operations would demand more electricity that would cause GHG emissions, even though no new facilities would be required under this Alternative. Operational GHG impacts attributable to the OBMPU were evaluated qualitatively, and were determined to be less than significant. This is because, by reducing the demand for importing water, which is energy intensive and generates GHG emissions, the implementation of the OBMPU and the facilities needed to achieve a Safe Storage Capacity of up to 900,000 AF would increase the availability of local water supply within the Basin, and, as demonstrated in **Tables 4.6-5** and **4.6-6**, the OBMPU would offset Project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project. Neither the Reduced Storage Alternative would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, while the OBMPU would offset Project specific and cumulative GHG emissions, neither Alternative would result in a significant GHG impact. Under this evaluation and set of assumptions the Reduced Storage Alternative would have substantially less overall construction emissions when compared to the OBMPU, while OBMPU would result in less operational emissions, but the impact of both alternatives may still be considered to be less than significant.

Hydrology and Water Quality; Utilities and Service Systems: While impacts under Hydrology and Water Quality are anticipated to remain mitigable, and therefore less than significant, a challenge that would result from implementing the Reduced Storage Alternative is that many of the facilities designed to treat water within the Basin that are proposed as part of the OBMPU—the Advanced Water Treatment Facility, upgrades to an existing recycled water treatment plant to desalt effluent, upgrades to the WFA Agua de Lejos Treatment Plant capacity for in-lieu recharge—would not be implemented under the Reduced Storage Alternative. Therefore, under the Reduced Storage Alternative, there is a greater potential for degradation of water quality from TDS and Nitrate concentrations, and while mitigation is available to minimize potentially significant impacts thereof, the cost to accomplish the minimization of high concentrations of TDS and Nitrate could be significantly greater than under the OBMPU. As such, though impacts under both the OBMPU and the Reduced Storage Alternative are anticipated to be less than significant with mitigation incorporated, the Reduced Storage Alternative would result in greater impacts under Hydrology and Water Quality than the OBMPU.

In regard to impacts related to net recharge, pumping sustainability, land subsidence, hydraulic control, and movement of water anomalies, it was determined in the SFI that Scenario 2a (i.e. the Reduced Storage Alternative) would result in less than significant impacts thereof, with the implementation of mitigation measures. Refer to **Table 5-3**, below, which is extracted both from the SFI and contains parts of **Table 4.7-4** of **Subchapter 4.7, Hydrology and Water Quality**.

Table 5-3
SUMMARY OF CONCLUSIONS FOR THE REDUCED STORAGE ALTERNATIVE

Criteria	The Reduced Storage Alternative
Operational Bands	2
Range in Managed Storage Used for Storage and Recovery Programs	700,000 to 800,000 af
Average Reduction in Net Recharge over Storage and Recovery Program (afy)	-1,700
Risk of New Pumping Sustainability Challenges	Potential new pumping sustainability challenges at wells near the assumed wells that will facilitate Storage and Recovery. These challenges are expected to be localized and temporary and would be mitigated.
Risk of New Land Subsidence	No risk of new land subsidence is projected to occur.
Hydraulic Control	Maintained through FY 2060
Riparian Vegetation	Impacts on riparian vegetation are projected to be negligible.
Movement of Water Quality Anomalies	No scenario is projected to result in any known plume impacting a well operated by an Appropriative Pool party that is not already projected to be impacted under the Baseline Scenario.

Based on the above information, implementation of the Reduced Storage Alternative, as with the OBMPU, would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that it may impede sustainable groundwater management of the Basin.

Regarding flood hazards and contribution thereof, the Reduced Storage Alternative, with a smaller overall construction footprint, and through the elimination of storage basins, has less potential to install facilities within flood hazard areas or install facilities that might cause a flood hazard. Regardless, both the OBMPU and Reduced Storage Alternative are forecast to have less than significant adverse impact under this environmental topic.

Tribal Cultural Resources: Simply because the OBMPU would disturb a greater amount of area, the potential for encountering Tribal Cultural Resources is greater under the OBMPU. The Reduced Storage Alternative would substantially reduce impacts related to ground disturbance because it would enhance the utilization existing facilities, rather than implementing new facilities. Thus, the Reduced Storage Alternative would have similar impacts to the OBMPU, but the impacts would be less extensive due to the reduced area that would be disturbed from projects under the Reduced Storage Alternative. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale OBMPU projects, and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects—both the OBMPU and Reduced Storage Alternative are forecast to cause less than significant impacts to tribal cultural resources. Under this evaluation and set of assumptions the Reduced Storage Alternative would have slightly less impacts on Tribal Cultural Resources when compared to the OBMPU, but both would ultimately result in less than significant impacts to tribal cultural resources.

Utilities and Service Systems: Given that the Reduced Storage Alternative would avoid a significant air quality emissions impact as a result of reduction in construction emissions, it would not result in a significant and unavoidable impact related to construction of water related infrastructure. The Reduced Storage Alternative would avoid the significant impact under Utilities and Service Systems that was identified under the OBMPU.

The Reduced Storage Alternative would be feasible, but would not meet most of the fundamental Project objectives to the same degree outlined in the OBMPU Project Description, which are to enhance Basin water supplies through improving water supply reliability, protect and enhance water quality, enhance management of the Basin, and equitably finance the OBMPU, to the extent that the OBMPU would meet these goals. Specifically, the Reduced Storage Alternative would not meet the OBMPU objectives to protect and enhance water quality and equitably finance the OBMPU.

The Reduced Storage Alternative has comparable, if reduced environmental impacts for all of the resource issues except hydrology and water quality, and for operational GHG emissions, which is consistent with it being a “reduced project” alternative, i.e., a component of the OBMPU. It would avoid any significant environmental impacts caused by the OBMPU as identified in **Chapter 4, Environmental Impact Analysis**.

5.6 SUMMARY OF ALTERNATIVES

A summary of impacts of the alternatives compared to the Proposed Project is included in **Table 1.6-1**, pursuant to CEQA Guidelines Section 15126.6(d).

5.7 CONCLUSION

CEQA Guidelines Section 15126.6(b), indicates that a list of reasonable alternatives must be developed and considered by the lead agency. Elimination of potential environmental impacts of the proposed Project should be considered when developing potential alternatives. As evaluated in **Chapter 2, Introduction** of this EIR, the significant impacts of the proposed Project are: Air Quality, Biological Resources, and Utilities and Service Systems.

The No Project/Baseline Alternative has comparable environmental impacts for all of the resource issues to the Project, except for those related to hydrology/water quality. The No Project/Baseline Alternative is forecast to have significant unavoidable adverse impacts to Hydrology and Water Quality, and would cause greater significant unavoidable adverse impacts under Utilities and Service Systems than the OBMPU. Further, although the No Project/Baseline Alternative would reduce potentially significant impacts identified in this RDSEIR as compared to the proposed Project, it would lead to greater impacts in some other areas, including Hydrology and Water Quality and Utilities and Service Systems. In the final analysis, the No Project/Baseline Alternative cannot be considered the environmentally superior alternative to the proposed Project from a total environment standpoint, because the environmental damage from implementing it is forecast to cause a significant adverse impact when compared to implementing the OBMPU.

As with the No Project/Baseline Alternative, the No Project Plus Alternative has comparable environmental impacts for all of the resource issues to the Project, except for those related to hydrology/water quality. The No Project Plus Alternative is forecast to have significant unavoidable adverse impacts to Hydrology and Water Quality, and would cause greater significant unavoidable adverse impacts under Utilities and Service Systems than the OBMPU. Further,

although the No Project Plus Alternative would reduce potentially significant impacts identified in this RDSEIR as compared to the proposed Project, it would lead to greater impacts in some other areas, including Hydrology and Water Quality and Utilities and Service Systems. In the final analysis, the No Project Plus Alternative cannot be considered the environmentally superior alternative to the proposed Project from a total environment standpoint, because the environmental damage from implementing it is forecast to cause a significant adverse impact when compared to implementing the OBMPU.

The Reduced Storage Alternative would reduce impacts in all categories as compared to the proposed Project except Hydrology and Water Quality. This is because the Reduced Storage Alternative would not install any new facilities designed to treat water within the Basin, and therefore, there is a greater potential for degradation of water quality from TDS and Nitrate concentration. While mitigation is available to minimize degradation of water quality, the cost to accomplish the minimization of high concentrations of TDS and Nitrate could be significantly greater than under the OBMPU. The Reduced Storage Alternative would minimize impacts under Biological Resources and Air Quality as compared to the proposed Project, and the extent to which this Alternative would minimize impacts is great enough to eliminate significant impacts under both issues. The Reduced Storage Alternative does not cause any new significant impact under any other categories except Hydrology and Water Quality when compared to the OBMPU. Accordingly, the Reduced Storage Alternative would be considered the environmental superior alternative because it would reduce Biological Resources and Air Quality impacts below a level of significance, although it would result in greater but still less than significant, impacts to Hydrology and Water Quality than the proposed Project.

Table 1.6-1

TABULAR COMPARISON OF PROJECT, NO PROJECT/BASELINE, AND REDUCED STORAGE ALTERNATIVE

	<i>Would the Project Result in Significant Adverse Impacts to the Resource Issues?</i>	<i>Would the Alternative Result in Equal, Greater, or Less Impacts than the Project?</i>		
	Proposed Project (SSC up to 900,000 af)	No Project/ Baseline Alternative	Reduced Storage Alternative	No Project Plus Alternative
Aesthetics	No Impacts LSM	▼	▼	▼
Agricultural	No Impacts LSM	▼	▼	▼
Air Quality	Yes Impacts would be Significant	▼	▼	▼
Biological Resources	Yes Impacts would be Significant	▼	▼	▼
Cultural Resources	No Impacts LSM	▼	▼	▼
Energy	No Impacts LSM	=	=	▲
Geology and Soils	No Impacts LSM	▼	▼	▼
Greenhouse Gas	No Impacts LSM	=	=	▲
Hazards and Hazardous Materials	No Impacts LSM	▼	▼	▼

	<i>Would the Project Result in Significant Adverse Impacts to the Resource Issues?</i>	<i>Would the Alternative Result in Equal, Greater, or Less Impacts than the Project?</i>		
	Proposed Project (SSC up to 900,000 af)	No Project/ Baseline Alternative	Reduced Storage Alternative	No Project Plus Alternative
Hydrology and Water Quality	No Impacts LSM	▲	▲	▲
Land Use / Planning	No Impacts LSM	▼	▼	▼
Mineral Resources	No Impacts LSM	▼	▼	▼
Noise	No Impacts LSM	▼	▼	▼
Population / Housing	No Impacts LSM	▼	▼	▼
Public Services	No Impacts LSM	▼	▼	▼
Recreation	No Impacts LSM	▼	▼	▼
Transportation / Traffic	No Impacts LSM	▼	▼	▼
Tribal Cultural Resources	No Impacts LSM	▼	▼	▼
Utilities and Service Systems	Yes Impacts would be Significant	▼	▼	▲
Wildfire	No Impacts LSM	▼	▼	▼

▲ Alternative is likely to result in greater impacts to issue when compared to Proposed Project.

▼ Alternative is likely to result in reduced impacts to issue when compared to Proposed Project.

= Alternative is likely to result in comparable overall impacts to issue when compared to the Proposed Project.

LSM = less than significant with mitigation measures

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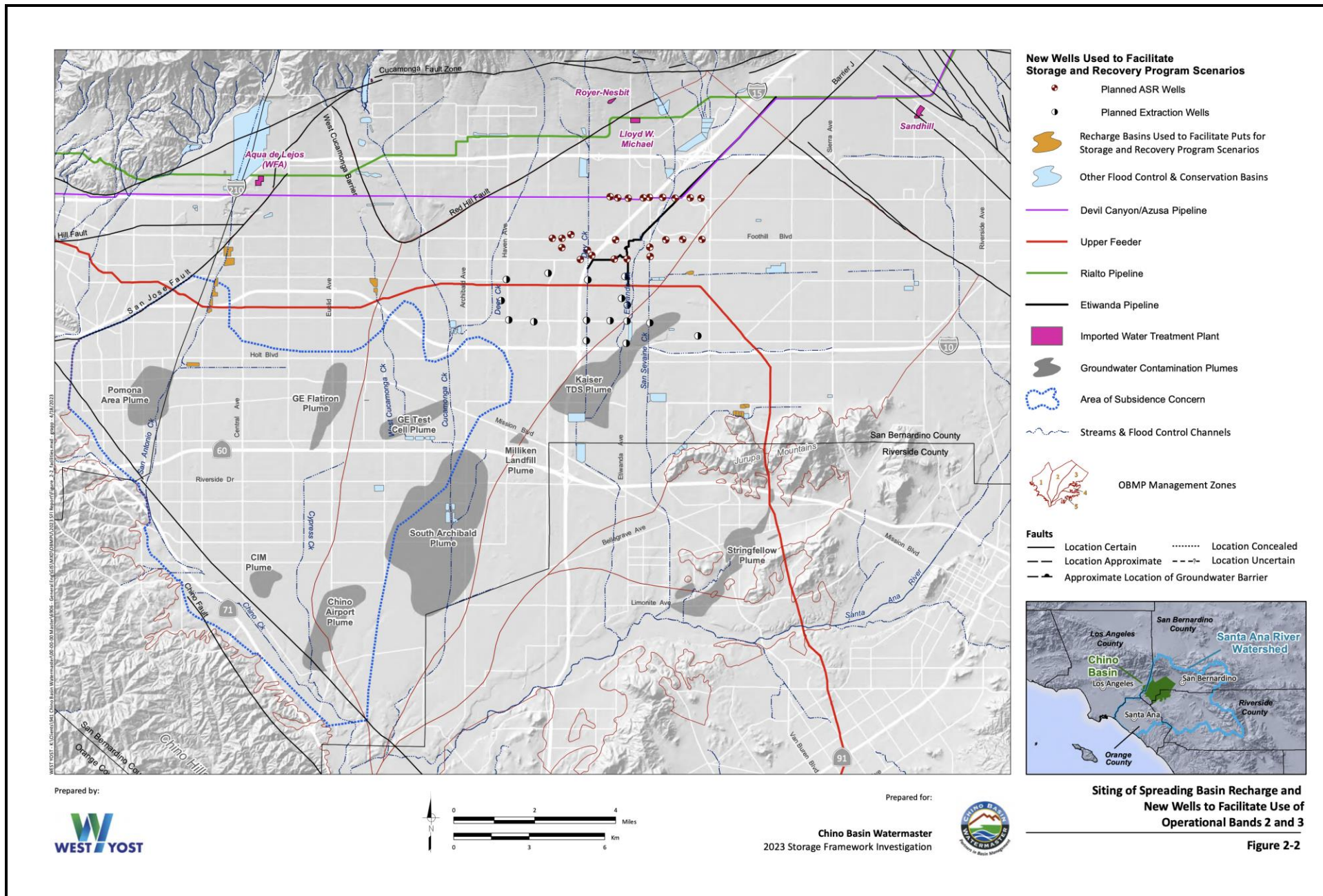


FIGURE 5-1

Tom Dodson & Associates
Environmental Consultants

Siting of Spreading Basin Recharge and New Well to Facilitate Use of Operational Bands 2 and 3

CHAPTER 6 – TOPICAL ISSUES

All Chapter 6 figures are located at the end of this chapter, not immediately following their reference in the text.

Each environmental document contains a certain amount of duplication to ensure that information is conveyed to the decision-makers and interested members of the public in an organized fashion. Chapter 4 contains a detailed discussion of environmental effects that may result from implementing the proposed Project. This includes a discussion of Project-specific and cumulative environmental impacts, as well as discussion of unavoidable adverse impacts for each topic evaluated in the EIR. This section of the EIR combines three “topical issues” that are mandated in State CEQA Guidelines Section 15126, which states: “The subjects listed below shall be discussed...preferably in separate sections or paragraphs of the EIR.” These sections are: (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented, and (d) Growth-Inducing Impact of the Proposed Project. Section 15130 requires a discussion of Cumulative Impacts. Because of the importance of this topic, a summary of cumulative effects is included in this Chapter 6. The other major topics required in an EIR (Significant Environmental Effects; Unavoidable Significant Environmental Effects; and Mitigation Measures) are specifically addressed above in Chapter 4. Alternatives to the proposed Project are evaluated in Chapter 5.

6.1 GROWTH-INDUCING IMPACTS

CEQA requires a discussion of the ways in which a project could be growth-inducing. (Public Resources Code, § 21100, subd. (b)(5); CEQA Guidelines, §§ 15126, subd. (d), 15126.2, subd. (d).) The CEQA Guidelines identify a project as growth-inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. New employees from commercial or industrial development and new population from residential development represent direct forms of growth. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in an area. Under CEQA, growth inducement is not considered necessarily detrimental, beneficial, or of little significance to the environment. (CEQA Guidelines § 15126.2, subd. (d).)

A project could indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts substantial additional population or new economic activity. However, a project’s potential to induce growth does not automatically result in growth. Growth can only happen through capital investment in new economic opportunities by the private or public sectors. Development pressures are a result of economic investment in a particular locality. Without the increase in demand for services and utilities growth demand stops and these service and utility infrastructure systems do not have to grow to meet new demand. These pressures help to structure the local politics of growth and the local jurisdiction’s posture on growth management and land use policy. The land use policies of local municipalities and counties regulate growth at the local level, not the actions and policies of utility agencies, such as the water providers in the Chino Basin.

Growth inducement may also occur if a project provides infrastructure or service capacity that accommodates growth beyond the levels currently permitted by local or regional land use plans and policies. This type of induced growth leads to conversion of adjacent acreage to higher intensity uses, either unexpectedly or through accelerated development. This conversion occurs

because the adjacent land becomes more suitable for development and, hence, more valuable because of the availability of the new infrastructure.

6.1.1 Direct Growth-Inducing Effects

The OBMPU proposes broad management actions to implement a coherent program for meeting future water supply requirements, ultimately for the maximum population that will inhabit the cities and communities in the Chino Basin based on their current General Plans. The OBMPU does not propose creation of housing, industrial facilities, or commercial facilities that could directly induce growth in the region. Also, based on the type of facilities envisioned under the OBMPU, the OBMPU facilities would not include the creation of a substantial number of new jobs.

The Project would result in the installation of a variety of new water infrastructure facilities and a modification to overall operation/management of the Chino Basin to achieve specific management goals. It is anticipated that short-term construction activities over the next 20 years would be met from existing construction companies in Southern California in response to Watermaster and Stakeholder contracts. Based on the rate of future facility implementation and the availability of construction companies and workers, no new growth is forecast to be induced. The continued and expanded operations and efforts envisioned by the OBMPU will not generate a substantial increase in employment or induce substantial growth. Based on the foregoing analysis and findings, the future OBMPU facilities will not directly result in any significant population growth, and would not result in population growth for the Chino Basin cities and communities beyond that reflected in adopted Southern California Association of Governments (SCAG) and General Plan growth projections.

6.1.2 Indirect Growth-Inducing Effects

Approval of the OBMPU and its implementation will not cause or contribute to non-program-related “leap frog” or “premature” development because the purpose of the program is to provide an overall management strategy, tied to specific facilities and management actions, that will provide the Chino Basin with a sustainable water supply for the future forecast population, partially based on effective management of the Chino Basin groundwater resources. As noted above, it does not generate a large number of new jobs. It will result in more infrastructure construction within the Chino Basin over the next 20 years, but due to the available construction resources in Southern California, no significant influx of new construction workers is forecast to occur in the region. The indirect effect of implementing the OBMPU programs and future site-specific projects is not forecast to cause substantial indirect growth inducing effects.

The position taken in this document is that the utility planning process is more appropriately playing a passive (accommodating) role, not an active (inducing) role. Actual future growth within the Chino Basin is controlled by local land use plans that establish the type of future development that will foster continuing growth of population throughout Southern California. If communities within the Project area chose to restrict growth and maintain a certain vision of the future as a static or slowly growing entity, the land use planning agencies (cities and counties) have the opportunity during the general planning process to establish such plans. Under such circumstances, the water utilities would have designed their future service plans to accommodate a level of future growth consistent with available resources. The future water demand forecasts for all water purveyors are dictated by the General Plans of the land use planning agencies, and the OBMPU represents a collective or cumulative effort to create a sustainable water supply through 2040.

In reality, however, the water supply agencies, acting as responsible water planning agencies, must plan for a level of future growth that appears to match available water resources with forecast growth through the 2040 planning horizon. At present, the domestic water agency water supply plans (Urban Water Management Plans) rely to a certain extent on water importation. The OBMPU provides an alternative water management program for the Chino Basin that has a goal to reduce reliance on imported water (recycled water, desalter programs, groundwater recharge programs, etc.). Implementation of the OBMPU programs still allow the water supply agencies to accommodate growth as envisioned in the applicable area General Plans and their respective service areas. Based on this analysis, implementation of the OBMPU program is not considered to be a significant growth inducing action.

6.2 CUMULATIVE IMPACTS

The following text summarizes the cumulative impact analyses provided in Chapter 4 for each environmental issue. The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contributions to area-wide or community environmental impacts when added to other or all development occurring within an area. The State CEQA Guidelines provide two alternative methods for making cumulative impact forecasts: (1) a list of past, present, and reasonably anticipated projects in the Project area; or (2) the broad growth impact forecast contained in general or regional plans. Because of the planning character of the Project, it will be evaluated in the context of adopted General Plans. From a water planning perspective, the 2000 OBMP PEIR (Peace I Agreement) and the 2010 Peace II SEIR (Peace II Agreement) represent a cumulative, or carrying capacity, evaluation of water resources in the Chino Basin. Thus, the analysis of Chino Basin water resources contained in this document represents a cumulative analysis of the activities and facilities required to manage the Basin's water resources, under current conditions.

Since the DSEIR was circulated in 2020, some cumulative projects with regional significance have been certified, or approved for implementation. For instance, in May of 2022, IEUA certified the Chino Basin Program (CBP) PEIR. While this document is presently undergoing CEQA litigation as of the publication of this RDSEIR, the CBP as a whole was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded \$206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 afy of recycled water in the Chino Basin and extract the water during call years, which will likely be in future dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new 15,000 afy AWPf and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPf for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits. In order to accomplish the water exchange outlined above, the CBP would install new water and wastewater type infrastructure within the Chino Basin, and would ultimately result in additional groundwater supply therein. The CBP contemplates the development of 37 wells of various types, use of up to 4 existing IEUA member agency wells, installation of about 30 miles of pipeline, a 5 MG reservoir, 4 pump stations, 6 turn-outs, and up to 3 wellhead treatment facilities in addition to the AWPf and increase in SSC described above. Where pertinent, the impacts from implementing the CBP on behalf of the IEUA will be considered in this document as a possible cumulative impact.

Additionally, the CBP contemplated an increase in Safe Storage Capacity that would supersede the SSC that was accepted by the Court in 2021 as a result of the 2021 LSLS Addendum. Should the CBP PEIR be upheld by the Court or otherwise remain fundamentally unchanged as part of the CEQA litigation process, the SSC would be increased up to 720,000 af from July 1, 2030 through June 30, 2042, and to 580,000 af from July 1, 2042 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 af thereafter. The increase in SSC contemplated by both the 2021 LSLS Addendum and the 2022 CBP PEIR, however, would be superseded by the increase in SSC contemplated herein as part of the OBMPU RDSEIR.

No other projects were identified within the Project area or vicinity that would contribute directly to cumulative impacts or cumulative demand for local groundwater infrastructure. This does not include individual water infrastructure projects implemented by local water purveyors to supply potable water to customers. Most of the city General Plans for the Chino Basin assume that buildout or near buildout will occur within their jurisdiction by 2040. Thus, substantial general growth in these cities will occur concurrent with the implementation of the OBMPU. Individual water purveyor infrastructure will be implemented as needed in the future as growth occurs in the Chino Basin, but it is not possible to identify future specific projects without speculation about the rate of growth and the infrastructure required to meet associated growth in water demand. It is assumed that the proponents of such projects will incorporate the impact evaluations in this document as part of their cumulative impact analyses when such specific projects are proposed.

Because the OBMPU addresses comprehensive water management facilities or activities within a portion of the upper Santa Ana River watershed, there may also be other projects within the watershed that will be implemented. The only other such project that is currently defined sufficiently to address under this cumulative impact analysis is the Upper Santa Ana Habitat Conservation Plan (HCP) DEIR currently under consideration by the San Bernardino Valley Municipal Water District (Valley District). Where pertinent, the impacts from implementing the HCP on behalf of the upper Santa Ana River watershed will be considered in this document as a possible cumulative impact.

The cumulative impacts of implementing the proposed Project are outlined in Chapter 4 for each environmental issue. This RDSEIR concludes that three unavoidable significant adverse impacts, including cumulative effects, would result from implementing the OBMPU. These include: (1) construction-related NO_x emissions; (2) biological resources as the Project may result in a potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, and was concluded to be unavoidable because there may not be mitigation available to minimize the impacts of certain construction or operational activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources; and (3) utilities and service systems as a result of construction-related NO_x emissions and significant impacts to biological resources that would result from the extension of water- and wastewater-related infrastructure. All other issues identified in the Initial Study Environmental Checklist Form (Appendix G, State CEQA Guidelines) were found to be less than cumulatively considerable either in the Initial Study (Subchapter 8.2) or in this RDSEIR.

For the issues analyzed in this RDSEIR—air quality, biological resources, cultural resources, energy, greenhouse gas, hydrology and water quality, tribal cultural resources, and utilities and service systems—the following summary of cumulative effects is provided. The reader should also refer to the text for each of these issues in Chapter 4, and to the Initial Study provided as Subchapter 8.2 for more information.

Air Quality: Cumulative OBMPU related air quality impacts are discussed under Subchapter 4.2, Air Quality, of this RDSEIR. The CAAQS designates the Program area as nonattainment for O₃, PM₁₀, and PM_{2.5} while the NAAQS designates the Program area as nonattainment for O₃ and PM_{2.5}.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*. In this report the AQMD clearly states (Page D-3):

“...the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for TAC emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

Therefore, this analysis assumes that individual projects that would not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. Thus, such projects would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

The Program- and facility-specific evaluation of emissions presented in the preceding analysis demonstrates that OBMPU facility construction-source air pollutant emissions could result in contributions to exceedances of regional thresholds for NO_x.

The geographic scope for the analysis of cumulative impacts relative to sensitive receptors is the Chino Basin because sensitive receptors (e.g., residences, schools, and hospitals) are interspersed throughout the area where the proposed OBMPU facilities would be located. Cumulative growth in the Program area would have the potential to result in carbon monoxide hotspots and emissions of diesel particulate matter. However, emissions from OBMPU construction and operation, including emissions of carbon monoxide and PM_{2.5}, would be below significance thresholds that are designed to protect the health of sensitive receptors. Furthermore, the overall net vehicle trips associated with the OBMPU would be negligible. Therefore, the OBMPU would not result in a cumulatively considerable air quality impact on sensitive receptors.

The geographic scope for the analysis of cumulative impacts relative to odorous emissions is the area immediately surrounding the odor source. Objectionable odors are not cumulative in nature because the air emissions that cause the odors disperse rapidly beyond the odor source, making the odor less detectable. Cumulative projects as well as the OBMPU would be required to comply

with SCAQMD Rule 402 (Nuisance). Therefore, the OBMPU, in combination with other cumulative projects, would not result in a significant cumulative impact associated with odorous emissions.

All of the mitigation measures identified in the analysis under **Subsection 4.2.7** would be required to minimize cumulative impacts to the maximum extent feasible. However, even with the implementation of mitigation to minimize NO_x emissions during construction (**MM AQ-1**), the SCAQMD emissions thresholds would be exceeded. As Program construction-source emissions would be considered cumulatively significant, the proposed Project could result in a cumulatively considerable air quality impact.

Biological Resources: Cumulative biological resource impacts can only occur when such resources are not avoided, protected or mitigated as outlined above. The mitigation requirements outlined in Section 4.3.7 of Subchapter 4.3, Biological Resources, are identified to ensure that biological resources are avoided or otherwise protected or mitigated, such that no cumulatively considerable impacts to significant biological resources are forecast to occur if the proposed Project is implemented as analyzed in this document. The SAR HCP DEIR forecast that the only cumulatively considerable impacts to significant biological resources that would occur as a result of SAR HCP implementation, would be impacts to the Santa Ana sucker. This was a narrow finding because the mitigation available to protect this species cannot conclusively be determined to protect it from being significantly impacted by cumulative diversions from the Santa Ana River.

However, the covered activities outlined in the SAR HCP DEIR under **Tables 2-1** and **2-2** indicate that the majority of the covered activities (projects) in the SAR HCP DEIR do not overlap with that which are proposed as part of the OBMPU. Furthermore, the SAR HCP DEIR covered activities are defined in that, the amount of additional or new capture of flow proposed by diversion projects is defined for each covered activity. This OBMPU RDSEIR does not define the specific increase in capture that the proposed new storage basins and modifications to existing storage basins would achieve, as the designs for the individual facilities have not been defined in enough detail to make such assumptions. The two facilities that overlap between that which is proposed by the SAR HCP DEIR and this OBMPU RDSEIR are the modifications to Riverside Basin (called "Riverside Basin Recharge Project" in the SAR HCP DEIR) and the modifications to Jurupa Basin, the increase in capture for which was analyzed in the IEUA 2010 Recharge Master Plan Update (RMPU).

When considering the cumulative diversions within the Basin that are analyzed as part of the SAR HCP DEIR in conjunction with the diversions proposed in order to enable the implementation of IEUA's CBP (analyzed in the CBP PEIR), the OBMPU's contribution to additional diversion from the Santa Ana River would be cumulatively considerable due to the impacts to the Santa Ana sucker disclosed in both the CBP PEIR and SAR HCP DEIR. This is because in conjunction with Low Impact Development ordinances, local policies, and municipal storm water detention, existing regulations, when combined with the facilities proposed as part of the OBMPU, SAR HCP DEIR, and CBP PEIR will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species, such as least Bell's vireo, as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub. The SAR HCP DEIR has determined that the potential cumulative impacts of water management agencies in the Upper Santa Ana River Watershed to covered species and supporting habitat can be mitigated by implementing the HCP, except for one species. As such, due to the cumulative diversions proposed or already occurring within the Chino Basin, the OBMPU would have a potential to contribute cumulatively considerable impacts to the Santa Ana sucker. The SAR HCP

DEIR concluded that such impacts should be treated as cumulatively considerable and unavoidably significant given the possibility that the effectiveness of some of the HCP mitigation measures cannot be guaranteed to be successful. As a contributor to this cumulative effect and a Permittee Agency, the Watermaster concurs with this finding.

Regardless, to mitigate the effects of the cumulative diversions on habitat values and conservation objectives to the greatest extent feasible, regional organizations such as the Santa Ana Watershed Project Authority and San Bernardino Valley Water District—which is the Lead Agency proposing the SAR HCP—have developed local programs and partnerships to address cumulative impacts to habitat within Prado Basin. The Chino Basin Watermaster groundwater management and monitoring efforts include provisions to maintain groundwater levels sufficient to avoid adversely affecting existing habitat that relies on groundwater; this effort will be continued under the OBMPU, and is enforced by Mitigation Measure **BIO-25**, above.

While the OBMPU may result in surface flow diversions that would contribute to the cumulative effect, IEUA and Watermaster would continue to participate in regional planning efforts to mitigate habitat deterioration. The multi-agency coordination that presently occurs to achieve regional habitat conservation objectives aimed at protecting the habitat within Prado Basin will continue under the OBMPU, which will ensure that the cumulatively significant reduction in surface flows would not occur through minimization and mitigation to the greatest extent feasible. However, as stated above, the SAR HCP DEIR concluded that, cumulative diversions would potentially contribute cumulatively considerable impacts to the Santa Ana sucker, and therefore, impacts thereof would be cumulatively considerable and unavoidably significant.

Other cumulative impacts may include direct impacts such as the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the Project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas.

In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Therefore, these impacts should be quantified and analyzed in a second-tier environmental evaluation for future Program improvements.

There are other areas within the overall Project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. These areas are highly dependent upon the sites selected and final design of each Program goal, i.e., individual project, and if those actions cannot be reasonably or feasibly offset, the ultimate design of these Program improvements must be based on sound engineering. In each case where most environmental impacts cannot be fully avoided, it may be possible to avoid certain impacts by designs that avoid such impacts through sound mitigation-based planning at each step. Given the speculative nature of the locations of proposed OBMPU facilities, there is a potential that an individual OBMPU facility may be developed and have

operations within an area containing biological resources that cannot be avoided, even at the design level. Therefore, based on the discussion above, the Program's contribution to biological impacts is considered cumulatively considerable, and would result in a significant or cumulatively considerable adverse impact.

Cultural Resources: As the Chino Basin continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The Project vicinity contains many historical, archaeological, and paleontological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resource sites resulting in a significant cumulative impact.

The potential construction impacts of the OBMPU, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact to specific historical, archaeological, and paleontological resources if encountered during project construction. Mitigation has been identified in this document to minimize impacts to cultural resources, including those that would: exclude highly disturbed sites from requiring further cultural resource evaluation except to adhere to procedures pertaining to the treatment of accidental discoveries, unless the Implementing Agency is seeking State funding for the project; ensure that future OBMPU projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or the Implementing Agency is seeking State funding, will require a follow on Phase I Cultural Resources Investigation and enforce several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located; ensure that a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM for projects containing cultural resources; and, set a precedent for future OBMPU Projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. Implementation of Mitigation Measures **CUL-1** through **CUL-4** would minimize the contributions of the OBMPU to cumulatively significant impact on specific historical, archaeological, and paleontological resources, and the OBMPU's contribution would not be cumulatively considerable.

The Chino Basin area is largely urbanized with residential, commercial, and industrial development, though many areas still exist that have not historically been disturbed at depth, such as agricultural sites. As the area continues to develop, it is possible, but unlikely, that construction activities could impact unknown human remains. However, since the treatment of human resources is governed by Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5, the cumulative potential to impact human remains would be less than significant. Therefore, the implementation of the OBMPU would not result in a cumulatively considerable contribution to impacts on human remains. As a result, there will not be any cumulatively considerable contributions from OBMPU implementation to cultural resources, as broadly defined in Subchapter 4.4, from implementing the OBMPU as proposed.

Energy: The cumulative analysis of each energy issue evaluated in **Subchapter 4.5** of the RDSEIR determined that the proposed OBMPU would not result in a cumulatively considerable contribution to construction related energy impacts within the Chino Basin without the need for mitigation. Cumulative operational energy demands are analyzed at a general level, rather than through generation of specific operational energy demand calculations as with construction energy demands, above. While construction energy demand can be estimated utilizing basic

assumptions that apply to the whole of the types of OBMPU facilities that are being proposed, operational energy demands cannot be estimated utilizing these same assumptions for the reasons outlined in **Subchapter 4.2 and 4.5**. Based on the energy intensity shown in Table 4 of the Water-Energy Nexus Report¹ (**Table 4.6-5 in Subchapter 4.6, Greenhouse Gas**), reliance on local sources of water is significantly less energy intensive than relying on imported water from either the State Water Project or the Colorado River. Even the most energy-intensive local source is 25% less energy intensive than Colorado River water and more than 50% less than State Water Project water. Other sources of local supply included in the proposed Project, such as groundwater pumping, are 70% to 80% less energy intensive than imported water, with correspondingly lower GHG emissions. Thus, implementation of the proposed Project would result in a lower energy-intensity embedded in Basin water supplies than relying on alternative sources of supply, such as imported water from the State Water Project or Colorado River, which would minimize energy demands from the proposed OBMPU such that there would be no significant operational impact associated with energy demands.

Cumulative development in the Chino Basin would increase demand for energy resources. However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require increasingly more efficient appliances and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue improving through implementation of the existing Pavley regulations under AB 1493, and implementation of SCAG's Regional Transportation Plan/Sustainable Communities Strategy would reduce per capita vehicle miles traveled in the Chino Basin. Cumulative development in the Chino Basin will also be required to be consistent with applicable provisions of local General Plans related to energy efficiency and renewable energy as well as SCAG's Regional Transportation Plan/Sustainable Communities Strategy. Furthermore, the percentage of statewide electricity and natural gas consumption attributed to San Bernardino and Riverside Counties (approximately 11.7 percent [electricity both counties] and 8.3 percent [natural gas both counties], respectively) is equal to or lower than those counties' proportion of the statewide population (approximately 11.7 percent²). Therefore, because the overall electricity and natural gas (energy) usage is below or on average the same as the statewide average, the proposed Program's contribution to energy consumption would be less than cumulatively considerable, and thus a less than significant impact.

Greenhouse Gases/Global Climate Change: Impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Subsection 4.6.2, Climate Change Setting**), the cumulative worldwide and statewide effects of GHG emissions are substantial. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. As demonstrated in the analysis under **Subsection 4.3.5.2(b)**, above, the OBMPU would be consistent with the applicable goals of applicable federal, State and local plans and programs designed to reduce GHG emissions. The OBMPU would be consistent with: AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045 and, by

¹ Next 10, September 2021. The Future of California Water-Energy Nexus

https://www.next10.org/sites/default/files/2021-09/Next10-Water-Energy-Report_v2.pdf (accessed 09/26/23)

² According to the SCAG Local Profiles for 2021, the population of San Bernardino and Riverside Counties, when combined is 4,616,143 persons. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 07/20/23). According to the California Department of Finance, the California population was about 39,370,000 million in 2021.

<https://dof.ca.gov/forecasting/demographics/e-2-california-county-population-estimates-and-components-of-change-by-year/> (accessed 07/20/23).

extension, Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; SB 32's goal of reducing statewide emissions of greenhouse gases by 40% below 1990 levels by 2030; AB 1279's goal of reducing emissions to 85% below 1990 levels and carbon neutrality by 2045; Executive Order S-03-05's goal of reducing emissions to 80% below 1990 levels by 2050; and, CARB's 2022 Scoping Plan goals and objectives, which are based on compliance with AB 1279. Furthermore, the implementation of the Project will increase local water supplies, thereby avoiding the need to import water from remote sources, such as the Delta or Colorado River. By reducing the demand for importing water, which is energy intensive and generates GHG emissions, as demonstrated in **Tables 4.6-5 and 4.6-6**, the OBMPU will offset project specific and cumulative GHG emissions that would otherwise have occurred absent implementation of the Project, and therefore, the proposed OBMPU would not contribute to global climate change through an incremental contribution of greenhouse gases.

Hydrology and Water Quality: Cumulative impacts that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan would result from cumulative development and water management in the Chino Basin. As the proposed OBMPU only has the potential to impact the Chino Basin which, as noted above, is an adjudicated basin, the impacts discussion under this issue are inherently cumulative, i.e., look at the whole of the Basin. Therefore, by implementing the mitigation actions that the Watermaster may require to conduct future OBMPU projects, which are enforceable via Mitigation Measures **HYD-1** through **HYD-13**. These thirteen measures would: ensure that Watermaster gathers the appropriate data to: (1) determine whether future OBMPU projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, result in new subsidence, result in potential adverse impacts to Hydraulic Control, result in adverse impacts to riparian vegetation and habitat in Prado Basin, or result in potential degradation of water quality; (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a project or, where mitigation is not feasible, reject the project; and (3) address the plan of response by Watermaster should the Basin conditions to vary from the projections that have been modeled as part of the OBMPU (and all supporting documentation). Additional Mitigation Measures **HYD-14** through **HYD-20** include those that would: require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the Construction General Permit and Stormwater Pollution Prevention Plan, which are required for larger projects; ensure that drainage is managed through either runoff collection or development of a drainage plan for a given OBMPU project; require OBMPU projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites; require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future OBMPU facility sites; ensure that a management plan for each storage or recharge basin is established to ensure the safety of surrounding property and people from undue risks associated with water-related hazards such as flooding; ensure that significant polluted runoff does not occur from contaminated discharge that may result from refurbishing or capping a well; and ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. These measures would ensure that the OBMPU will not contribute to cumulatively considerable impacts on the Basin resulting in the obstruction of implementation of the Chino Basin Judgment. As such, with the implementation of Mitigation Measures **HYD-1** through **HYD-20**, the proposed Project would not result in a cumulatively considerable contribution to hydrology and water quality impacts.

Tribal Cultural Resources: OBMPU implementation can proceed without causing any unavoidable significant adverse impacts to Tribal Cultural Resources (TCRs). Upon implementation of

identified mitigation measures, the proposed OBMPU is not forecast to cause any direct, significant adverse impact to any site specific TCRs, and as a result the OBMPU has no potential to make a cumulatively considerable contribution to TCR impacts in the project area, i.e., the Chino Basin. This is because impacts to individual TCRs at specific sites would be mitigated and site specific; as such, the OBMPU's contribution to cumulative TCR impacts, whether significant or mitigated below significance thresholds, would not be cumulatively considerable. Any TCRs discovered on a project site that would be adversely impacted by proposed future OBMPU projects would be mitigated to a level of less than significant by implementing one or more of Mitigation Measures **TCR-1** through **TCR-3**. With implementation of the appropriate measures, OBMPU projects are not forecast to cause or contribute to cumulatively considerable tribal cultural resource impacts.

Utilities and Service Systems: Future cumulative development within the Chino Basin is expected to require new or expanded water supply resources or entitlements to serve the increase in urban development. However, a goal of the OBMPU is to ensure that water supply is reliable within the Chino Basin for the foreseeable future. Management actions to ensure adequate water supplies were evaluated based on various demand factors such as land development and community density. The cumulative analysis of each Utilities and Service System issue evaluated in Subchapter 4.9 of this RDSEIR and Section XVIII of the IS determined that the proposed OBMPU would result in a cumulatively considerable contribution to utilities and service system impacts within the Chino Basin, even with the implementation of mitigation measures. Cumulative impacts would occur as a result of construction of water and wastewater related facilities proposed by the OBMPU which could contribute to cumulatively considerable impacts from construction-related NO_x emissions, and construction relation potential to result in significant impacts on biological resources. All other issues were determined to contribute less than cumulatively considerable contributions to utilities and service systems impacts as the potential for the OBMPU to result in a cumulatively considerable contribution to such impacts would be less than significant.

6.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

State CEQA Guidelines Sections 15126, subd.(c), 15126.2 subd.(d), and 15127, require that, for certain types or categories of projects, an EIR must address significant irreversible environmental changes that would occur should the project be implemented. As presented at State CEQA Guidelines Section 15127, the topic of Significant Irreversible Environmental Changes need be addressed in EIRs prepared in connection with any of the following activities:

- (a) The adoption, amendment, or enactment of a plan, policy, or ordinance or a public agency;
- (b) The adoption by a local agency formation commission of a resolution making determinations; or
- (c) A project which will be subject to the requirements for preparing of an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 U.S.C. 4321-4347.

The Project marginally qualifies under CEQA Guidelines Section 15127, subd. (a), in that the proposed action consists of adoption of the OBMPU for the Chino Basin. As such, it was concluded that this RDSEIR analysis must address any significant irreversible environmental changes that would be involved in the proposed Project should it be implemented (CEQA Guidelines, §§ 15126(e), and 15127). An impact would fall into this category if:

- The project would involve a large commitment of nonrenewable resources;

- The primary and secondary impacts of the project would generally commit future generations to similar uses;
- A project involves uses in which irreversible damage could result from any potential environmental incidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project results in wasteful use of energy).

Determining whether implementation of the proposed OBMPU may result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed in such a way that there would be little possibility of recovering or restoring them for continued use. No such degradation or destruction of resources is anticipated as a result of the proposed Project. While the OBMPU will consume resources (energy, steel, concrete, etc.) none of the activities are forecast to cause a significant, permanent commitment of resources from Project implementation. As noted, various natural resources, in the form of construction materials and energy resources will be utilized in the construction of the Program facilities, and energy resources, in the form of electricity, natural gas and petroleum/chemical products, will be used during the long-term operations of the proposed facilities; however, their use is not expected to create a permanent and negative impact to the long-term availability of these resources.

If the OBMPU programs are effectively implemented, the following irreversible environmental changes or commitments of resources would be involved:

- a. The construction, installation and maintenance of pipelines, new wells, pump stations, desalter units, storage facilities and water treatment facilities and other public facilities, as proposed in the Peace II program, will involve the irreversible consumption of natural resources in the form of construction materials, water, and energy sources. Money, energy, and manpower will be expended to develop and maintain the facilities and operations but not at a level of significant impact.
- b. The development of individual properties in accordance with land uses designated in the OBMPU will, for all intents and purposes, eliminate the possibility of development of the land for other uses. Though not necessarily permanent or irreversible, the commitment to long term use will occur over the normal human time scale.
- c. A commitment of economic and manpower resources will be required for the long-term implementation of the OBMPU.
- d. Building materials, including forest and mineral products, will be permanently committed in construction projects related to the long-term implementation of the proposed Program.
- e. Expenditures of money, manpower, and materials will be made to maintain adequate levels of public service to the greater community while those services are undergoing disruption and modification within the Project area.
- f. A limited potential exists to cause the irreversible loss of critical habitat. The potential for the direct permanent loss of a species based on construction and implementation of the OBMPU is not considered a significant impact as alternative water sources or alternative sites can avoid such a significant permanent loss.

All other potential adverse impacts from implementing the proposed Project are considered reversible. Air emissions and water resources and water quality can be changed by both humans and nature over time by cleaning air and water and by reducing or providing alternative sources of water. In fact, the proposed Project includes a key element designed to clean groundwater contamination in the Chino Basin in conjunction with cooperative implementation of the Chino Desalter projects. Soils and geologic resources will be modified but can be modified in the future to suit different purposes.

Land uses and population growth can be considered irreversible on the short term, but the growth forecast for these two issues is not considered to be attributable to the proposed Project. Thus, through the incorporation of recommended mitigation measures together with the implementation of the OBMPU, limited significant irreversible environmental changes will be caused within the Project area that can be attributable to the proposed Project, and implementation of the extensive suite of mitigation measures in this RDSEIR will insure that all other potential irreversible environmental impacts, as identified above and described within Chapter 4, will not rise to a level of significance or can be adequately mitigated to a level of insignificance.

6.4 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL CHANGES

State CEQA Guidelines Sections 15126.2, subd. (b), require that an EIR describe significant impacts where the impacts cannot be alleviated without making it infeasible to achieve project objectives. This RDSEIR has identified three potential unavoidable significant adverse impacts from implementing the OBMPU: Air Quality from potential exceedances of SCAQMD thresholds for NO_x during construction; Biological Resources resulting from a potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation; and Utilities and Service Systems, resulting from construction of Water and Wastewater Infrastructure. Refer to discussions of these topics in Chapter 4 for the detailed evaluation and the rationale for why impacts cannot be mitigated to a less than significant impact level.

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CHAPTER 7 – PREPARATION RESOURCES

7.1 REPORT PREPARATION

7.1.1 Lead Agency

Pietro Cambiaso
Manager of Compliance and Sustainability
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Phone: (909) 993-1639
Email: Pcambias@ieua.org

7.1.2 EIR Consultant

Tom Dodson & Associates
2150 N. Arrowhead Avenue
San Bernardino, CA 92045
Phone: (909) 882-3612

Tom Dodson
Kaitlyn Dodson-Hamilton
Christine Camacho

West Yost
23692 Birtcher Drive
Lake Forest, CA 92630
Phone: (602) 962-6761

Garrett Rapp
Carolina Sanchez
Mark Wildermuth

7.1.3 EIR Technical Consultants

- *Final Program Environmental Impact Report for the Optimum Basin Management Program* (SCH#200041047), July 2000 prepared by Tom Dodson & Associates (2000 OBMP PEIR)
- *Final Program Environmental Impact Report for the Wastewater Facilities Master Plan, Recycled Water Master Plan, Organics Management Master Plan* (SCH#2002011116), June 2002 prepared by Tom Dodson & Associates
- *Final Subsequent Environmental Impact Report for Inland Empire Utilities Agency Peace II Project* (SCH#2000041047), September 2010 prepared by Tom Dodson & Associates (2010 Peace II SEIR)
- *IEUA Facilities Master Plan Final Environmental Impact Report* (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR)
- *IEUA Addendum to 2000 OBMP PEIR*, March 2017 prepared by Tom Dodson & Associates (2017 OBMP Addendum)
- *IEUA 2021 Local Storage Limitation Solution (LSLS) Addendum to 2000 OBMP PEIR*, March 2021 prepared by Tom Dodson & Associates (2021 LSLS Addendum)
- *Final 2020 Storage Management Plan*. December 2019. WEI. (2019)
- *Recharge Master Plan Update*. September 2018. WEI (2018)
- *Air Quality Impact Analysis Optimum Basin Management Program Update, Chino Basin, California*, dated April 24, 2023 prepared by Gerrick Environmental

- *Program Biological Resources Report, Optimum Basin Management Program Update for the Chino Basin Watermaster and Inland Empire Utilities Agency, May 15, 2023, prepared by Jacobs Engineering Group*
- CRM TECH collaborated on drafting the Cultural Resources Environmental Impact Evaluation (Chapter 4.4)
- *Optimum Basin Management Program Update Energy Analysis Chino Basin Watermaster, May 31, 2023, prepared by Urban Crossroads*
- *2020 Optimum Basin Management Program Update Report, 2020, prepared by WEI*
- *2020 Safe Yield Recalculation Final Report, May 15, 2020, prepared by WEI*
- *2023 Storage Framework Investigation, May 2023, prepared by West Yost*
- *Evaluation of the Local Storage Limitation Solution, February 2021, prepared by West Yost*
- *2020 State of the Basin Report, 2021, prepared by West Yost*
- *2021 Chino Basin Maximum Benefit Annual Report, 2021, prepared by West Yost*
- *2020 Optimum Basin Management Program Update Greenhouse Gas Assessment, 2023, prepared by Urban Crossroads*
- *Optimum Basin Management Program Update Energy Analysis Chino Basin Watermaster, May 31, 2023, prepared by Urban Crossroads*

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Historic Map, Aerial Photograph, and Record Collections:

- California Historic Resources Information System: reports and site records pertaining to the Chino Basin area; available at Eastern Information Center, University of California, Riverside, and South Central Coastal Information Center, California State University, Fullerton.
- General Land Office, U.S. Department of the Interior: land survey plat maps, 1850s-1910s; available at U.S. Bureau of Land Management, California Desert District, Moreno Valley.
- Google Earth: historic aerial photograph collection, 1984-2016; available through the Google Earth software.
- Nationwide Environmental Title Research Online: historic aerial photograph collection, 1938-2016; available at <http://www.historicaerials.com>.
- Natural History Museum of Los Angeles County, Vertebrate Paleontology Section: paleontology collection records; available at the museum, Los Angeles.
- San Bernardino County Museum, Division of Earth Sciences: Regional Paleontological Localities Inventory; available at the museum, Redlands.
- United States Geological Survey, U.S. Department of the Interior: topographic maps, various quadrangles (30', 15', and 7.5'), 1901-1996; available at Science Library, University of California, Riverside.

CHAPTER 8 – APPENDICES

8.1 NOTICE OF PREPARATION / NOP COMMENT LETTERS

8.2 INITIAL STUDY

8.3 DRAFT SEIR COMMENT LETTERS AND RESPONSES TO COMMENTS / USPS DELIVERY CONFIRMATION TO COMMENTERS

APPENDIX 8.1

NOTICE OF PREPARATION / NOP COMMENT LETTERS

NOTICE OF PREPARATION AND NOTICE OF PUBLIC SCOPING MEETING

Chino Basin Wastewater Optimum Basin Management Program Update

To: California Office of Planning and Research
Responsible and Trustee Agencies
Federal Agencies
Other Interested Parties

Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting

Project: Chino Basin Optimum Basin Management Program Update (OBMPU)

Lead Agency: Inland Empire Utilities Agency

Date: February 10, 2020

Notice of Preparation:

This Notice of Preparation (NOP) has been prepared to notify agencies and interested parties that the Inland Empire Utilities Agency (IEUA) as the Lead Agency has independently prepared an Initial Study and determined that there are potentially significant impacts associated with implementation of projects identified in the proposed Optimum Basin Management Program Update (OBMPU), and an Environmental Impact Report (EIR) is required. The OBMPU continues the OBMP's nine Program Elements (described in the attached Initial Study), and describes facility improvements needed to meet the OBMPU's long-term planning objectives over a thirty-year planning horizon. The OBMPU EIR will tier from prior OBMP environmental documents, including but not limited to the Final Program Environmental Impact Report for the Optimum Basin Management Program (SCH#200041047), July 2000, prepared by Tom Dodson & Associates (2000 OBMP PEIR). The IEUA has prepared this Notice of Preparation in accordance with the State CEQA Guidelines (Section 15082).

The Initial Study is attached to this Notice, along with maps of the project area. The Initial Study has identified the following issues to be addressed in the scope of the EIR: air quality, biology, cultural resources, energy, greenhouse gases, hydrology and water quality, tribal cultural resources, and utilities and service systems. The Initial Study has not identified any other issues identified in CEQA Guidelines Appendix G that raise potentially significant environmental impacts.

The IEUA is soliciting the input from interested persons and agencies to assist in the further development of the scope and content of the environmental information to be studied in the EIR. In accordance with CEQA, agencies are requested to review the Initial Study that describes a program of proposed facilities and activities and provide comments on environmental issues related to the statutory responsibilities of the agency. The EIR will be used by Chino Basin Watermaster when considering approval of the OBMPU and related documents.

In accordance with CEQA, comments to the NOP must be received by IEUA no later than 30 days after publication of this notice. The review period for this NOP is from February 10, 2020 to March 10, 2020. We request that comments to this NOP be received no later than March 10, 2020.

Please include a return address and contact name with your comments and send them via mail or email to the address shown below:

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Email: Slee@ieua.org; Telephone: 909-993-1600

Notice of Public Scoping Meeting:

A public scoping meeting will be held to receive verbal public comments and suggestions on the environmental issues associated with implementation of the OBMPU that will be addressed in the EIR. It will include a brief presentation providing an overview of the facilities proposed in the OBMPU. After the presentation, oral comments will be accepted. Written comment forms will be made available for those who wish to submit comments in writing at the scoping meeting. The scoping meeting will be open to the public and held at the following location:

Inland Empire Utility Agency
Agency Headquarters, Board Room
6075 Kimball Avenue, Building A
Chino, CA 91708

At 6:00 PM on Thursday, February 27, 2020

NOP COMMENT LETTERS

Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU)

Summary

SCH Number	2020020183
Lead Agency	Inland Empire Utilities Agency (<i>Inland Empire Utility Agency</i>)
Document Title	Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU)
Document Type	NOP - Notice of Preparation
Received	2/10/2020
Project Applicant	Inland Empire Utilities Agency
Present Land Use	Multiple

Document Description	<p>This project description focuses on the relationship between OBMPU Program Elements and activities and facilities proposed by the overall OBMPU programs that may be implemented if the proposed program is approved by the Chino Basin Watermaster (CBWM or Watermaster). However, because the CBWM is not considered a public agency, the Inland Empire Utilities Agency (IEUA), whose service area encompasses most of the Chino Basin, will serve as the Lead Agency for this environmental document and compliance with the CEQA. Actual implementation of the OBMPU activities described herein may be carried out by the CBWM or any of its member agencies/stakeholders in the Chino Groundwater Basin (Chino Basin) through the planning period, 2020 through 2050. The description of the OBMPU's scope in this document is of necessity expansive as it covers the nine (9) Program Elements (PEs) that make up the original OBMP, and which were analyzed in a 2000 Program Environmental Impact Report (2000 PEIR). The OBMPU is intended to address possible program activities and projects at a programmatic level over the next 30 years, with some site-specific detail where near-term future locations of facilities are known. The CBWM and stakeholders have been meeting to review Program Elements and define potential project activities and facilities for about the past two years. Since the Inland Empire Utilities Agency (IEUA) has jurisdiction throughout most of the Chino Basin, it has agreed to serve as the Lead Agency for purposes of complying with the California Environmental Quality Act (CEQA). The CBWM and parties/stakeholders of the OBMPU and regulatory agencies that will function as CEQA Responsible Agencies will have the option of relying upon this CEQA document for any future actions they take in support of the proposed program or an individual project described in this environmental document.</p>
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Contact Information	<p>Sylvie Lee Inland Empire Utilities Agency</p> <div>6075 Kimball Avenue Chino, CA 91708</div> <div>Phone : (909) 993-1953</div> <div>slee@ieua.org</div>
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Location

Coordinates	34°2'16.9"N 117°34'33.4"W
Counties	Riverside San Bernardino
Cross Streets	center of Basin @ intersection of Haven Avenue and Mission Blvd.
Total Acres	235 sq mi
State Highways	60
Railways	BNSF / Union Pacific
Airports	Ontario, Chino, Cable
Waterways	Upper Santa Ana River Watershed, Chino Creek

Notice of Completion

Review Period Start	2/10/2020
Review Period End	3/10/2020
Development Type	Water Facilities (Water Master Plan)(multiple Type)
Local Action	Other Action
Reviewing Agencies	California Air Resources Board California Coachella Valley Mountains Conservancy California Department of Conservation California Department of Fish and Wildlife, Inland Deserts Region 6 California Department of Fish and Wildlife, South Coast Region 5 California Department of Forestry and Fire Protection California Department of Parks and Recreation California Department of Pesticide Regulation California Department of Resources Recycling and Recovery California Department of Transportation, District 7 California Department of Transportation, District 8 California Department of Transportation, Division of Aeronautics California Department of Water Resources California Governor's Office of Emergency Services California Highway Patrol California Natural Resources Agency California Public Utilities Commission California Regional Water Quality Control Board, Colorado River Basin Region 7 California Regional Water Quality Control Board, Lahontan Victorville Region 6 California Regional Water Quality Control Board, Los Angeles Region 4 California Regional Water Quality Control Board, Santa Ana Region 8 California State Lands Commission Colorado River Board Department of Corrections Department of Toxic Substances Control Office of Historic Preservation State Water Resources Control Board, Division of Drinking Water State Water Resources Control Board, Division of Water Quality State Water Resources Control Board, Division of Water Rights California Native American Heritage Commission

Attachments

Environmental Document

CBW-271 Document Summary Transmittal form	PDF	519 K
OBMPU Initial Study (February 2020)	PDF	59673 K
OBMPU Notice of Preparation (February 2020)	PDF	72 K

NOC

Notice of Completion (NOP)	PDF	151 K
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State Comments

2020020183_NOP Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) Project 2-11-2020	PDF	242 K
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DIRECTORS

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ORANGE COUNTY WATER DISTRICT

ORANGE COUNTY'S GROUNDWATER AUTHORITY

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First Vice President
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Second Vice President
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General Manager
MICHAEL R. MARKUS, P.E., D.WRE

March 6, 2020

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino CA, 91708

Dear Ms. Lee:

The Orange County Water District (OCWD) appreciates the opportunity to comment on the Notice of Preparation (NOP) of an Environmental Impact Report (SCH 2020020183) for projects proposed in the Chino Basin Optimum Basin Management Program Update (OBMPU).

OCWD is a special district formed in 1933 by an act of the California Legislature. The District manages the groundwater basin that underlies north and central Orange County. Water produced from the basin is the primary water supply for approximately 2.4 million resident living within the District's boundaries. OCWD also owns more than 2,000 acres of land in the Prado Basin and is keenly interested in projects that may affect the Prado Basin.

By virtue of its statutory authority and its extensive activities in Prado Basin, including water conservation/stormwater capture and operation of constructed wetlands to enhance Santa Ana River water quality, OCWD is particularly sensitive to environmental values and natural resources in Prado Basin.

Prado Basin contains extensive areas that have been identified as Wetland Waters of the United States and jurisdictional Waters of the State. Additionally, the CA Department of Water Resources (DWR) has provided mapping tools in their Natural Communities Commonly Associated with Groundwater Dataset that show the distribution of riparian vegetation and wetlands in Prado Basin. The distribution of riparian vegetation and wetlands in Prado Basin and the occurrence of shallow groundwater and groundwater discharge to the ground surface (commonly referred to as 'rising groundwater' or 'groundwater seepage') in Prado Basin are typical of Groundwater Dependent Ecosystem (GDE). DWR defines a GDE as an "ecological community or species that is depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface". Figures 1 and 2 below show mapping of vegetation and wetlands in Prado Basin commonly associated with GDE. Figure 1 and 2 were generated from a DWR mapping tool available online at <https://gis.water.ca.gov/app/NCDatasetViewer/>. The mapping in Figure 2 uses data from the National Wetlands Inventory Version 2 published by the United States Fish and Wildlife Service (<https://www.fws.gov/wetlands/>).

Prado Basin contains the single largest forested wetland in coastal Southern California and supports an abundance and diversity of wildlife, including many listed and sensitive species. The Environmental Impact Report (EIR) for the OBMPU should evaluate potential effects the proposed projects may have on GDE in Prado Basin. The EIR should assess how proposed OBMPU projects change or affect surface water flow rates in Chino Creek, Mill Creek, and the Santa Ana River and how changes in surface water flow rates in these water bodies affect the levels and availability of shallow groundwater in and around Prado Basin and the effects these changes will have on sensitive riparian vegetation and riparian habitats. The EIR should assess how proposed changes in groundwater pumping, groundwater storage levels, or groundwater overdraft affect the levels and availability of shallow groundwater in and around Prado Basin and the effects these changes will have on sensitive riparian vegetation and riparian habitats in Prado Basin. The EIR should evaluate potential impacts of increased fire risk, riparian habitat loss and riparian habitat conversion to non-native plant species that may occur due to the projects proposed in the OBMPU. Riparian habitat is critical for the endangered Least Bell Vireo as a seasonal foraging and breeding ground.

The Upper Santa Ana River Sustainable Resource Alliance circulated a NOP for the EIR for the Upper Santa Ana River Habitat Conservation Plan (HCP). According to their website, <http://uppersarhcp.com/>, the purpose of the Upper Santa Ana River Sustainable Resources Alliance is to enable the water resource agencies to continue to provide and maintain a secure source of water for the residents and businesses in the watershed, and to conserve and maintain natural rivers and streams that provide habitat for a diversity of unique and rare species in the watershed. Implementation of projects contained in this HCP will reduce flow in the Santa Ana River. As the project description contained in the HCP identifies a number of reasonably foreseeable future projects that would affect Santa Ana River flows reaching Prado Basin, the OBMPU EIR should provide a quantitative analysis regarding how OBMPU projects would cumulatively impact Prado Basin habitat and groundwater levels in relation to those projects identified in the HCP.

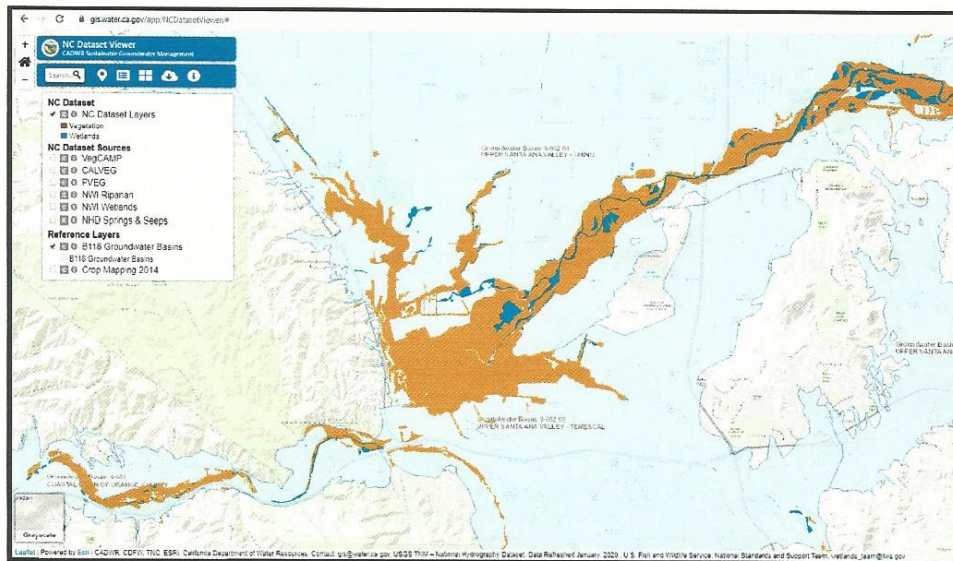


Figure 1 – DWR Mapping tool Generated Map depicting Prado Basin Vegetation and Wetlands

Ms. Sylvie Lee, P.E.
March 6, 2020
Page 3 of 3

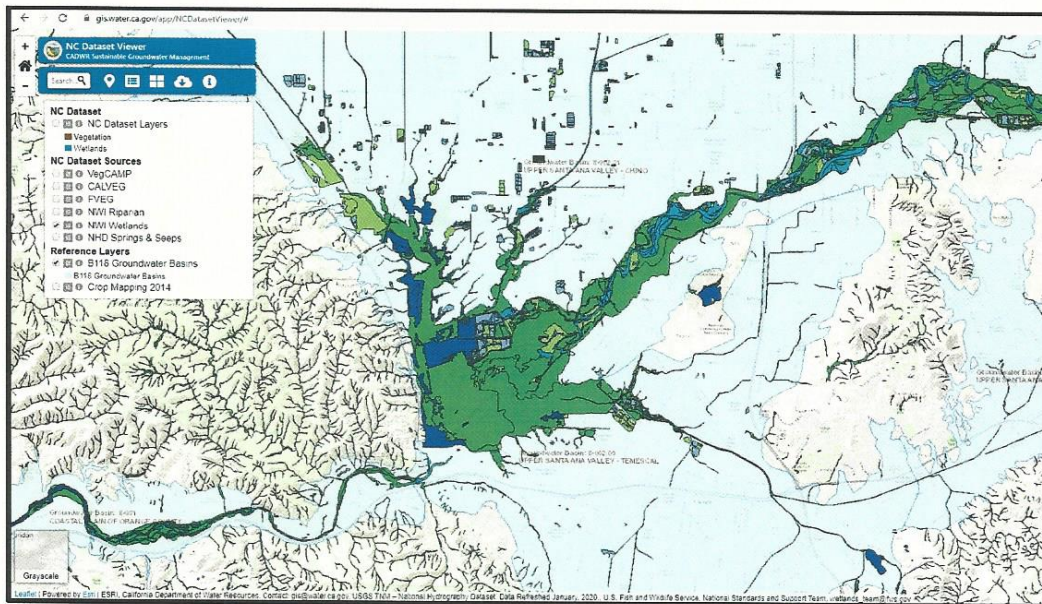


Figure 2 - DWR Mapping tool Generated Map depicting Wetlands Identified by National Wetlands Inventory

If you have any questions, please contact Kevin O'Toole at (714) 378-8248 or kotoole@ocwd.com.

Sincerely,

Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager

FACILITY PLANNING, CONSTRUCTION AND MANAGEMENT
P.O. Box 942883
Sacramento, CA 94283-0001



March 10, 2020

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Dear Ms. Lee:

The Inland Empire Utilities Agency (IEUA), as Lead Agency, has prepared a Notice of Preparation to notify agencies and interested parties that 1) the IEUA has independently prepared an Initial Study and determined potentially significant impacts are associated with the implementation of projects identified in the proposed Optimum Basin Management Program Update (OBMPU); and 2) an Environmental Impact Report (EIR) is required. The OBMPU continues the Optimum Basin Management Program's nine Program Elements (described in an Initial Study), and describes facility improvements needed to meet the OBMPU's long-term planning objectives over a 30-year planning horizon.

The California Department of Corrections and Rehabilitation (CDCR) operates the California Institution for Men and the California Institution for Women within the IEUA service area and considers local and regional environmental issues a priority. CDCR looks forward to the opportunity to comment on the OBMPU Draft EIR and continued collaboration with the IEUA, the City of Chino, San Bernardino County, and the Chino Basin Watermaster on issues that will be reviewed in the OBMPU Draft EIR.

Please do not hesitate to contact Peter Connelly, Senior Environmental Planner, via email at Peter.Connelly@cdcr.ca.gov, or by phone at (916) 255-3010, with any questions.

Sincerely,

A handwritten signature in blue ink that reads "Dean L. Borg".

DEAN L. BORG
Director
Facility Planning, Construction and Management

cc: Peter Connelly

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



MAR 03 2020

Ms. Sylvie Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, California 91708

**Notice of Completion and Environmental Document Transmittal for the Chino Basin
Watermaster Optimum Basin Management Program Update SCH2020020183
San Bernardino County**

Dear Ms. Lee:

The Division of Safety of Dams (DSOD) has reviewed the Initial Study for the Chino Basin Watermaster Optimum Basin Management Program Update (Project) which describes constructing various new surface water storage basins (listed on Pages 20 and 21 of the Initial Study) and improvements to the Upland, College Heights, Brooks, Eight and Seventh Street, Etiwanda Conservation, Lower Day, Victoria, San Sevaine, Turner, Hickory, Etiwanda Percolation, Jurupa, and Wineville Basins, and the construction of the RP-3 Basins (Page 16).

Insufficient information is provided regarding the basins in the Project description to make an accurate jurisdictional determination with regards to the described work and it is unclear whether part or all the work will be subject to State jurisdiction for dam safety; therefore, the Inland Empire Utilities Agency needs to submit preliminary plans for each of the proposed basins so that DSOD can make a jurisdictional determination.

As defined in Sections 6002 and 6003, Division 3, of the California Water Code, dams 25 feet or higher with a storage capacity of more than 15 acre-feet, and dams higher than 6 feet with a storage capacity of 50 acre-feet or more are subject to State jurisdiction. The dam height is the vertical distance measured from the maximum possible water storage level to the downstream toe of the barrier.

If any of the dams are subject to State jurisdiction, a construction application, together with plans, specifications, and the appropriate filing fee must be filed with DSOD for this project. All dam safety related issues must be resolved prior to approval of the application, and the work must be performed under the direction of a Civil Engineer registered in California. Erik Malvick, our Design Engineering Branch Chief, is responsible for the application process and can be reached at (916) 565-7840.

Ms. Lee

MAR 03 2020
Page 2

If you have any questions or need additional information, you may contact Area Engineer Bill Vogler at (916) 565-7828 or me at (916) 565-7827.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rick G. Draeger".

Rick G. Draeger, Regional Engineer
Southern Region
Field Engineering Branch
Division of Safety of Dams

cc: Governor's Office of Planning and Research
State Clearinghouse
state.clearinghouse@opr.ca.gov



STATE OF CALIFORNIA
California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
SACRAMENTO, CA 94236-0001



MS SYLVIE LEE
INLAND EMPIRE UTILITIES AGENCY
6075 KIMBALL AVENUE
CHINO CA 91708



917089174 R053

Subject: RE: [OBMPU] Notice of Preparation of an Environmental Impact Report
Date: Monday, March 23, 2020 3:37:28 PM

From: Katie Gienger <KGienger@ontarioca.gov>

Sent: Thursday, March 5, 2020 4:10 PM

To: Sylvie Lee <slee@ieua.org>; etellezfoster@cbwm.org

Subject: FW: [OBMPU] Notice of Preparation of an Environmental Impact Report

Good Afternoon Sylvie and Edgar,

Will the EIR include a discussion on the Santa Ana River? It wasn't clear to me in the NOP/IS how the environmental review would evaluate potential impacts to the Santa Ana River. Several of the projects, from increased use of recycled water to the Chino Basin Program, result in either reduced flows to the river or a change in the source water discharged to the river. The flow rate may change, or even if not, the location of discharge and water quality may change. This warrants review in the OBMP EIR.

In order to ensure that the CEQA process goes smoothly and accurately reflects the intentions of the Chino Basin stakeholders, I request that the stakeholders be given an opportunity to review a draft of the EIR prior to it being released for public comment.

I look forward to working with you to ensure a complete environmental review.

Sincerely,

Katie Gienger, P.E.

Water Resources Manager



1425 S. Bon View Avenue

Ontario, CA 91761-4406

Phone: (909) 395-2694

E-mail: kgienger@ontarioca.gov

From: Janine Wilson

Sent: Tuesday, February 11, 2020 1:27 PM

Subject: [OBMPU] Notice of Preparation of an Environmental Impact Report

Dear Stakeholders,

IEUA, in cooperation with the Chino Basin Watermaster, has published a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Chino Basin Optimum Basin Management Program Update (OBMPU) that includes an Initial Study, which incorporates the OBMPU project description and establishes the scope of the EIR. If you are interested in reviewing a copy of this document, it can be accessed at www.ieua.org/obmpu-ceqa [ieua.org]. Comments are due by March 10, 2020.

A Public Scoping Meeting will be held at IEUA's Boardroom, [6075 Kimball Ave, Chino, CA 91708](http://www.ieua.org/obmpu-ceqa)

[[bing.com](https://www.bing.com)], on February 27th, 2020 at 6:00pm.

If you have any questions or comments please contact Sylvie Lee (slee@ieua.org) or Edgar Tellez Foster (etellezfoster@cbwm.org)

Thank you,

Janine Wilson, CAP, OM, TA
Senior Accountant
Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Office: 909.484.3888
Fax: 909.484.3890
Web: www.cbwm.org [[cbwm.org](http://www.cbwm.org)]



Driven, Collaborative Professionals

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APPENDIX 8.2

INITIAL STUDY

INITIAL STUDY

FOR THE

CHINO BASIN WATERMASTER

OPTIMUM BASIN MANAGEMENT PROGRAM UPDATE

Prepared for:

Inland Empire Utilities Agency

6075 Kimball Avenue
Chino, California 91708
(909) 993-1600

Implementing Agency:

Chino Basin Watermaster

9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Prepared by:

Tom Dodson & Associates

2150 North Arrowhead Avenue
San Bernardino, California 92405
(909) 882-3612

In association with West Yost

September 2023

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| Exhibit 2 | Chino Basin, OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern |
| Exhibit 23 | Delineation of Groundwater Contamination |

LIST OF FIGURES (at end of document)

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ATTACHMENTS

- Attachment 1 – General Plan Maps for All Cities Within Chino Basin

ABBREVIATIONS AND ACRONYMS

AFY or afy	acre-feet per year
AMP	Adaptive Monitoring Program
ASR	Aquifer Storage and Recovery
Basin Plan	Santa Ana River Basin
CASGEM	California Statewater Groundwater Elevation Monitoring Program
CCWF	Chino Creek Well Field
CCWRF	Carbon Canyon Water Recycling Facility
CDA	Chino Basin Desalter Authority
CEQA	California Environmental Quality Act
CIM	California Institution for Men
Court	California State Superior Court for San Bernardino County
DDW	Division of Drinking Water
DFW	Department of Fish and Wildlife
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DYYP	Dry-Year Yield Program
EDMs	electronic distance measurements
FMSB	First Managed Storage Band
FWC	Fontana Water Company
GE	General Electric
GLMC	Ground-Level Monitoring Committee
GMZ	Groundwater Management Zone
HP	horsepower
IEUA	Inland Empire Utilities Agency
IMP	Interim Monitoring Program
IP	Implementation Plan
IX	RO/ion exchange
JCSD	Jurupa Community Services District
Judgment	Chino Basin Municipal Water District vs. City of Chino et al.
MAR	Managed Aquifer Recharge
MCLs	maximum contaminant levels
MGD	million gallons per day
MPI	Material Physical Injury
MS4	Municipal Separate Storm Sewer System
MVWD	Monte Vista Water District
MZ-1	Management Zone 1
NLs	notification levels
OBMP	Optimum Basin Management Program
PBHSP	Prado Basin Habitat Sustainability Program
PEs	Program Elements
PFAS	per-and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate

POTW	Publicly-owned Treatment Works
Regional Board	Santa Ana Regional Water Quality Control Board
RIPComm	Recharge Investigations and Projects Committee
RMPU	Recharge Master Plan Update
RO	reverse osmosis
RODs	Records of Decisions
RP	Regional Plant
SEIR	Supplemental Environmental Impact Report
SFI	Storage Framework Investigation
SGMA	Sustainable Groundwater Management Act
SMP	Storage Management Plan
SNMP	Salt-and-Nutrient Management Plan
SSC	Safe Storage Capacity
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TIN	total inorganic nitrogen
TOC	total organic carbon
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
UV	ultraviolet
VOC	volatile organic compound
WEI	Wildermuth Environmental, Inc.
WFA	Water Facilities Authority

ENVIRONMENTAL CHECKLIST FORM

1. INTRODUCTION AND PROJECT DESCRIPTION

Project Title: Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) Recirculation

Lead Agency Name: Inland Empire Utilities Agency
Address: 6075 Kimball Avenue, Chino, CA 91708

Contact Person: Mr. Pietro Cambiaso
Phone Number: (909) 993-1600

Project Location: The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

Project Sponsor's Name and Address: Chino Basin Watermaster
9641 San Bernardino Road
Rancho Cucamonga, CA 91730

Present Land Use / Zoning /
General Plan Designation: Multiple

Recirculation

In accordance with Public Resources Code Section 21092.1 and California Environmental Quality Act (CEQA) Guidelines Section 15088.5, the Inland Empire Utilities Agency (IEUA), in conjunction with the Project proponent, the Chino Basin Watermaster (CBWM or Watermaster), have elected to recirculate the entire Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) Draft Subsequent Environmental Impact Report (DSEIR) (SCH #2020020183).

CEQA requires a lead agency to issue new notice and to recirculate a revised EIR, or portions thereof, for additional commentary and consultation if, subsequent to the commencement of public review and interagency consultation but prior to final EIR certification, the lead agency adds "significant new information" to an EIR. Significant new information can include changes in the project or environmental setting, as well as additional data or other information. New information added to a Draft EIR is not significant unless the Draft EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect

of the project or a feasible way to mitigate or avoid such an effect (including feasible alternatives) that the project's proponents have declined to implement.

In accordance with CEQA Guidelines Sections 15162 and 15168, IEUA prepared the 2020 DSEIR for the Chino Basin Watermaster Optimum Basin Management Program Update (2020 OBMPU) and circulated it for public review from March 27, 2020 to May 11, 2020. The 2020 DSEIR was finalized, and responses to comments were sent to agencies and entities that commented on the project (henceforth referred to as the 2020 FEIR). However, the project was removed from the IEUA Board of Directors' July 15, 2020 Agenda, and the 2020 FEIR ultimately was not certified in part, as a result of comments received both during the initial public review period (March 27, 2020 to May 11, 2020) and the day of the IEUA Board of Directors monthly Board Meeting.

Since that time, the Project Description has been further refined in conjunction with Watermaster and with input from Watermaster member agencies/Stakeholders.

Recirculation of a draft EIR requires notice pursuant to CEQA Guidelines Section 15087, and consultation with responsible agencies, trustee agencies, agencies with jurisdiction by law over the Project, and other entities pursuant to Section 15086 (see CEQA Guidelines Section 15088.5 [d]). A Notice of Availability of the OBMPU Recirculated Draft Subsequent Environmental Impact Report (RDSEIR) was published on September 27, 2023 for a 45-day public review period ending on November 13, 2023, pursuant to CEQA Guidelines Section 15087 and consultation with responsible agencies, trustee agencies, agencies with jurisdiction by law over the Project has occurred pursuant to Section 15086.

Project Description

A complete detailed project description is provided in Chapter 3 of the OBMPU Draft Subsequent Environmental Impact Report. In short, the OBMPU continues the Optimum Basin Management Program's (OBMP) nine Program Elements, and describes facility improvements needed to meet the OBMPU's long-term planning objectives over a twenty-year planning horizon. The nine PEs defined in the 2000 OBMP included:

- PE 1 – Develop and Implement Comprehensive Monitoring Program.
- PE 2 – Develop and Implement Comprehensive Recharge Program.
- PE 3 – Develop and Implement a Water Supply Plan for Impaired Areas.
- PE 4 – Develop and Implement Comprehensive Groundwater Management Plan for Management Zone 1.
- PE 5 – Develop and Implement Regional Supplemental Water Program.
- PE 6 – Develop and Implement Cooperative Programs with the Regional Board and Other Agencies to Improve Basin Management.
- PE 7 – Develop and Implement Salt Management Plan.
- PE 8 – Develop and Implement Groundwater Storage Management Program.
- PE 9 – Develop and Implement Storage and Recovery Programs.

The OBMPU updates the OBMP, and the RDSEIR will analyze the environmental impacts of the OBMPU compared to what was previously analyzed in the 2000 Final Program Environmental Impact Report (OBMP PEIR; SCH#200041047), 2010 Peace II Supplemental EIR (2010 OBMP SEIR), and 2017 Addendum adopted to provide a temporary increase in Safe Storage Capacity (SSC) (2017 Addendum). The OBMPU EIR will tier from prior OBMP environmental documents, including but not limited to the Final Program Environmental Impact Report for the Optimum Basin

Management Program (SCH#200041047), July 2000, prepared by Tom Dodson & Associates (2000 OBMP PEIR).

2. PROJECT PURPOSE AND OBJECTIVES

The *2020 Optimum Basin Management Program Update Report* (2020 OBMP Update Report), approved by CBWM in October 2020, documents the stakeholder process that was used to update the OBMP and it describes the 2020 OBMP Management Plan. The Management Program forms the basis for the 2020 OBMP Implementation Plan Update, which remains in process. Through this process, the Stakeholders concluded through the 2020 OBMP Update Report that the goals of the 2020 OBMP Update should be identical to the 2000 OBMP goals.

Accordingly, the 2020 OBMPU's goals remain the same as the 2000 OBMP's goals:

Goal No. 1 - Enhance Basin Water Supplies. The intent of this goal is to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use.

Goal No.2 - Protect and Enhance Water Quality. The intent of this goal is to ensure the protection of the long-term beneficial uses of Chino Basin groundwater.

Goal No.3 - Enhance Management of the Basin. The intent of this goal is to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties.

Goal No. 4 - Equitably Finance the OBMP. The intent of this goal is to identify and use efficient and equitable methods to fund OBMP implementation.

3. ENTITLEMENTS, APPROVALS AND OTHER AGENCY PARTICIPATION

Implementation of future individual project(s) in accordance with the OBMPU may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds. Consequently, it should not be considered exhaustive.

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for a site. In the project area, the Santa Ana Regional Water Quality Control Board enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the Regional Board and county providing enforcement oversight.
- The Project includes the potential discharge of fill into or alterations of "waters of the United States," "waters of the State," and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities, such as pipeline installation across a stream bed, are likely be required from the Army Corps of Engineers (ACOE), the Regional Board, and California Department of Fish and Wildlife (CDFW) over

the life of the OBMPU. A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE; a Section 401 Water Quality Certification may be required from the Regional Board; a Report of Waste Discharge may be required from the Regional Board; and a 1600 Streambed Alteration Agreement may be required from the CDFW.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
- Land use permits may be required from local jurisdictions, such as individual cities and the two Counties (Riverside and San Bernardino).
- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD).
- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), Flood Control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as Union Pacific Railroad.
- Watermaster has a separate approval process for determining material physical injury to the stakeholders within the Chino Basin.
- State Water Resources Control Board will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or Division of Drinking Water.
- The U. S. Environmental Protection Agency provides direct grants and/or funding through its WIFIA program and it requires submittal similar to the State’s CEQA Plus program to ensure compliance with the National Environmental Policy Act (NEPA).

This is considered to be a partial list of other permitting agencies for future OBMPU future individual projects.

4. CEQA RESPONSIBLE AGENCIES

In addition to the above agencies that may be required to review and grant authorizations for future OBMPU projects, the Chino Basin Watermaster functions as a unique entity that has been created by the court to manage groundwater resources within the Chino Basin. The Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. Individual members of the various pools may assume responsibility for implementing individual projects and activities covered by this OBMPU RDSEIR. To do this the individual agency would identify a specific project or activity evaluated in this CEQA document and then conduct a shortened environmental review under Sections 15162 and 15168 of the State CEQA Guidelines. Such a review for CEQA compliance could conclude that the project falls within the scope of analysis in this document, i.e., it is consistent with the findings in this PEIR; decide that the proposed project or activity is a minor technical change relative to the OBMPU project description and is subject to an Addendum; or the agency could

find that a project or activity exceeds the scope of this CEQA document's evaluation and requires a supplemental or subsequent environmental document as outlined in State CEQA Guidelines Sections 15162 or 15163. These Responsible Agencies include:

Agricultural Pool, 2023

State of California
County of San Bernardino

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of all Agricultural Pool participants.

Non-Agricultural Pool, 2023

City of Ontario
County of San Bernardino
Monte Vista Water District

- Please note that specific companies or parties that are not public agencies are part of the Agricultural Pool, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of Non-Agricultural Pool participants.

Appropriative Pool Committee, 2019

Monte Vista Water District
Cucamonga Valley Water District
City of Chino
City of Chino Hills
City of Fontana
City of Norco
City of Ontario
City of Pomona
City of Upland
County of San Bernardino
Jurupa Community Services District
West Valley Water District

- Please note that specific companies or parties that are not public agencies are part of the Appropriative Pool Committee, but individuals or group representatives do not have authority to implement CEQA. Please refer to Appendix 1 for a list of all Appropriative Pool Committee participants.

Other Agencies Participating in the Judgment/Agreements

IEUA
Three Valleys Municipal Water District
Western Municipal Water District
Chino Basin Water Conservation District

In all future circumstances, IEUA will remain the Lead Agency for the OBMPU CEQA document and the Watermaster will maintain annual records for cumulative projects implemented under the OBMPU on an annual basis. A CEQA Responsible Agency shall coordinate with these agencies when it assumes CEQA Lead Agency status for a future specific project. Thus, IEUA and Watermaster will continue to accumulate information on implementation of the OBMPU and provide a future project specific Lead Agency with essential information regarding the cumulative impact circumstances at the time a proposed specific project is ready for implementation.

5. CUMULATIVE PROJECTS

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contributions to area-wide or community environmental impacts when added to other or all development proposed in an area. The State CEQA Guidelines provide two alternative methods for making cumulative impact forecasts: (1) a list of past, present and reasonably anticipated projects in the project area, or (2) the broad growth impact forecast contained in general or regional plans. Because of the planning character of this project, it will be evaluated in the context of adopted General Plans.

From a water planning perspective, the 2000 OBMP PEIR (Peace I Agreement) and the 2010 Peace II SEIR (Peace II Agreement) represent a cumulative, or carrying capacity, evaluation of water resources in the Chino Basin. Thus, the analysis of Chino Basin water resources and groundwater management contained in this document represents a cumulative analysis of the activities and facilities required to effectively manage the Basin's water resources.

Since the DSEIR was circulated in 2020, some cumulative projects with regional significance have been certified or adopted. For instance, Watermaster began the comprehensive re-evaluation of the Safe Storage Capacity concept through a stakeholder process during 2017 and 2018, which resulted in the 2018 Storage Framework Investigation Report (SFI)(Appendix 2). The SFI evaluated the Basin response, MPI and undesirable results from projections of the Parties' future storage management activities and potential future Storage and Recovery Programs that could store additional water in the Basin, concurrently with the Parties (cumulatively up to 1,000,000 Acre Feet (AF)). This work was based, in part, on groundwater modeling projections of the Basin using the 2017 Watermaster model that was last previously calibrated in 2011. The SFI developed a series of metrics to identify MPI and undesirable results for the use of additional storage space in the Chino Groundwater Basin and introduced a new term called "managed storage." Managed storage includes water stored by the Parties and other entities in the Chino Groundwater Basin, which fluctuates over time based on the actions of the Parties and other entities.

During the period between 2018 and mid-2020, Watermaster revised its groundwater model and renamed it the 2020 Chino Valley Model (CVM). The 2020 CVM supersedes the model version used in the 2018 SFI. The CVM was used to update pumping and recharge projections to develop an updated estimate of Safe Yield for the period 2021 through 2030. Based on this Safe Yield Investigation, the Safe Yield for the period 2021 through 2030 was found to be 131,100 acre-feet per year.

The Court subsequently accepted Watermaster's Safe Yield recommendation and ordered the Safe Yield changed in July 2020. In addition to the updated Safe Yield, three other conclusions were reached in the Safe Yield investigation using the 2020 CVM: (1) the storage in the saturated zone of the Chino Basin was estimated to be about 12,200,000 af on July 1, 2018, of which 462,000 af was in managed storage; (2) the projected managed storage by the Parties would

reach about 612,000 af in 2031; and, (3) no adverse impacts or MPI were projected to occur from managed storage reaching 612,000 af by 2031.

In 2020, Watermaster identified the need to amend the Safe Storage Capacity (SSC) of the OBMP for the Chino Basin because the temporary increase in the SSC that was adopted as part of the 2017 Addendum was set to expire on June 30, 2021. The 2021 Local Storage Limitation Solution (LSLS) Addendum enabled an increase in SSC to 700,000 af through June 30, 2030, and to 620,000 af from July 1, 2030 through June 30, 2035. The 2021 LSLS Addendum was adopted by the IEUA Board on March 17, 2021.

Additionally, in May of 2022, IEUA certified the Chino Basin Program (CBP) PEIR. While this document is presently undergoing CEQA litigation that is ongoing as of the publication of this RDSEIR, the CBP contemplated an increase in Safe Storage Capacity that would supersede the SSC adopted by IEUA as part of the 2021 LSLS Addendum. Should the CBP PEIR be upheld by the Court or otherwise remain fundamentally unchanged as part of the CEQA litigation process, the SSC would be increased up to 720,000 af from July 1, 2030 through June 30, 2042, and to 580,000 af from July 1, 2042 through June 30, 2048, with the SSC decreasing to 500,000 af thereafter. The increase in SSC contemplated by both the 2021 LSLS Addendum and the 2022 CBP EIR would be superseded by the increase in SSC contemplated herein as part of the OBMPU RDSEIR.

Additionally, the CBP as a whole was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded \$206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 afy of recycled water in the Chino Basin and extract the water during call years, which will likely occur in dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new 15,000 afy Advanced Water Purification Facility (AWPF) and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPF for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits. In order to accomplish the water exchange outlined above, the CBP would install new water and wastewater type infrastructure within the Chino Basin, and would ultimately result in additional groundwater supply therein. The CBP contemplates the development of 37 wells of various types, use of up to 4 existing IEUA member agency wells, installation of about 30 miles of pipeline, a 5 MG reservoir, 4 pump stations, 6 turn-outs, and up to 3 wellhead treatment facilities in addition to the AWPF and increase in SSC described above. Where pertinent, the impacts from implementing the CBP on behalf of the IEUA will be considered in this document as a possible cumulative impact.

No other projects were identified within the Project area or vicinity that would contribute directly to cumulative impacts or cumulative demand for local groundwater infrastructure. This does not include individual water infrastructure projects implemented by local water purveyors to supply potable water to customers. Most of the city General Plans for the Chino Basin assume that buildout or near buildout will occur within their jurisdiction by 2050. Thus, substantial general growth in these cities is forecast to occur concurrent with the implementation of the OBMPU. Individual water purveyor infrastructure will be implemented as needed in the future as growth occurs in the Chino Basin, but it is not possible to identify future specific projects without

speculation. It is assumed that the proponents of such projects will incorporate the impact evaluations in this document as part of their cumulative impact analyses when such specific projects are proposed.

Because the OBMPU addresses comprehensive water management facilities or activities within a portion of the upper Santa Ana River watershed, there may also be other projects within the watershed that will be implemented. The only other such project that is currently defined sufficiently to address under this cumulative impact analysis is the Upper Santa Ana River Habitat Conservation Plan (HCP) DEIR currently under consideration by the San Bernardino Valley Municipal Water District (Valley District). Where pertinent, the impacts from implementing the HCP on behalf of the upper Santa Ana River watershed will be considered in this document as a possible cumulative impact.

6. NATIVE AMERICAN CONSULTATION

As required by Public Resources Code section 21080.3.1, the lead agency is required to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. AB 52 consultation was initiated on January 29, 2020.

In response to the AB 52 consultation initiated on January 29, 2020, the three tribes that were notified (Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation [YSMN][formerly known as the San Manuel Band of Mission Indians]) requested consultation. IEUA Staff initiated consultation and reached agreement with all three tribes to incorporate mitigation to address implementation of specific projects under the OBMPU as they are proposed. The Tribes requested updated archaeological evaluations in line with current standards and requested the opportunity to participate in the updated evaluations as well as an opportunity to monitor ground-disturbing activities on native soil under site specific circumstances. In response to the AB 52 consultation initiated in January 2020, the three tribes that were notified (Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and Yuhaaviatam of San Manuel Nation ([formerly known as the San Manuel Band of Mission Indians]) requested consultation. IEUA Staff initiated consultation and reached agreement with all three tribes to incorporate mitigation to address implementation of specific projects under the OBMPU as they are proposed for site-specific implementation. The Tribes requested updated archaeological evaluations in line with current standards and requested the opportunity to participate in the updated evaluations as well as an opportunity to monitor ground-disturbing activities on native soil under site specific circumstances.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Energy |
| <input type="checkbox"/> Geology / Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates
Prepared by



Lead Agency (signature)

April 2023
Date

Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

I.1 Environmental Setting

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

Scenic Resources

The Chino Basin is characterized primarily by dense urbanization including residential, commercial and industrial land uses interspersed with undeveloped hilltop and distant mountain vistas. Valuable scenic resources within the service area are found sporadically on the valley floor and are visible from specific viewpoints on the valley floor. In contrast the surrounding hilltops and mountain scenic vistas are generally available from all locations within the service area, with the majestic view of the San Gabriel Mountains forming the primary background vista within the area.

San Bernardino County

The most significant visual resources in the unincorporated county are the hills and mountains, certain pastoral landscapes in and within view of the service area and the Prado Basin wetlands that occur in the southern portion of the Basin. The predominant scenic vistas in the service area, as identified in local General Plans (cities of Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland, and Counties of San Bernardino and Riverside) include: views of the San Gabriel, San Bernardino and Santa Ana Mountains; Chino Hills, Jurupa Hills, Puente Hills and

San Jose Hills; Tonner Canyon; Prado Basin; and the remaining pastoral Chino farmlands. The Santa Ana River, Mill Creek (the southern portion of Cucamonga Creek), Chino Creek (the southern portion of San Antonio Creek) and the Prado Basin provide vegetated natural settings including riverine and wetland features bordering the southern edge of the service area.

The San Bernardino Countywide Plan Program EIR (PEIR) identifies the following natural land resources within the Valley Region, within which the Chino Basin falls: Natural resources such as protected and wilderness areas within the Valley Region include the North Etiwanda Preserve, Day Canyon Preserve, Colton Dunes Conservation Bank, Vulcan Materials Alluvial Fan Sage Scrub Mitigation Bank, Lytle Creek Conservation Bank, Chino Hills State Park, Prado Basin Mitigation Area, Woolly Star Preserve Area, Crafton Hills Conservancy, Wildwood Canyon State Park, and the Oak Glen Preserves- Wildlands.

The San Bernardino Countywide Plan identifies State Route (SR) 142 (south of SR 71) as an eligible State Scenic Highway that falls within the regional Chino Basin setting. Eligible State Scenic Highways are highways that have been identified and recommended for designation, but are not officially designated by the California Scenic Highway Mapping System (Caltrans, 2019). No other State or county designated scenic highways or scenic routes are located in the Chino Basin.

Chino

The city is relatively flat as it lies on the southwestern alluvial valley floor of the Chino Basin. The city of Chino has views of the San Gabriel and San Bernardino Mountains to the north, the Jurupa Hills and Santa Ana Mountains to the east and south, respectively, and the Chino Hills to the west. The Chino General Plan does not identify specific scenic resources or local roadways of importance within its jurisdiction (City of Chino, 2010). The southern portion of the city contains pastoral agricultural areas that are slowly transitioning to suburban residential neighborhoods, some supporting commercial areas, and industrial warehouse areas. The southern-most portion of Chino is located below the 536-foot elevation behind Prado Dam that transitions into unincorporated territory, which constitutes the 100-year flood hazard area occupied by a mix of agricultural areas and Prado Basin, the largest riparian woodland remaining in southern California.

Chino Hills

Grass covered oak savannah woodland hillsides dominate the western and southern portion of the community and are a key aspect to the area's visual character. The hills are visible from nearly every neighborhood and major street within this community. Single-family neighborhoods penetrate into the hills in the northern half of the city, while most of the southern half is preserved as undeveloped open space. The principal component of the southern area is the Chino Hills State Park; a wilderness park of rangeland, oak woodlands, and chaparral. The Chino Hills General Plan identifies city and state eligible and officially designated scenic highways, as well as the following Exceptionally Prominent Ridgelines as important scenic resources and defers to Chapter 16 of the Municipal Code of development standards and policies regarding visual resources:

- Chino Valley Freeway (SR 71);
- Carbon Canyon Road (SR 142);
- Butterfield Ranch Road;
- Soquel Canyon Parkway;
- Chino Hills Parkway;
- Peyton Drive;
- Woodview Road;
- Eucalyptus Avenue;
- Tonner Canyon Road; and
- Grand Avenue.

Claremont

The Claremont General Plan does not identify any designated scenic vistas. However, the San Gabriel Mountains lie just north of the City and are visible from throughout the City on north-south roadways. Reasonably foreseeable development under the Housing Element Update could have the potential to block views of the San Gabriel Mountains. Additionally, there are no officially designated state scenic highways

in Claremont. The nearest eligible state scenic highway is 25 miles east of the City (State Route 210 at State Route 134).

Fontana

The central portion of the City of Fontana is located on an alluvial plain that gently slopes south from the San Gabriel Mountains. The northern portion of the city extends into the San Gabriel foothills and the southern portion of the city extends into the northern-edge of the Jurupa Hills. The topography varies from characteristically flat in the central portion of the city, to gently to steep sloping hillsides in the San Gabriel foothills and Jurupa Mountains to the south. Views of the mountains at the northern and southern borders of the city are an important component of the city's aesthetic quality. The Fontana General Plan EIR identified the San Gabriel Mountains as the city's most prominent visual feature, rising dramatically above the community with scenic views toward the mountains. Panoramic views also exist from the base of the mountains toward Fontana. The Jurupa Hills – the highest point in the city at 1,900 msl – offer scenic vistas of the San Gabriel Mountains and surrounding valleys, particularly from Martin Tudor Jurupa Hills Regional Park, which contains bicycle and hiking trails. Other significant natural landforms in Fontana include Lytle Creek and other dry washes that have intermittent water flow from the mountains, and are visible from the I-15 corridor in the northern portion of the city (City of Fontana, 2018). There are no scenic highways officially designated by Caltrans within or adjacent to the Project area, and no roadways within the Project area are currently eligible for scenic highway designation.

Montclair

According to the Montclair 2020 General Plan Update EIR, there are no officially designated scenic highways in the Plan Area; however, the Foothill Freeway (Interstate 210 [I-210]), located approximately 2.5 miles north of the northern edge of the Plan Area, is eligible for state scenic highway designation. The city is on an alluvial plain that gradually slopes down and to the south from the San Gabriel Mountains. The dominant views from the city are therefore of the San Bernardino Mountains, which can be seen from much of the city, looking north. On a clear winter day, the mountains are often snow-capped and clearly visible. Although the San Bernardino Mountains are not identified by the city as part of a scenic vista, because views of these mountains are prominent and the public can see them from much of the city, views of the San Gabriel Mountains could be considered part of a scenic vista for purposes of this environmental analysis (City of Montclair, 2022).

Ontario

The dominant visual characteristic in the City of Ontario is the San Gabriel Mountain range to the north. Other visual characteristics include the Jurupa Mountains and the San Bernardino Mountains to the east, the Santa Ana Mountains to the south, and Chino Hills to the southwest. Ontario is located in a highly developed, urban/suburban area with developed land uses (residential, commercial, industrial, agricultural, recreational, public, institutional, airport, and utility and transportation easements) located throughout the city. The City of Ontario is served by three freeways: I-10, I-15, and SR-60. I-10 and SR-60 traverse the northern and central portion of the city, respectively, in an east–west direction. I-15 traverses the northeastern portion of the city in a north/south direction. These segments are not officially designated scenic highways by Caltrans, and there are no officially designated scenic highways in Ontario (Caltrans 2018); however, the Euclid Corridor and the Mission Boulevard Corridor are the primary scenic corridors in Ontario. Euclid is a grand boulevard with a wide landscaped median along its length. The median is used for public activities and civic events, such as festivals and music concerts. Visually, Euclid Avenue is the most defining corridor in the city. Mission Boulevard has a wide landscaped median and runs east-west immediately south of Ontario International Airport (City of Ontario, 2022). Additionally, the Ontario Plan Supplemental EIR indicates that the city's physical setting lends opportunities for many views of the community and surrounding natural features, including panoramic views of the San Bernardino and San Gabriel Mountains and stretches of open space and undeveloped land south of Riverside Drive. Scenic vistas can be viewed from an extensive system of formal and informal trails that afford recreational, commercial, and scenic opportunities for the community. The majority of planned trails are throughout the Ontario Ranch. Current trails in urbanized portions of the city are limited to flood control channels and other informal trails.

Pomona

Though Pomona is largely built out, large areas of natural, undeveloped lands remain as open hillsides that are visible from all over the city. These hillsides are essential parts of Pomona's character and identity. They include Westmont Hill and Elephant Hill, remaining natural hillsides abutting S.R. 60, and master-planned areas retaining strategic "fingers" of open space such as in the Phillips Ranch development. One of the city's most valuable livability assets is its spectacular natural setting. By minimizing the visual prominence of hillside development, the city will protect features such as ridgelines, grasslands, stands of trees, and individual mature trees that contribute to Pomona's natural beauty (City of Pomona, 2014).

Rancho Cucamonga

The City of Rancho Cucamonga lies on the sloping alluvial plain of the Basin and extends up to the foothills of the San Gabriel Mountains. As the city's most prominent natural feature, the mountains run east-west and form an impressive visual background to the north. The Rancho Cucamonga General Plan Update EIR indicates that views of the San Gabriel and San Bernardino Mountains are afforded from most of the city and provide a backdrop for the community. Unobstructed views of the San Gabriel Mountains to the north are provided from north-south roadways, such as Archibald, Haven, and Etiwanda Avenues, and views of the lower-lying valley to the south are provided from the foothills. Other scenic resources in the city include stands of eucalyptus windrows, vineyards and orchards, and vegetation in flood-control channels and utility corridors. Views of wide-open spaces, natural vegetation, and steep slopes with limited development are provided by the foothills at the northern end of the city. In general, visual resources in the city include scenic mountain views, scenic city views, prominent scenic vistas, and scenic corridors. While many residential and commercial property owners enjoy these views from their personal property, the city only evaluates scenic resources from public places.

- Scenic Mountain Views: Rancho Cucamonga features scenic mountain views of the nearby San Gabriel and San Bernardino Mountains to the north and northeast. These mountains rise to heights over 6,000 feet above mean sea level and are partially visible from most areas of the city. The foothills at the northern end of the city afford views of scenic wide-open spaces, steep slopes, and natural vegetation.
- Scenic City Views: Roads that traverse Rancho Cucamonga provide scenic views of the city, its hillsides, and environs. The I-15 and SR-210 freeways afford views of the city, although some views are blocked by berms, block walls, and dense landscaping.
- Prominent Scenic Vistas: Significant vistas in the city include:
 - The view of the North Etiwanda Preserve from I-15, from the northeastern boundary of the city to the interchange with SR-210.
 - The view north to the San Bernardino and San Gabriel Mountains from SR-210.
 - The northern view of the San Bernardino foothills from major east-west streets south of West Foothill Boulevard.
 - The views of the San Gabriel Mountains from the city roadways south of West Foothill Boulevard. The Pacific Electric Trail, running east to west approximately 1,300 feet north of Base Line Road, extends through the city and features natural scenery and multiple benches to stop and view the mountains to the north.
 - Residents who live on roads in the wildland-urban interface in the northern part of the city and SOI have direct canyon and mountain views from their residences.
 - Trails and roads extending into the northern part of the SOI include viewpoints. One such viewpoint is South Panoramic, a vista point near the Etiwanda Falls Trailhead that offers views of the entire west end of the Inland Empire, including Rancho Cucamonga, Fontana, and other cities in Riverside County. This viewpoint has gazebos, picnic tables, and signage for visitors.
 - Numerous parks throughout the city provide scenic vistas of the northern mountains.
- Scenic Corridors: Foothill Boulevard / Route 66 is not a designated scenic highway but is considered a historic route by residents of the city and has northern views of the mountains and hillsides. There are no state-designated scenic highways in Rancho Cucamonga.

Upland

The city of Upland is located on the upper alluvial fan of San Antonio Creek, where the city extends into the San Gabriel Mountain foothills. The topography of the city is fairly flat sloping gradually north toward the San Gabriel Mountains. Scenic resources in the city include Foothill Boulevard and Euclid Avenue north of

Interstate 10. The Upland General Plan designates Foothill Boulevard and Euclid Avenue as scenic roadways (City of Upland, 2015).

County of Riverside

The County of Riverside has adopted General Plan Policies to deal with lighting and glare impacts to the Mount Palomar Observatory. Projects within a 45-mile radius of the Observatory must adhere to special standards relating to the use of low-pressure sodium lights. Additionally, it is policy of the County of Riverside to require that all new developments shield and direct lighting sources downward to minimize conflicts with adjacent land uses.

Eastvale

Eastvale is located in northwestern Riverside County, California, within the Inland Empire region of Southern California. Its boundaries extend from Hellman Avenue to the west (the San Bernardino county-line), Philadelphia Avenue to the north (also the San Bernardino county line), the Santa Ana River and the City of Norco to the south, and Interstate 15 to the east. The City of Eastvale General Plan identifies how the design of new development also has an impact on how scenic vistas, natural areas (such as the Santa Ana River), and other desirable views are seen and appreciated. Good design ensures that desirable views are maintained and enhanced (City of Eastvale, 2012).

Jurupa Valley

Jurupa is located in northwestern Riverside County, California, within the Inland Empire region of Southern California. The topography of the city is varied with several hills along the northern boundary and center of the city. The city's quilted pattern of hills, valleys, and slopes provides a variety of scenic resources. Examples include the Jurupa Mountains, the Santa Ana River, and the Pedley Hills. The city's General Plan states the goal of preserving the city's scenic resources, including mountains, hills, ridgelines, rock outcroppings, canyons, mature trees, the Santa Ana River and floodplain, riparian corridors, agricultural fields, views of scenic resources from vista points or along scenic street or highway corridors (City of Jurupa, 2017).

I.2 Impact Discussion

Impacts are determined through assessing the project's potential to exceed significance thresholds outlined in the CEQA Guidelines Appendix G.

Except as provided in Public Resources Code Section 21099, would the project:

- a. *Have a substantial adverse effect on a scenic vista?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The construction of the proposed wells and monitoring devices would require temporary ground-disturbance within the project sites. While the wells could require approximately one-half acre of disturbance, the flow meters would be installed within streams and channels to monitor surface water, and as such, the area of disturbance would be minimal. The presence of construction equipment and related construction materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not substantially affect any scenic views or vistas. Construction of the proposed wells and monitoring devices would not permanently affect views or scenic vistas due to their small size and low profile. Thus, impacts would be less than significant.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area that a well would occupy would be about 10 feet by 10 feet. Many of the wells would be enclosed in a small structure no larger than the size of a storage shed, which is designed to minimize noise from the pumps required to operate a well. As such, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water. Therefore, given the small footprint required to install and operate the facilities under this Project Category, it is anticipated that any impacts to scenic vistas would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The construction of the conveyance systems would require temporary ground-disturbance almost wholly within existing roadway/public rights-of-way. It is anticipated that the majority of the proposed ancillary facilities would individually have small-to-medium footprints (around 1 acre or less). The presence of construction equipment and related construction materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not adversely affect any scenic views or vistas. Construction of the conveyance pipelines and ancillary facilities would not permanently affect views or scenic vistas. Thus, impacts would be less than significant.

The conveyance pipelines would be placed underground and would not be visible once construction is complete. Implementation of conveyance system upgrades would not permanently alter a scenic vista, and as such, impacts to scenic vistas would be less than significant. It is anticipated that the majority of the proposed ancillary facilities would individually have small-to-medium footprints (around 1 acre or less) and be low profile; for instance, a booster pump station would occupy less space and be no taller than a small residential home. Construction of the water storage reservoirs would occur at unknown locations; as such, it is possible that the development of aboveground, water storage reservoirs could affect views or designated scenic vistas, particularly along hillsides where the majority of scenic views are located. The footprints of reservoirs are anticipated to be about one acre and are can be intrusive; furthermore, reservoirs are typical along hillsides due to the elevation required to distribute stored water. However, mitigation is provided below to minimize impacts to scenic vistas from the development of steel or concrete aboveground water storage reservoirs.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The construction of new and improvement of existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would require temporary ground-disturbance within the project sites. The presence of construction equipment and materials may be visible from public vantage points, but it would not permanently affect designated scenic views or vistas. Once in operation, the proposed storage basins would be consistent with the existing setting. Furthermore, storage basins are typically flat, below the ground surface, earthen excavations with berms. Operation of the storage basins would not obstruct or alter existing views of scenic vistas. Thus, impacts would be less than significant.

Mills Wetlands are located within the City of Chino, which has not identified Mills Wetlands as a scenic resource. However, this area represents a pastoral viewshed within the city, particularly given its proximity to the Chino Preserve, which is accessed often by the public for hiking purposes. As such, the transformation of this site to contain storage ponds would require mitigation to ensure that impacts to scenic vistas remain less than significant.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would, like those at existing facilities, require temporary ground-disturbance within the project sites that have generally been previously disturbed. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Operational storage basins are typically flat, below the ground surface, earthen excavations with berms. Operation of the recharge basins would not obstruct or alter existing view of scenic vistas. The project would include aboveground ancillary facilities associated with the basins. Thus, impacts would be less than significant.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts. As such, no impacts to scenic vistas can result.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility proposed by the city of Ontario; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters, 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The construction of the facilities proposed under this Project Category would require temporary ground-disturbance within existing treatment facilities. The presence of construction equipment and materials would be visible from public vantage points such as open space areas, sidewalks, and streets, but it would not permanently affect designated scenic views or vistas. Thus, impacts would be less than significant.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. The upgrades would have a small footprint and would not substantially reduce the views in the area. Additionally, the additional facilities and structures required to implement the proposed upgrades would be consistent with that which exists at present at the project sites. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites. Furthermore, the addition of groundwater treatment facilities at well sites upgrades would have a small footprint and would not substantially reduce the views in the area. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not consist of high-profile structures that would impede views. Much like a booster pump station, this type of facility would individually have a small footprint, be low profile, and be no taller than a residential home. Therefore, it is anticipated that impacts to scenic vistas in the vicinity of these project sites would be less than significant.

A regional groundwater treatment facility would occupy a space of no more than 20 acres, while the AWPFF would occupy a space of no more than 10 acres. Each would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure.

Given that the locations for facilities of these types are unknown, it is not known whether such a facility would cause a significant impact to a scenic vista. As such, mitigation to ensure that further CEQA analysis is completed prior to implementation of this type of project shall be implemented, and is provided below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.15-1, 4.15-3, and 4.15-5):

- 4.15-1** *All surface areas disturbed by OBMP construction activities, except those area used structures or hardscapes) shall be revegetated, either with native vegetation in natural landscapes or in accordance with a landscape plan in man-made landscape areas (note that native vegetation is also eminently suited to man-made landscapes and requires less maintenance). Once construction is completed, revegetation shall begin immediately and, where a formal landscape plan is being implemented, it shall be coordinated with the local agency and the local design guidelines for consistency.*
- 4.15-3** *Where facilities will disrupt views from occupied areas with significant scenic vistas, a visual simulation analysis shall be performed of the facility's impact on the important view. If the analysis identifies a significant impact on a scenic vista, the facility shall be relocated, redesigned to reduce the impact to a non-significant level, or a subsequent environmental evaluation shall be prepared.*
- 4.15-5** *All utilities for OBMP facilities shall be placed underground unless such undergrounding is not technically feasible.*

The following mitigation measures shall be implemented under the proposed OBMPU:

- AES-1:** *Design Standards. Proposed facilities shall be designed in accordance with local design standards and all applicable sections for the California Building Standards Code (CCR, Title 24). These design standards will be complied with and facilities designed to be integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.*
- AES-2:** *Mills Wetland Landscaping Standards. The Mills Wetland Storage Basin Project shall be designed to include landscaping commensurate with the existing pastoral¹ setting that exists at this site at present. The existing pastoral setting that currently exists includes tall grasses, riparian vegetation, and native vegetation suitable for riparian/wetland habitat. The Implementing Agency² shall utilize existing photos of the Mills Wetlands prior to construction to develop a landscape plan, that shall demonstrate that the Storage Basin is shielded using tall grasses, riparian vegetation, and native vegetation suitable for riparian/wetland habitat, that the Implementing Agency and/or Watermaster deem acceptable as "commensurate with the existing pastoral setting," as demonstrated by Photos AES-2-A and AES-2-b, which depict the existing setting of Mills Wetlands.*

¹ Pastoral is defined here as: of or relating to the countryside (not urban)

² "Implementing Agency" as used throughout this Mitigation Monitoring and Reporting Program refers to the lead agency implementing a project under the Optimum Basin Management Program Update (e.g., the Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (Watermaster), or Watermaster Stakeholders).



Photo AES-2-A: Mills Wetlands Existing Setting



Photo AES-2-B: Mills Wetlands Existing Setting

AES-3: ***Scenic Vista Avoidance. Future regional groundwater treatment facilities, the proposed AWPf, and other proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.***

The implementation of 2000 OBMP PEIR Mitigation Measures **4.15-1** and Mitigation Measure **AES-1** would ensure that the proposed facilities' contribution to cumulative scenic vista impacts would be reduced to less than cumulatively considerable by meeting the local design and landscape standards, which is not a requirement for water and wastewater infrastructure in accordance with California Government Code Section 53091. Furthermore, Mitigation Measure **AES-2** would ensure that the pastoral setting that presently exists at the Mills Wetland site is not lost due to implementation of the proposed storage basin project; this will reduce scenic vista impacts to a level of less than significant. The implementation of Mitigation Measure **AES-3** will ensure that impacts to scenic resources from the implementation of future regional groundwater treatment facility projects, the AWPf, and other proposed facilities defined within the OBMPU at unknown locations will be avoided or assessed further in future CEQA documentation. Furthermore, 2000 OBMP PEIR Mitigation Measures **4.15-3** would require visual simulations for future OBMPU projects proposed within scenic viewsheds, and 2000 OBMP PEIR Mitigation Measures **4.15-5** would ensure that conflicts with viewsheds are avoided to the maximum extent feasible through ensuring utilities are installed belowground, wherever possible.

Level of Significance After Mitigation: Less Than Significant

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The San Bernardino Countywide Plan identifies State Route (SR) 142 (south of SR 71) as an eligible State Scenic Highway that falls within the regional Chino Basin setting. Eligible State Scenic Highways are highways that have been identified and recommended for designation, but are not officially designated by the California Scenic Highway Mapping System (Caltrans, 2019). No other State or county designated scenic highways or scenic routes are located in the Chino Basin. The most significant visual resources are the hills and mountains surrounding the Chino Basin and the pastoral landscape that occurs in the southern portion of the Chino Basin. The activity with the highest potential to conflict with local agency design guidelines is construction disturbance of the landscape. Such disturbance can be reduced to an acceptable level by landscaping or revegetating disturbed areas (pipelines, recharge basins, structural developments, and aboveground wastewater treatment facilities) either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in a project area.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, these facilities will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. As such, the development of the facilities included in this Project Category would have no potential to impact scenic resources within a State scenic highway corridor.

However, given that the locations for the proposed wells are largely unknown, mitigation is required to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located belowground, and will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. Therefore, the development of conveyance facilities would have no potential to impact scenic resources within a State scenic highway corridor. It is anticipated that the majority of the proposed ancillary facilities would individually have small-to-medium footprints (around 1 acre or less). However, given that the locations of such facilities are presently unknown, it is possible that the development of ancillary facilities may impact other scenic resources such as rock outcroppings or trees. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for ancillary facilities shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Storage basins are typically flat, below the ground surface, earthen excavations with berms. The development of such facilities would have no potential to impact scenic resources within a State scenic highway corridor because no designated State scenic highways exist within Chino Basin. Based on the location of the new storage basins and improvements to existing storage basins within existing facilities, impacts to scenic resources are anticipated to be less than significant. However, mitigation is provided to minimize impacts to any trees located within these sites that may require removal.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would, like those at existing facilities, be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. Therefore, the development of new storage facilities would have no potential to impact scenic resources within a State scenic highway corridor. Given that the location for the new storage basins are presently known, a site reconnaissance has determined that no scenic resources exist within these known sites. However, given that the locations of the remaining facilities within this Project Category are presently unknown, it is possible that the development of storage facilities may impact other scenic resources such as rock outcroppings or trees. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a storage facility shall avoid rock outcroppings and other scenic

resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to scenic resources can result.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities, and as such, these sites are not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of upgrades and improvements to existing facilities would be less than significant.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would typically occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites, and as such, these sites are not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of improvements to existing or construction of new groundwater treatment facilities at existing well sites would be less than significant.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not typically consist of high-profile structures that would impede views. A regional groundwater treatment facility would occupy a space of no more than 20 acres, while the proposed AWPf would occupy a space of no more than 10 acres, and would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure. Given that the locations for facilities of these types are unknown, it is not known whether such facilities would cause a significant impact to scenic resources. As such, mitigation is provided to ensure that: (1) Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) The specific location selected for a regional groundwater treatment facility and for the AWPf shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.15-2):

- 4.15-2 *Where facilities are proposed to be located adjacent to scenic highways, corridors or other scenic features identified in local agency planning documents, OBMP facility implementation will conform with design requirements established in these planning documents.***

The following mitigation measures shall be implemented under the proposed OBMPU:

AES-4: **Tree Removal Compliance.** *Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by an International Society of Arboriculture (ISA) Certified arborist, (1) the implementing agency shall replace all trees removed at a 1:1 ratio, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a subsequent CEQA evaluation shall be completed.*

AES-5: **Scenic Resource Avoidance.** *Future proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located within sites that avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.*

The implementation of Mitigation Measure **AES-4** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant. Furthermore, Mitigation Measure **AES-5** would ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. 2000 OBMP PEIR Mitigation Measure **4.15-2** would ensure conformance with design requirements pertaining to development within scenic highway corridors, thereby further reducing the potential to damage scenic resources within a state scenic highway.

Level of Significance After Mitigation: Less Than Significant.

c. *In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?*

Though the presence of agriculture is still prevalent within parts of the Chino Basin, the overall Chino Basin would be characterized as "an urbanized area," excluding Prado Basin. As such, the following will evaluate whether the project will conflict with applicable zoning or other regulations governing scenic quality.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located belowground, and as such, will have no potential to conflict with applicable zoning or other regulations governing scenic quality.

It is anticipated that the majority of the proposed ancillary facilities would individually have small-to-medium footprints (around 1 acre or less). Though the locations of such facilities are presently unknown, the proposed ancillary facilities will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed ancillary facilities will conform with design requirements established by local jurisdictions.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Storage basins are typically flat, below the ground surface, earthen excavations with berms. Further development of storage basins at established sites, which are typically developed at grade, would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed storage basins, flood MAR facilities, and MS4 facilities will conform with design requirements established by local jurisdictions.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts, and as such would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities, and as such, would be consistent with the existing setting. Further

development within these existing treatment facilities would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater treatment facilities would be consistent with that which exists at present at the well sites, and as such, further development at these sites is not anticipated to result in a conflict with applicable zoning or other regulations governing scenic quality.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres, and would not consist of high-profile structures that would impede views. A regional groundwater treatment facility would occupy a space of no more than 20 acres, while the proposed AWPf would occupy a space of no more than 10 acres, and would be visually comparable to a small warehouse structure, with various tanks and ancillary components that may or may not be enclosed within a structure. Given that the locations for facilities of these types are unknown, the proposed regional groundwater treatment facilities and AWPf will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed groundwater treatment facilities will conform with design requirements established by local jurisdictions.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.15-4):

4.15-4: When OBMP above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility.

The following mitigation measures shall be implemented under the proposed OBMPU:

AES-6: Local Jurisdiction Design Conformance. OBMPU facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not limited to the applicable zoning code, to the maximum extent feasible, except where such compliance is not possible, due to design requirements, and site constraints (examples include: installation of a reservoir at a height that exceeds the maximum allowed height by the applicable zoning code, where conformance is not required due to California Government Code Section 53091; and, installation of a well, booster pump station, or other infrastructure facility that does not meet the setbacks established in the applicable zoning code, etc.).

The implementation of Mitigation Measure **AES-6** would ensure compliance with the applicable zoning code, which is not a requirement for water and wastewater infrastructure in accordance with California Government Code Section 53091. Furthermore, 2000 OBMP PEIR Mitigation Measure **4.15-4** would ensure that future facilities will conform with design requirements established by local jurisdictions.

Level of Significance After Mitigation: Less Than Significant

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Furthermore, the proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The conveyance systems would not require nighttime lighting because they would be placed belowground. As a result, there would be no new sources of lighting as a result of conveyance facilities. No impacts related to light and glare would occur.

The ancillary facilities may include nighttime security lighting mounted to the buildings and/or structures. These new sources of lighting could result in significant light intrusion impacts onto adjacent land uses. The proposed ancillary facilities would generally not include aboveground structures that would include uninterrupted expanses of glass or other highly-reflective construction material. However, water storage reservoirs could be a source of glare due to highly reflective materials. Therefore, mitigation is provided below to minimize lighting and glare impacts related to ancillary facilities.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Storage basins located within existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing setting. Additional nighttime security lighting could be included with at these existing facilities; however, due to these facilities being located on relatively flat terrain, potential lighting impacts would be less than significant. The potential for glare from proposed storage basins containing water to affect specific residences and/or viewsheds for short periods of time is low and would not introduce substantial new sources of glare, and is therefore, less than significant.

Similar to the construction of storage basins within existing facilities, the construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites may also require additional nighttime security lighting; however, because these facilities will be located on relatively

flat terrain, potential lighting impacts would be less than significant. The potential for glare from proposed storage basins containing water to affect specific residences and/or viewsheds for short periods of time is low and would not introduce substantial new sources of glare, and is therefore, less than significant.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts, and as such would have no potential to result in any light or glare impacts.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The aesthetic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities that contain lighting. The facilities are also located within an urban area developed with residential and commercial uses. Implementation of the proposed improvements could result in new exterior nighttime lighting for operational and security purposes within the existing treatment facilities. The increase in lighting within existing treatment facilities could result in spill over lighting onto residential and commercial uses. Therefore, mitigation to address the increased lighting is provided below.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. Groundwater treatment facilities at well sites will have additional lighting beyond that which currently exists at each well site, and therefore to protect nearby light sensitive land uses from direct light and glare from new lighting, mitigation to address the increased lighting is provided below.

The proposed new regional groundwater treatment facilities, groundwater treatment facilities near well sites, and the proposed AWPf would require additional lighting. These facilities are not of a type that would be constructed within materials that would cause substantial glare, and as such no impacts are anticipated thereof. New exterior nighttime lighting for operational and security purposes is anticipated as a result of the development of these projects. The increase in lighting that would result from new regional groundwater treatment facilities and groundwater treatment facilities near well sites could result in spill over lighting onto residential and commercial uses. Therefore, mitigation to address the increased lighting is provided below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

This measure has been abstracted from the 2000 OBMP PEIR (measure 4.15-6):

4.15-6 Future project review and implementation shall implement the following:

- **Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare.**
- **Height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.**
- **Directing light and shielding shall be used to minimize off-site illumination.**
- **No light shall be allowed to intrude into sensitive light receptor areas.**

The following mitigation measures shall be implemented under the proposed OBMPU:

AES-7: ***Lighting Standards. Future OBMPU projects shall use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights.***

The implementation of Mitigation Measure **AES-7** would ensure compliance that facilities proposed within 45 miles of the Mount Palomar Observatory that are located in Riverside County adhere to Riverside County lighting standards, regardless of the exemption from such requirements awarded to water and wastewater facilities, such as those proposed by the OBMPU, afforded by California Government Code Section 53091. 2000 OBMP PEIR Mitigation Measure **4.15-6** would ensure that light and glare impacts from future structures associated with the OBMPU are minimized to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

I.3 Cumulative Impact Discussion

Construction of the new facilities proposed under the OBMPU could alter existing views and contribute to significant cumulative aesthetic impacts in combination with other projects in the region. The implementation of Mitigation Measures **AES-1** through **AES-7** and 2000 OBMP PEIR Mitigation Measures **4.15-1** through **4.15-6** would ensure that the proposed facilities' contribution to cumulative aesthetic impacts would be reduced to less than cumulatively considerable by: ensuring that facilities and landscaping comply with local design standards and are integrated with local surroundings; ensuring that the pastoral setting that presently exists at the Mills Wetland site is not lost due to implementation of the proposed storage basin project; ensuring that impacts to scenic resources from the implementation of future OBMPU facilities will be avoided or assessed further in future CEQA documentation; ensuring that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant; ensuring that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof ensuring compliance with the applicable zoning code; ensuring that future facilities will conform with design requirements established by local jurisdictions; and, ensuring that light and glare impacts from future structures associated with the OBMPU are minimized. Thus, the proposed OBMPU would not contribute cumulatively considerable contributions to cumulative adverse aesthetics impact.

I.4 2000 OBMP PEIR Mitigation Measures

All 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Aesthetics), and have been listed under the impact analysis provided under **I.2, Impact Discussion**, above. These are: **4.15-1** through **4.15-6**.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

This section describes the environmental setting for agriculture and forestry resources, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed OBMPU, and mitigation measures to reduce those impacts to less than significant where required.

II.1 Environmental Setting

Regional Agriculture

According to the county's 2021 *Annual Crop Report for San Bernardino County*,³ San Bernardino County had approximately 1,373,553 acres of non-irrigated and irrigated important farmlands in 2021, but has

³ San Bernardino County. 2021 *Annual Crop Report for San Bernardino County*. <https://awm.sbcounty.gov/wp-content/uploads/sites/84/2022/10/N4454-AWM-CROP-REPORT-2021-Web.pdf> (accessed 03/20/22)

continued to see a decline in farmlands over the years adjacent to existing urban areas. Specifically, San Bernardino County experienced significant urban growth since 2010, ranking tenth in the state for urban growth. Approximately 10,471 acres have been converted from agricultural to nonagricultural uses in San Bernardino County between 2020 and 2021.

According to the *2021 Annual Crop Report for San Bernardino County*, the gross value of agricultural production in San Bernardino County for 2021 totaled approximately \$350 million, which equates to a decrease of about 16.7 percent over 2020 production, primarily due to a decrease in the price for navel oranges, a decrease in vegetable crops due to increased urban development in the west end, and a decrease in animal products due to the closure of 13 egg farms and 8 dairies. Despite continued conversion of agricultural land in the county to business and residential development, agriculture is still an integral component of the economy in San Bernardino County.

The Chino Basin is located within the southwestern portion of the county, within an area historically containing significant agricultural resources; primarily dairy ranches located in the Chino, Chino Hills, and south Ontario areas of the Basin. Some of the historic dairy and agricultural operations in the Chino Basin have been converted to urban uses during the housing and industrial warehousing construction boom in the early part of this decade. **Figure II-1** shows the agriculture and forest land zones within San Bernardino County.

There are several parcels of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the southern portion of the Chino Basin, particularly in the southern portions of Ontario and Chino. Most of the Prime Farmland is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which is located in the southwestern portion of the program area. California Department of Conservation (DOC) Important Farmland designations within the service area are shown on **Figure II-2**. Note the sparsity of important agricultural lands within the northern portion of the Chino Basin, north of the 60 Freeway.

Forestry

The San Bernardino National Forest is located just north of Upland, Rancho Cucamonga, Fontana, and portions of the unincorporated area San Bernardino County. The Chino Basin borders the San Bernardino National Forest, but it does not overlap with the National Forest (see **Figure II-1**). Public Resources Code (PRC) para. 12220(g) defines “Forest Land” as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Under this definition certain woodland areas within the Prado Basin may qualify as “forest land.”

II.2 Regulatory Framework

State

California Farmland Mapping and Monitoring Program

The California Department of Conservation, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the state’s farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of state agricultural land and updates its “Important Farmland Series Maps” every two years (DOC, 2016). Important farmlands are divided into the following five categories based on their suitability for agriculture:

Prime Farmland. Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.

Unique Farmland. Unique Farmland has even lesser quality soils and produces the state's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.

Farmland of Local Importance. Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

The FMMP Map for the Chino Basin is provided as **Figure II-3**.

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowner's contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The Chino Basin appears to contain some parcels with County Williamson Act contracts in place. These occur in the City of Ontario and the City of Chino as shown on **Figures II-4 and II-5**.

California Public Resources Code Section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526

The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)

The California Timberland Productivity Act of 1982, like the Land Conservation Act, was passed to encourage the production of timber resources. Government Code Section 51104(g) defines "Timber," "Timberland," and "Timberland Production Zone" for the purposes of CEQA and "Timberland Preserve Zone," which may be used in city and county general plans.

- "Timber" means trees of any species maintained for eventual harvest for forest production purposes, whether planted or of natural growth, standing or down, on privately or publicly owned land, including Christmas trees, but does not mean nursery stock.
- "Timberland" means privately owned land, or land acquired for State forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.
- "Timberland Production Zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "Timberland Preserve Zone" means "Timberland Production Zone."

California Land Evaluation and Site Assessment Model

The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features.

The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including in CEQA reviews.

The California Agricultural LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance (DOC, 2016).

Local

The Chino Basin area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. The County of San Bernardino, County of Riverside, City of Chino, and City of Ontario contain goals and policies regarding farmland preservation. Though the City of Eastvale contains some land designated for agricultural use, no goals or policies pertaining to agriculture are contained in the city's General Plan.

San Bernardino Countywide Plan

The Countywide Plan Natural Resources Element sets forth the following goals and policies pertaining to agriculture:

Goal NR-7 Agriculture and Soils. The ability of property owners, farmers, and ranchers to conduct sustainable and economically viable agricultural operations.

Policy NR-7.1 Protection of agricultural land. We protect economically viable and productive agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.

Policy NR-7.2 Preservation of important farmlands. We require project applicants seeking to develop 20 or more acres of farmland (classified as prime, of statewide importance, or unique farmland) to non-agricultural uses to prepare an agricultural resource evaluation prior to project approval. The evaluation shall use generally accepted methodologies to identify the potentially significant impact of the loss of agricultural land as well as the economic viability and sustainability of future agricultural use of the property, including long-term sustainability and economic viability of water resources. If the conversion is deemed significant, the County shall require mitigation at a 1:1 ratio of converted to preserved acreage through conservation easements, payment of its valuation equivalent if a fee mitigation program is established, or inclusion in a regional agricultural preservation program.

Policy NR-7.3 Conservation and preservation incentives. We support programs and policies that provide tax and economic incentives to conserve existing productive agricultural lands or preserve farmland classified as prime, of statewide importance, unique, or of local importance. We support land owners in establishing new and maintaining existing California Land Conservation (Williamson Act) contracts.

Policy NR-7.4 Economic diversity of farm operations. We encourage farm operations to strengthen their economic viability through diversifying potential sources of farm income and activity, including value added products, agricultural tourism, roadside stands, organic farming, and farmers markets.

Policy NR-7.5 Agriculture on Rural Living and Open Space properties. We permit small-scale, non-water-intensive, and incidental agricultural on properties designated for Rural Living. In the Oak Glen and Mentone community planning areas, we also permit commercial-scale agriculture on properties designated for Rural Living. In the Oak Glen and Mentone community planning areas and in the Crafton Hills, we also permit commercial-scale agriculture on privately owned properties designated for Open Space.

County of Riverside

The County of Riverside Multipurpose Open Space Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the OBMPU area:

Goal OS-7.3: Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.

Goal OS-7.5: Encourage the combination of agriculture with other compatible open space uses in order to provide an economic advantage to agriculture. Allow by right, in areas designated Agriculture, activities related to the production of food and fiber, and support uses incidental and secondary to the onsite agricultural operation.

Goal OS 8.1: Cooperate with federal and state agencies to achieve the sustainable conservation of forest land as a means of providing open space and protecting natural resources and habitat lands included within the MSHCPs.

Goal OS-8.2: Support conservation programs to reforest privately held forest lands.

City of Chino General Plan, Open Space and Conservation Element

The City of Chino Open Space and Conservation Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the Chino Basin:

Goal OSC-2: Connect Chino's residents to historic agricultural uses and support appropriate ongoing agricultural uses.

Objective OSC-2.1: Support links to Chino's agricultural history.

Objective OSC-2.2: Preserve and protect the remaining agricultural land in Chino.

Objective OSC-2.3: Minimize conflicts between agricultural and urban uses.

City of Ontario Plan and Municipal Code

The City of Ontario Municipal Code contains regulations pertaining to agricultural resources in the city, including:

Ontario Development Code, Chapter 6, Development and Subdivision Regulations, Division 6.01, District Standards and Guidelines, Section 6.01.035, Overlay Zoning Districts. The purpose of the AG Overlay District is to accommodate the continuation of agricultural uses within the city, on an interim basis, and to allow for the establishment of general agricultural uses, such as dairies, within certain areas of concentrated agricultural use. This section regulates development in the Ontario Ranch to create compatibility between agricultural and nonagricultural uses. It recognizes that specific plans will guide the development of the Ontario Ranch. New construction, except for agricultural uses or agricultural-related activities, shall first require the adoption of a Specific Plan, which prescribes the allowed land uses, development regulations and guidelines, and sign regulations applicable to the project.

The Ontario Plan Environmental Resources Element includes the following goals and policies regarding agriculture that may be applicable to all program activities within the Chino Basin:

Goal ER-5. Protected high value habitat and farming and mineral resource extraction activities that are compatible with adjacent development.

Policy ER-5.3. Right to Farm. We support the right of existing farms to continue their operations within the Ontario Ranch.

Policy ER-5.4. Transition of Farms. We protect both existing farms and sensitive uses around them as agricultural areas transition to urban uses.

Significance Criteria

The criteria used to determine the significance of impacts related to Agricultural and Forestry resources are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact to Agricultural and Forestry resources if it would:

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;*
- b. *Conflict with existing zoning for agricultural use, or a Williamson Act Contract;*
- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));*
- d. *Result in the loss of forest land or conversion of forest land to non-forest use.*
- e. *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use; or*

A discussion of the impacts and mitigation measures for the proposed program are presented below.

II.3 Impacts Discussion

- a. *Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

The Chino Basin area historically contains significant agricultural resources; primarily dairy ranches and vegetable farms located in the southwestern portion of the County of San Bernardino. There are several areas of land designated by the California Department of Conservation as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Chino Basin area which includes portions of Riverside County (see **Figures II-2 and II-3**). Most of the important farmland in the Chino Basin is located within the City of Chino, the City of Ontario, and Prado Regional Park area, which includes portions of Riverside County and is located in the southern portion of the program area. General Plan Land Use Maps for all cities are provided in Attachment 1.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

With just over 200 wells envisioned over the next 20 years to support the OBMPU and an estimated one-half acre of disturbance for each new well, approximately 100 acres of future disturbance will result from implementing these new facilities. Those new facilities located north of State Route (SR) 60 will not cause the loss of any important farmland. Those located south of SR 60 have a potential to cause the loss of some important farmland soil resources. However, these well sites and support facilities are rarely required

to be installed at a specific location, so mitigation is available to minimize future Category 1 facility impacts to such resources in the southern portion of the Basin.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas. Again, all Project Category 2 facilities north of SR 60 will not cause the loss of or adverse impact to important farmland resources. Most of the new facilities south of the SR 60 are also expected to be installed within public ROWs. In addition, in most cases appurtenances can be moved short distances to avoid conflicts with site specific resources, which can usually allow avoidance of significant farmland/soil resources. However, in the southern portion of the Basin some conveyance facilities and support equipment may be required to be located within important farmland areas resulting in a potentially significant impact to such resources. Where this occurs mitigation will be implemented to avoid or compensate for such impacts.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8-9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

As indicated in the preceding Project Category discussions, all Project Category 3 facilities north of SR 60 will not cause the loss of or adverse impact to important farmland resources. In contrast several of the proposed storage basin facilities will be located in the southern Chino Basin (south of SR 60) and some may be located within important farmland areas resulting in a potentially significant impact to such farmland resources. This includes several hundred acres of important farmland shown on **Figure II-2** on the California Institution for Men (CIM) property; farmland also occurs adjacent to the Lower Cucamonga Creek Basins; and farmland occurs in the vicinity of the proposed Mill Creek basin. Within existing basins, modifications will not adversely impact important farmlands. To offset the impacts to important farmland in the southern Chino Basin which may remove more than 100 acres of important farmland from production, projects must adhere to the mitigation provided below.

The flooding of existing agricultural fields can be managed in a manner that can enhance agricultural activity without causing adverse impacts. This can be done by using agricultural lands during periods of non-production (winter) and ensuring that the MAR activities do not diminish the quality of existing farmland productiveness. Mitigation is provided below to accomplish this.

Regarding other Category 3 projects, the increase in storage in the Chino Basin is not forecast to cause any adverse impact to important farmland either directly (such as removal from production) or indirectly through enhancing land values that could cause the transition of important farmland to other uses. Regarding MS-4 compliance facilities, such facilities are typically associated with managing surface runoff from urban development, not agricultural land, and implementation of programs to enhance MS4 facilities is not forecast to adversely impact any important farmland resources.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Again, all Project Category 4 facilities north of SR 60 will not cause the loss of or adverse impact to important farmland resources. Most of the new Category 4 facilities south of the SR 60 are also expected to be installed within disturbed areas that support existing public facilities, such as existing Desalter sites or existing well sites. If a regional water treatment facility or if the proposed AWPf must be constructed south of SR 60, it could impact important farmland. Mitigation is provided below to address any impacts to agricultural resources from Project Category 4 facilities either through avoidance of important farmlands during site selection or through compensatory mitigation. Where this occurs, the mitigation will be implemented to avoid or compensate for such impacts.

Combined Project Categories

Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (important farmland). Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant for all four Project Categories.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

The following mitigation measure has been adapted from the 2000 OBMP PEIR (measure 4.2-2). The modification proposed below is necessary as a result of known OBMP facilities that could be located within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), such as the CIM Storage Basin. As such, the following mitigation measure represents an adapted version of 2000 OBMP PEIR Mitigation Measure **4.2-2**.

AGF-1 *Farmland Avoidance or LESA Evaluation. For all proposed facilities in the southern portion of the Chino Basin (south of SR 60), the California Department of Conservation: California Important Farmland Finder shall be consulted to determine whether a project would be installed within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance). If designated important farmland cannot be avoided, the agency implementing the project shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, the implementing agency shall either (1) relocate and avoid the site, or alternatively the implementing agency shall (2) where relocation is not possible, undergo subsequent CEQA documentation.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The cumulative analysis for impacts to agriculturally important farmland resources involves the compilation of acreage all projects that occur within the southern portion of the Chino Basin by the Chino Basin Watermaster. Because agricultural land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is limited and undergoing reduction within the Chino Basin, the loss of farmland acreage over the life of the program in this area could contribute to a significant cumulative impact. Thus, if the OBMBP would result in a loss of Important Farmland, impacts would be potentially significant and would be considered cumulatively considerable.

*Cumulative Measure: Implementation of Mitigation Measure **AGF-1** is required.*

While the conversion of Important Farmland may occur as a result of cumulative development within the region, cumulative loss of agricultural resources may occur. However, implementation of Mitigation Measure **AGF-1** would ensure the proposed facilities' contribution to project specific or cumulative farmland impacts would be reduced to less than cumulatively considerable through implementation of Mitigation Measure **AGF-1**. If there is a determination of significance, then the implementing agency will either relocate

and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland.

Level of Significance After Mitigation: Less than Significant

b. Conflict with existing zoning for agricultural use or a Williamson Act contract?

Combined Project Categories

Based on the data available from the counties and the DOC, there is currently no land within the Chino Basin under Williamson Act Contract. Therefore, none of the facilities and operations proposed under the OBMPU program elements have a potential to adversely impact such land.

The same circumstance exists for the cities that no longer include any designated agricultural land. The proposed project cannot conflict with existing land use designations. On the other hand, San Bernardino County, Riverside County, Ontario, Chino, Chino Hills and Eastvale that still have some land assigned agricultural designations, with the Cities of Ontario and Chino containing some land that is under Williamson Act Contract. The critical issue for such designated land is whether such designated land constitutes "Important Farmlands" in contrast to low value (from an agricultural perspective) agricultural land, such as grazing land. Where future OBMPU water facilities or operations are proposed for implementation, a potential does exist for impact to important farmlands that are coincidentally. To mitigate potential impacts to zoned high value agricultural land (important farmland), the mitigation measure provided below shall be implemented.

Ultimately proposed facilities could potentially be constructed on land that has been zoned for agricultural use, or more specifically within land that is under a Williamson Act Contract, resulting in a conflict with existing zoning at a given site. Construction and operation of OBMPU facilities with presently unknown locations may convert this land to non-agricultural use. Therefore, impacts would be potentially significant for all four Project Categories.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation Measure **AGF-1** is required to minimize impacts under this issue*

The implementation of Mitigation Measure **AGF-1** includes the need to conduct a LESA Model if a facility is proposed on land designated as important farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, the implementing agency would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland.

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

The cumulative analysis for determining conflicts between proposed projects and agricultural zoning and Williamson Act Contracts, involves the implementation of OBMPU facilities. Because land zoned for agriculture is limited within the Chino Basin, the loss of farmland acreage over the life of the program in this area would be considered a significant cumulative impact. Thus, if the OBMBP would result in a loss of Important Farmland, impacts would be potentially significant and would be considered cumulatively considerable.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **AGF-1** is required.*

The implementation of Mitigation Measure **AGF-1** would ensure the proposed facilities' contribution to cumulative impacts on important farmland zoned for agriculture would not be cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination

of significance, then the implementing agency would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland or land under Williamson Act Contract, thus reducing the program's contribution to less than cumulatively considerable.

Level of Significance After Mitigation: Less than Significant

- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

The Chino Basin does not include zoning designations for forest land, timberland, or timberland zoned Timberland Production. The project area borders the San Bernardino National Forest, but it does not overlap with the Chino Basin boundaries.

Combined Project Categories

With no acreage designated for timberland development in the Chino Basin by any of the local jurisdictions, no potential exists to adversely impact timberland through conflicts with such land use designation.

Level of Significance Before Mitigation: No Potential for Significant Impact

Mitigation Measures: None required.

Cumulative Impact Analysis

The proposed projects would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production; and therefore, would not contribute to any cumulative effect on forest or timberland.

Level of Significance Before Mitigation: No Impact

Cumulative Measures: None Required

Level of Significance After Mitigation: No Impact

- d. *Result in the loss of forest land or conversion of forest land to non-forest use?*

The southern-most portion of the Chino Basin overlaps with riparian woodland areas along the Santa Ana River; Chino Creek; and Mill Creek; and in the Prado Basin. Certain areas of these riparian woodlands may qualify as forest land based on the definition cited at the beginning of this section of the Initial Study. Other than these specific areas, no contiguous area of forest land occur in the Chino Basin. Further, no jurisdictions have designated areas within their jurisdiction with zoning designations for forest land. The Chino Basin area borders the San Bernardino National Forest, but it does not overlap with the Basin itself.

Combined Project Categories

Some of the OBMPU facilities, particularly monitoring wells, other wells, and the proposed Mill Creek water storage basin could impact riparian woodland that might qualify as "forest land." Projects in the remainder of the Basin would not result in the loss of forest land or conversion of forest land to non-forest use, and therefore, would not contribute to any cumulative effect on forest or timberland losses from OBMPU implementation.

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

AGF-2 Forest Land Avoidance or Evaluation. For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SR 60), the potential for impacts to riparian woodland/forest land shall be determined prior to final site election via an

Initial Study. If important riparian woodland/forest land cannot be avoided, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct an evaluation to determine if it qualifies with the CDFW definition of "riparian woodland" and/or State definition of "forest land." If the evaluation determines the permanent loss of important riparian woodland/forestland will occur, the agency shall provide compensatory mitigation in the form of comparable riparian woodland/forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, the agency may carry out a riparian woodland/forest land creation program at a 1:1 ratio for comparable riparian woodland/forest land. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Prado Basin contains several hundred acres of riparian woodland that may qualify as "forest land." The proposed projects could result in the conversion of limited areas in the Prado Basin to support OBMPU project categories of uses. It is not possible to quantify the extent of impacts at this stage of the review because many site locations have not yet been identified. Therefore, in a manner similar to the site selection and compensation procedure established for important farmland impacts and for analysis purposes, any loss of riparian woodland/forest land without replacement land dedicated in kind would be considered significant. Note that such woodland is being considered here not for its wetland values, but for its "forest land" impacts. Because land that qualifies as forest land is limited within the Chino Basin, the loss of forest land in the area would be considered a significant cumulative impact. Thus, cumulative impacts to forest land may be cumulatively considerable without implementation of Mitigation Measure **AGF-2**.

*Cumulative Measure: Implementation of Mitigation Measure **AGF-2** is required.*

For all projects implemented in the Chino Basin that actually impact "forest land/riparian woodland," Mitigation Measure **AGF-2** shall be required when such woodland is impacted in support of OBMPU projects, which would prevent the project from contributing to a cumulatively considerable regional forestland impact.

Level of Significance After Mitigation: Less Than Significant

- e. *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion to forest land to non-forest use?*

Combined Project Categories

As previously stated, no Williamson Act lands exist within the Chino Basin. Ultimately, the OBMPU may develop land adjacent to or within agricultural uses, which could contribute to changes within the existing environment which would result in conversion of agricultural or forestry use to non- agricultural or non-forestry use. This is because a limited potential has been identified to convert agricultural land and forest land to water management uses from implementing the OBMPU in the Chino Basin. . In general, the development of infrastructure services existing and future uses within an area or region. As such, development of the OBMPU facilities would be unlikely to trigger conversion of adjacent agricultural or forestry uses to future OBMPU facility sites. However, given that the proposed project may result in the conversion of agriculture or forestry uses, the conversion of such uses to non-agricultural or non-forestry uses may be facilitated as a result of large-scale development in highly agricultural or forestry-oriented areas. Therefore, a potentially significant impact may occur, requiring mitigation identified below to minimize impacts to below significance thresholds.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation Measures **AGF-1** and **AGF-2** can be implemented to reduce potentially significant adverse impacts to agricultural, forest, and timber resources to a less than significant impact level.*

The implementation of each mitigation involves avoidance as the first mitigation approach, but provides contingency measures to address impacts that cannot fully avoid these resources. Two of the mitigation measures require tests of onsite resources (the LESA Model or an evaluation to determine whether Prado Basin woodlands qualify as “forest land”) to determine whether they qualify as resources of sufficient importance that would require mitigation of potential impacts. These mitigation measures would ensure that, where land is eliminated in order to develop OBMPU facilities, such uses are replaced with commensurate uses that would ensure such resources are maintained in the region, and that where designated important farmland is located within a proposed OBMPU site, the LESA Model to determine if a significant farmland impact would occur, and where there is a determination of significance, the implementing agency would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland, thus reducing the program’s contribution to less than significant.

Level of Significance After Mitigation: Less Than Significant

II.4 Cumulative Impact Discussion

Cumulative development within the Chino Basin could result in the conversion of existing farmlands to non-farmland uses. Therefore, potential significant cumulative farmland conversion impacts could occur. Because the proposed project may result in potential significant farmland and forestry conversion impacts, the project’s contribution to the cumulative conversion of farmland may be cumulatively considerable without implementation of mitigation outlined below.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measures **AGF-1** and **AGF-2** is required.*

The implementation of Mitigation Measures **AGF-1** and **AGF-2** would ensure the proposed facilities would not result in a considerable contribution to a cumulative impact related to converting existing farmland or forest land to a non-agricultural use or non-forest use.

Level of Significance After Mitigation: Less Than Significant

II.5 2000 OBMP PEIR Mitigation Measures

The only 2000 OBMP PEIR Mitigation Measures applicable to the analysis under this issue (Agricultural and Forestry has been listed under the impact analysis provided under **II.3, Impact Discussion**, above. This is: **4.2-2**. Mitigation Measure **LU-1** reflects an adapted 2000 OBMP PEIR Mitigation Measure 4.2-2). The modification is necessary as a result of known OBMPU facilities that could be located within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance), such as the CIM Storage Basin. Therefore, as this measure has been modified, 2000 OBMP PEIR Mitigation Measures **4.2-2** is no longer applicable to the proposed OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction related and operational air emissions. These emissions may exceed applicable thresholds for air quality thereby conflicting with the applicable air quality plan. This issue will be further evaluated in the Environmental Impact Report (EIR).
- b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction-related fugitive dust and equipment emissions. Operation of the facilities proposed as part of the OBMPU would likely result in increased emissions of air pollutants. These issues will be further evaluated in the EIR.
- c. *Potentially Significant Impact* – Construction and operational activities may expose sensitive receptors to air pollution in substantial concentrations. The facilities proposed as part of the OBMPU would likely result increased air emissions associated with diesel particulate matter and other pollutants. These issues will be further evaluated in the EIR.
- d. *Potentially Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The OBMPU proposed facilities that may generate substantial odors or other emissions. These issues will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

- a-f. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to biological resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a-c. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to cultural resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a-b. *Potentially Significant Impact* – Cumulatively, the energy required for construction and operational activities associated with the facilities proposed by the OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

VII.1 Environmental Setting

Regional Geology

According to the California Geologic Survey (CGS) Division of the California Department of Conservation (DOC), the Chino Basin is part of a large and broad alluvial-filled plain situated between the San Gabriel Mountains to the north (Transverse Ranges) and the elevated Perris Block to the south (Peninsular Ranges). The surrounding mountains and bedrock hills were uplifted by tectonic compression and faulting during the Quaternary Period, and sediments were eroded and washed-out of the mountains by streams and deposited in the low-lying depressions on the Perris Block to form the groundwater reservoirs of the Chino Basin and its neighboring groundwater basins. Major faults in the area—the Cucamonga Fault Zone, the Rialto-Colton Fault, the Red Hill-Etiwanda Avenue Fault, the San Jose Fault, Central Ave Fault, and the Chino Fault—are at least partly responsible for the uplift of the surrounding mountains and the depression

of the basin. These faults are significant in that they are known barriers to groundwater flow within the alluvial aquifer-system(s) and define some of the external boundaries of the basins by influencing the magnitude and direction of groundwater flow.

Quaternary alluvial deposits and recent soils comprise the majority of the stratigraphy of the County of San Bernardino. Other strata may include Tertiary marine and non-marine non-sedimentary and volcanic units; Mesozoic marine sedimentary; metasedimentary, metavolcanic and plutonic rocks, Paleozoic sedimentary and metasedimentary units; and Precambrian igneous and metamorphic rocks (IEUA, 2000).

Topography

The Chino Basin is located in southern California within the west end of San Bernardino Valley; just east of Los Angeles County, northeast of Orange County, and extending just south of the Riverside-San Bernardino County boundary lines. There are three primary physiographic regions within San Bernardino County: Valley, Mountain and Desert regions. The Chino Basin lies within the Valley Region which consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana River Watershed and Chino Hills.

The project area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The Chino Basin is bordered to the north by the Cucamonga Basin; to the east by the Rialto-Colton Basin and the Jurupa Mountains; to the south by the Santa Ana River and the Temescal Basin; and to the west by the Chino Hills, Puente Hills and the Six Basins Basin (IEUA, 2000).

Seismic Hazards

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and the Cucamonga faults and close proximity to other major faults make the Valley Region of the County of San Bernardino have a greater risk for populations and structures to be exposed to potential geological hazards (San Bernardino County, 2020).

There are three active faults (Elsinore [Chino] Fault Zone, Red Hill-Etiwanda Avenue Fault Zone, and Sierra Madre Fault Zone) within the Chino Basin. There are additional active or potentially active faults outside of the Chino Basin and within or near the County of San Bernardino with the potential to create a magnitude earthquake of 3.7 or greater up to approximately magnitude 7.5-8.0. There is also an extensive history of large, damaging earthquakes occurring within the County of San Bernardino ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). In addition to strong ground shaking from earthquakes on faults located within the region, large earthquakes on faults near the County boundaries also have and will impact property within the County of San Bernardino. Many of the other potential geologic hazards in the region are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, and seismically induced landslides. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by earthquakes and related ground shaking up to several tens of kilometers from a site (San Bernardino County, 2020).

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults, or even along different strands of the same fault. Ground rupture is considered more likely along active faults. Site locations for the proposed projects within the OBMPU may be within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act (San Bernardino County, 2021). Active faults within the Chino Basin are shown on Exhibit 1. According to the Riverside County General Plan, the portion of the Chino Basin that is located in Riverside County does not overlie any Alquist-Priolo special studies zones.

Ground Shaking

According to the DOC's Earthquake Shaking Potential Assessment tool—the Ground Motion Interpolator⁴—the Chino Basin is within an area subject to high frequency shaking potential. High frequency shaking areas are in regions near major, active faults and will on average experience stronger earthquake groundshaking more frequently. This intense shaking can damage strong, modern buildings. Ground shaking intensity varies depending on the overall earthquake magnitude, distance to the fault, focus of earthquake energy, and type of geologic materials underlying an area. The Modified Mercalli Intensity (MMI) scale is commonly used to express earthquake effects due to ground shaking because it expresses ground shaking relative to actual physical effects observed by people during a seismic event. MMI values range from I (earthquake not felt) through a scale of increasing intensities to XII (nearly total damage). Earthquakes on the various active and potentially active fault systems within and near the Chino Basin can produce a wide range of ground shaking intensities.

Liquefaction and Landslide Hazards

Soil liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. During liquefaction, soils lose strength and ground failure may occur. Secondary ground failures associated with liquefaction include lateral spreading or flowing of stream banks or fills, sand boils, and subsidence. Areas characterized by water-saturated, cohesionless, and granular soils are most susceptible to liquefaction and usually at depths of less than 50 feet, especially in areas with a shallow water table. The groundwater table can fluctuate greatly in association with groundwater recharge activities, both natural and artificial. During years of high groundwater recharge, the groundwater table could potentially be shallow enough to present a liquefaction hazard in the areas of the existing recharge basins. Portions of the service area are within liquefiable zones as discussed in the General Plans for the cities and counties.

Landslides are the down-slope displacement of rock, soils and debris. The susceptibility of land (slope) failure is dependent on slope and geological formations and influenced by levels of rainfall, excavation, or seismic activities. Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. The southwestern portion of the Chino Basin is located within landslide hazard zones, as defined in the Seismic Hazard Zones map for the San Bernardino County. Landslides and mudflow hazards exist throughout the Chino Basin area, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other causes. Specifically, Chino Hills is underlain by landslide-prone marine rocks, presenting the greatest potential slope stability problem in the project area (San Bernardino County, 2021).

Soils

Soils within the Valley Region generally include deep well-drained sands, sandy loams, silty loams on level alluvial basins and fans; and shallow to deep, well to excessively drained, sandy loams on foothills and upland areas (IEUA, 2000). The soils present within the service area vary slightly in physical properties but share similar characteristics. Soils within the southwestern portion of San Bernardino County (including the Chino Basin) are presented in Table VII-1 below.

Subsidence

Subsidence of the ground surface can occur under static conditions (i.e., due to consolidation settlement from overlying load or long-term groundwater extraction) but can also be accelerated and accentuated by earthquakes and tectonic activity. Subsidence of loose, unconsolidated soils generally occurs slowly, but can cause significant structural damage.

San Bernardino County has undergone tectonic activity, including the uplifting of the San Bernardino Mountains in relation to the Valley Region. This activity has raised some portions of the Earth's crust, while others have subsided. This tectonic subsidence is of concern during very large earthquakes. Furthermore, subsidence caused by groundwater withdrawal is of concern to alluvial valleys of San Bernardino County.

⁴ California Department of Conservation, Ground Motion Interpolator.
<https://www.conservation.ca.gov/cgs/Pages/PSHA/ground-motion-interpolator.aspx> (accessed 03/27/23)

The entire alluvial valley area in southwestern San Bernardino County, primarily the Chino area, has experienced subsidence from groundwater withdrawal. Subsidence from 0.8 to 5.8 feet is possible in these areas (San Bernardino County, 2021).

Table VII-1
SOILS WITHIN SOUTHWESTERN SAN BERNARDINO COUNTY

Soil Type	Acres
Alo clay, 15 to 30 percent slopes	3.2
Calleguas clay loam, 50 to 75 percent slopes, eroded	10.5
Soper gravelly loam, 30 to 50 percent slopes	31.8
Alo clay, 30 to 50 percent slopes, warm MAAT, MLRA 20	956.0
Chino silt loam	7,840.2
Chualar clay loam, 0 to 2 percent slopes	871.0
Chualar clay loam, 2 to 9 percent slopes	2,706.2
Chualar clay loam, 9 to 15 percent slopes	1,132.7
Cieneba sandy loam, 9 to 15 percent slopes	430.7
Cieneba-Friant sandy loams complex	1,124.9
Cieneba-Rock outcrop complex, 30 to 50 percent slopes, MLRA 20	16,535.3
Crafton-Rock outcrop complex, eroded	761.3
Delhi fine sand	22,344.7
Fontana clay loam, 15 to 30 percent slopes	2,067.3
Fontana clay loam, 30 to 50 percent slopes	9,715.9
Friant-Rock outcrop complex	1,309.7
Garretson very fine sandy loam, 2 to 9 percent slopes	479.3
Gaviota-Rock outcrop complex	5,248.7
Quarries and Pits soils	872.1
Grangeville fine sandy loam	7,763.9
Grangeville fine sandy loam, saline-alkali	1,155.1
Greenfield sandy loam, 2 to 9 percent slopes	7,651.3
Greenfield fine sandy loam, 9 to 15 percent slopes	630.7

Source: USDA, NRCS Web Soil Survey, 2023. <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx> (accessed 03/24/23)

Erosion

Soil erosion is the detachment and movement of soil materials through natural processes or human activities. Natural processes include water, landslide, fire, flood, and wind. Man-made causes could include irresponsible grading and other construction practices, use of off-road vehicles, and other indiscriminate disruptions of soil. Wind is the primary cause of erosion in San Bernardino County. In the Valley Region, especially at the base of mountains and foothills like Chino Hills and northern Rancho Cucamonga, wind is more severe, and therefore, erosion is more prevalent. According to the San Bernardino Countywide Plan, severe erosion can be a problem anywhere in the County of San Bernardino, especially when precipitation and/or wind combine with uncovered soil (San Bernardino County, 2021).

Expansive Soils

Expansive soils contain significant amounts of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from building and structure foundations or underground utilities, and can result in structural distress and/or damage. Often, grading, site preparations, and backfill operations associated with subsurface structures can eliminate the potential for expansion. Linear extensibility and plasticity are used to describe the shrink-swell potential of soils. If linear extensibility is greater than 3 percent (classified as Moderate potential), shrinking and swelling can cause damage to Buildings, roads, and other structures. Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency but are not typically expansive. However, soils within clay-rich units with moderate to high shrink-swell potential are located throughout the Chino Basin.

VII.2 Impact Discussion

Would the project:

- a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - (i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area delineated as an Alquist-Priolo Earthquake Fault Zone. There are three faults delineated on the Alquist-Priolo Earthquake Fault Zoning Map within and adjacent to the Chino Basin: the Elsinore Fault Zone (Chino Fault), which crosses the western boundary of the Chino Basin; the Red Hill-Etiwanda Avenue Fault, which traverses the northern boundary of the Chino Basin; and, a segment of the Sierra Madre Fault Zone, Cucamonga Section passes through the northwestern portion of the Chino Basin. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. As such, because the locations for future wells and extensometers are unknown at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed under this Project Category operated within these zones could expose structures to potential substantial adverse effects; therefore, mitigation is required to minimize impacts under this issue through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

As mentioned in Project Category 1, the Elsinore, Red Hill, and Sierra Madre Faults are each delineated as being located within Alquist-Priolo Earthquake Fault Zones. Underground pipelines are not typically susceptible to severe damage from fault rupture, depending on the severity of a seismic event. However, because not all proposed project locations are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Facilities operated within these zones could expose conveyance and ancillary facilities to potential substantial adverse effects; therefore, mitigation is required to minimize impacts under this issue to a less than significant level by ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. Given that the proposed storage facilities will be developed at or below grade, and do not require any aboveground structures, or are at known locations outside of the Alquist-Priolo Earthquake Fault Zones, no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these sites is located within an Alquist Priolo Earthquake Fault Zone. Therefore, the risk of the project exposing people or structures to loss, injury, or death involving rupture of an active earthquake fault would be less than significant.

The proposed AWPf, groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise location of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. Because not all proposed project locations are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed as part of this Project Category operated within these zones could expose structures to potential substantial adverse effects; therefore, mitigation is required to minimize impacts under this issue through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone are

analyzed thoroughly through a site-specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.4-10 and 4.4-19):

4.4-10 ***Prohibit critical, essential, and high-risk land uses near earthquake special studies areas shown on the Hazard Overlay Maps developed by the County of San Bernardino and Riverside.***

4.4-19 ***When determined necessary by the affected jurisdictions, geotechnical and soils engineering reports shall be prepared in conjunction with the preparation of preliminary design layouts and grading plans for all new development projects implemented within the proposed Project Area. These studies will verify the presence or absence of hazardous soil conditions. If necessary, these reports will provide specific mitigation measures for the treatment of potential geologic and soils hazards.***

The implementation of 2000 OBMP PEIR Mitigation Measure **4.4-10** would ensure critical, essential, and high-risk facilities are located outside of delineated fault zones. The implementation of 2000 OBMP PEIR Mitigation Measure **4.4-19** would ensure that, when determined necessary, geotechnical and soils engineering reports are prepared to ensure that potential geologic hazards, such as fault zones, are mitigated to otherwise minimize impacts if located within a fault zone.

Level of Significance After Mitigation: Less Than Significant

- a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
 - (ii) *Strong seismic ground shaking?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active.

In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed wells and monitoring devices. As stated under issue a(i) above, the flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated with seismic ground shaking is anticipated to occur. The extensometers will be located within wells, and the proposed wells may each be housed within a small structure. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of well and extensometer related systems. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of onsite workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the

CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active.

In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed wells and monitoring devices. Underground pipelines are not typically susceptible to severe damage from seismic ground shaking, and furthermore are subject to industry standards that will minimize the potential risk of damage or pipeline rupture. However, the facilities under this Project Category include ancillary facilities that may include aboveground structures. The primary and secondary effects of ground shaking could damage structural foundations, distort or break pipelines and other water conveyance structures, and cause structural failure.

The structural elements of conveyance and associated ancillary facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. In addition, the pipelines would be constructed according to industry standards using American Water Works Association (AWWA) guidelines. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

As discussed under issue a(i) above, the storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. Given that the proposed storage facilities will be developed at or below grade, and do not require any habitable structures, there is no risk of the development of storage basins directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, there is no risk of expansion of the safe storage capacity directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the upgrades and improvements to existing treatment facilities, and to the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of related systems. Some of the proposed facilities are non-habitable or will only require visits on an as-needed basis; however, the proposed AWPf, existing treatment plants, and the proposed regional groundwater treatment plant would require full time employees onsite. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of onsite workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. Compliance with the construction and building safety design standards addressed under Project Category's 1 and 2 would reduce potential impacts associated with ground shaking to a level of less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

- a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
(iii) *Seismic-related ground failure, including liquefaction?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area with a high potential for liquefaction. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss, injury, or death associated

liquefaction is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. As such, because the locations for future wells and extensometers are unknown at this time, there is the potential for projects to be constructed and operated within an area with a high potential for liquefaction. The proposed wells located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, adverse effects involving liquefaction would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area with a high potential for liquefaction. As described in the Environmental Setting above, there are areas within the Chino Basin with a high potential for liquefaction. The pipelines and/or ancillary facilities located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for such facilities to be located on or in soils with a moderate to high potential for liquefaction, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with liquefaction is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new; up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these existing facilities is located on soils susceptible to liquefaction.

The proposed AWPf, groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be located on or in soils with a moderate to high potential for liquefaction, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to 2000 OBMP PEIR Mitigation Measure 4.4-19, above.

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.4-8 and 4.4-16):

4.4-8 *Require each site within identified Liquefaction Hazard Zones to be evaluated by a licensed engineer prior to design or land disturbance/construction.*

4.4-16 *Require site-specific geotechnical investigations of proposed development to include an assessment of potential impacts and mitigation measures related to expansive and reactive soils and liquefaction. Under the OBMP, Watermaster will continue to monitor the areas with potential liquefaction hazards and will work with local jurisdictions to ensure that any future structures are constructed with the appropriate foundations to address increased liquefaction potentials apropos to the specific area. This mitigation measure will reduce impacts to a less than significant level.*

The implementation of 2000 OBMP PEIR Mitigation Measure 4.4-19, 4.4-8 and 4.4-16 would reduce the potential impacts from liquefaction through evaluation by a licensed engineer, and through a design level geotechnical investigation with implementation of specific design recommendations intended to reduce liquefaction impacts.

Level of Significance After Mitigation: Less Than Significant

- a. *Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:*
(iv) *Landslides?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Landslides and mudflow hazards exist throughout the Chino Basin on steep hillsides and in creek and streambed areas. Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area with a high potential for landslide. The flow meters will be located within surface water, and are small devices; no structures will be developed in association with these flow meters and as such no risk of loss,

injury, or death associated landslide is anticipated to occur. The extensometers will be located within wells, and the proposed wells may be housed within a small structure. The proposed wells could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area susceptible to landslides. The proposed conveyance and ancillary facilities could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. As such, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for those facilities to be constructed in areas susceptible to landslides, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with landslides is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Seismic impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters) would occur within developed sites already containing desalter or water treatment facilities; none of these existing facilities is located in an area susceptible to landslide.

The proposed AWPf, groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities near well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be constructed in areas susceptible to landslides, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to 2000 OBMP PEIR Mitigation Measure 4.4-19, above.

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.4-11 and 4.8-12):

4.4-11 *Require stability analysis for Landslide Hazard areas designated “Generally Susceptible” and “Mostly Susceptible” on the Hazards Overlay Maps.*

4.4-12 *Institute restrictions on construction in high landslide potential and steep-slope areas to ensure safe development.*

The implementation of 2000 OBMP PEIR Mitigation Measure 4.4-19 would reduce the potential impacts from landslide hazards through a design level geotechnical investigation with implementation of specific design recommendations, where deemed appropriate. Additionally, 2000 OBMP PEIR Mitigation Measures 4.4-11 and 4.4-12 would further institute stability analysis requirements for future facilities located within Generally Susceptible and Mostly Susceptible areas delineated on Hazard Overlay Maps, and would restrict construction in high landslide potential areas to ensure development is either avoided or mitigated when placed in areas considered highly susceptible to landslides. Together, these mitigation measures would minimize the potential for landslide related impacts.

Level of Significance After Mitigation: Less Than Significant

b. Result in substantial soil erosion or the loss of topsoil?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Construction activities for proposed well development projects such as site excavation and grading could result in soil erosion during rain or high wind events. Flow meters will be located within surface water, and are small devices that would not require grading or excavation to place. These devices would require a few trips to each site, which may result in some ground disturbance, but this would be temporary and would not occur on a frequent basis. Development of the proposed wells would result in construction activities that would need to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities that generate wind-induced soil erosion are below significance thresholds. As a mandatory requirement, mitigation is not required to ensure compliance with the above Rule.

As stated in the project description, well development is anticipated to occur within sites that would disturb less than half an acre, and as such no Storm Water Pollution Prevention Plan (SWPPP) would be required. However, in order to prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency will abide by best management practices (BMPs) to ensure that the discharge of storm runoff from construction sites does not cause erosion downstream to the discharge point. The implementation of BMPs will be enforced through mitigation identified below. Additionally, for these well development projects, which are anticipated to be less than one acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit⁵ that includes the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland, within the Chino Basin as co-permittees, and as specified by the Riverside County MS4 Permit that includes Eastvale, and Jurupa Valley as co-permittees shall include erosion and sediment control BMPs for the construction site. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction activities for proposed conveyance and ancillary facility projects such as excavation and grading could result in soil erosion during rain or high wind events. As stated above, development of the proposed wells would result in construction activities that would need to comply with SCAQMD Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities that generate wind-induced soil erosion are below significance thresholds.

To prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency would be required to prepare and implement a SWPPP in accordance with the requirements of the statewide Construction General Permit (CGP) (State Water Resources Control Board [SWRCB] Water Quality Order 2009-0009-DWQ). The SWPPP would identify best management practices (BMPs) to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. Compliance with the CGP, required SWPPP, and identified BMPs would ensure soil erosion and loss of topsoil impacts would be reduced to a level of less than significant.

As stated above, should an individual proposed project result in disturbance of less than one acre during construction activities, then the CGP would not apply to the particular project. In order to prevent erosion associated with runoff from construction sites for each proposed project, the implementing agency will abide by BMPs to ensure that the discharge of storm runoff from construction sites does not cause erosion downstream to the discharge point. The implementation of BMPs will be enforced through mitigation identified below. Additionally, for conveyance and ancillary facility projects that are less than one acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (SARWQCB, 2016) that includes the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland, within the Chino Basin as co-permittees, and as specified by the Riverside County MS4 Permit that includes Eastvale, and Jurupa Valley as co-permittees, shall include erosion and sediment control BMPs for the construction site. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR

⁵ State Water Quality Control Board, Santa Ana Region, Stormwater Programs.
https://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/ (accessed 03/27/23)

facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts related to soil erosion and the loss of topsoil from construction of storage basins and recharge facilities are anticipated to be the same as that which is discussed under Project Categories 1 and 2 above.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no soil erosion or loss of topsoil are anticipated.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Geology and Soils impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts related to soil erosion and the loss of topsoil from construction of desalters and water treatment facilities are anticipated to be the same as that which is discussed under Project Categories 1, 2, and 3 above.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-1: ***Small Site Erosion Control. For each well development or other OBMPU projects that is less than one acre in size requiring ground disturbing activities such as grading, the Implementing Agency shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **GEO-1** would ensure that the proposed facilities associated with the OBMPU that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs.

c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data

loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells could be located within a site with unstable soils; furthermore, groundwater pumping facilities could cause aquifer system compaction and land subsidence, which is known to occur within the Chino Basin. The flow meters are small devices that will be located on the wellhead; as such soil stability is not of a concern for these devices. The extensometers will be located within monitoring wells, and the proposed monitoring wells may be housed within a small structure. The proposed wells located on or in unstable soils could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of onsite or visiting employees. The project also proposes additional pumping to expand the Chino Desalters through the use of existing and new wells. Pumping impacts in the vicinity of the desalter well field could result in adverse impacts on water levels and subsidence issues, which would be a significant impact. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations, and through monitoring of potential subsidence resulting from Chino Desalter pumping, and minimizing the impacts thereof.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the conveyance and ancillary facilities are presently unknown, it is possible that any of the future conveyance and ancillary facilities could be located within a site with unstable soils. The proposed conveyance and ancillary facilities located on or in unstable soils could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of onsite or visiting employees. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential

for such facilities to be located on unstable soils, which may cause damage or failure as a result. Additionally, if a storage basin might be implemented that would bring water levels up to a level that significantly increases the risk of liquefaction, a more detailed monitoring and geologic study focused on this issue must be conducted to determine whether or not liquefaction poses a hazard to surface structures and to human safety, otherwise a significant impact may occur. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through the methods described above, and through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no impacts related to soil instability are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Geology and Soils impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters), proposed AWPf, groundwater treatment facilities at well sites, existing groundwater treatment facilities (the precise locations of existing groundwater treatment facilities have not been mapped), regional groundwater treatment facilities and groundwater treatment facilities may involve groundwater pumping facilities that could cause aquifer system compaction and land subsidence. However, the overall OBMPU facilities are, when combined, intended to minimize the potential for land subsidence that is known to occur within the Chino Basin. Construction and operation of the proposed facilities would not cause subsidence; rather, proposed facilities, though not anticipated to be affected by historic subsidence, could be exposed to future subsidence and collapse risk due to the circumstances known to exist within the treatment facility locations. As such, there is a potential for such facilities to be located on unstable soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: 2000 OBMP PEIR Mitigation Measure 4.4-19, above.

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.4-6 and 4.4-15):

4.4-6 *If a conjunctive use program might be implemented that would bring water levels up to a level that significantly increases the risk of liquefaction, a more detailed monitoring and geologic study focused on this issue will be conducted to determine whether or not liquefaction poses a hazard to surface structures and to human safety. If such a study finds the impacts to be significant, the volume of water permitted to be stored in the Basin will be decreased sufficiently until a water level is achieved that does not pose any significant hazard to surface structures or people.*

- 4.4-15** *To ensure that pumping impacts in the vicinity of the desalter well field do not have an adverse impact on water levels and subsidence issues, the follow performance standards shall be used to evaluate the desalters:*
- a. Water level declines in areas surrounding the desalter pumping locations will not be allowed to decline to the extent that pumping capabilities for surrounding wells are impacted. If surrounding wells and producers are impacted by declines in water levels, alternative access to equivalent quantity and quality of water will be provided to affected surrounding parties. This water may be provided through distribution of funding to affected parties for the deepening of existing wells, or may be provided through the delivery (paid for by the implementing agency) of comparable or improved quality and quantity of water from other sources.*
 - b. If desalter well fields are demonstrated to cause or exacerbate impacts to subsidence areas measurable by a decline of over six inches in ground level at a ¼ mile radius, or at the radius of the nearest non-OBMP-participating structure, then pumping patterns for the desalters shall be modified to reduce impacts to cause no more than six inches of decline in ground level at the smallest of the two radii.*

The implementation of 2000 OBMP PEIR Mitigation Measure **4.4-19** would reduce the potential impacts related to unstable soils through a design level geotechnical investigation with implementation of specific design recommendations for future OBMPU projects. Additionally, 2000 OBMP PEIR Mitigation Measure **4.4-6** would ensure the groundwater recharge activities under the OBMPU would not exacerbate liquefaction conditions through decreasing recharge until a water level is achieved that does not pose any hazard to surface structures or people. 2000 OBMP PEIR Mitigation Measure **4.4-15** would minimize potential impacts related to subsidence occurring as a result of additional pumping in the Chino Desalter well fields under the OBMPU. This would ensure that subsidence is not exacerbated as a result of implementation of the proposed OBMPU.

Level of Significance After Mitigation: Less Than Significant

- d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

When expansive soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from structure foundations or underground utilities, and can result in structural distress and/or damage. Most of the Chino Basin is comprised of old alluvial fans, which vary in consistency. As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. The specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. Given that the location of well development sites and extensometers will be located within wells, there is a potential that such facilities could be installed within a site containing expansive soils. The flow meters are small devices that will be located within surface water; as such the presence of expansive soils is not of a concern for these devices. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed pipelines would be installed belowground; soils with expansive characteristics could exert pressure on the pipelines during times of saturation, potentially threatening pipeline stability. Similar to Project Category 1 facilities, the foundation of the ancillary facilities could also be damaged by expansive soils. Identified soil types within the Chino Basin area do not have expansive soil characteristics since they do not have a large amount of clay (expansive soils are typically of a clay type); however, specific sites could have undetected expansive characteristics. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Proposed recharge basins and wells could saturate soils and create expansive soil characteristics that did not exist previously. The storage facilities proposed under this project category would not include any aboveground, habitable structures. The ancillary facilities required to implement these projects are discussed under Project Category 2 above. However, given that the proposed storage basins may require a seal to retain the water, there is a potential for such facilities to be located on expansive soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue through ensuring that new storage basins are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no impacts related to expansive soils are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Geology and Soils impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. Therefore, the project facilities would be located in areas of low soil expansion potential. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. The presence of expansive soils at the existing treatment facility sites could decrease the structural stability of the proposed project facilities, which could result in structural or operational failure of these facilities and or threaten the health and safety of onsite workers. Such impacts are considered potentially significant.

Therefore, mitigation is required to minimize impacts under this issue through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to 2000 OBMP PEIR Mitigation Measures 4.4-16 and 4.4-19, above.

The implementation of 2000 OBMP PEIR Mitigation Measures 4.4-16 and 4.4-19 would reduce the potential impacts related to expansive soils through a design level geotechnical investigation with implementation of specific design recommendations intended to reduce potential for expansive soils to impact future OBMPU projects.

Level of Significance After Mitigation: Less Than Significant

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

Implementation of proposed well development and monitoring devices associated with the OBMPU would not require the use of septic systems. There is no planned use of onsite septic systems for the proposed OBMPU projects proposed under this Project Category. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

Implementation of proposed conveyance and ancillary facilities would not include facilities that would require the use of septic systems. The majority of facilities would be upgrades to existing infrastructure, wells, pipelines, and other water conveyance facilities that do not require septic systems. There is no planned use of onsite septic systems for the proposed project facilities. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

Impacts would be the same as Project Category 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

Impacts would be the same as Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None required.

Level of Significance After Mitigation: No Impact

- f. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Cumulatively, the facilities proposed by the OBMPU may result in impacts to paleontological resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR in **Subchapter 4.4, Cultural Resources**.

VII.3 Cumulative Impact Discussion

Future cumulative development may experience significant impacts associated with geotechnical constraints within the Chino Basin, including impacting resources such as paleontological resources, that occur below ground. Similarly, development of the OBMPU would be affected by geotechnical constraints within the Chino Basin.

Level of Significance Before Mitigation: Potentially Significant

Cumulative Measures: GEO-1, 4.4-8, 4.4-10, 4.4-11, 4.8-12, 4.4-16, and 4.4-19.

None of the future onsite or off-site project-related activities are forecast to cause changes in geology or soils or the constraints affecting the project area that cannot be fully mitigated. With the implementation of Mitigation Measures **GEO-1** and 2000 OBMP PEIR Mitigation Measures **4.4-8, 4.4-10, 4.4-11, 4.8-12, 4.4-16, and 4.4-19**, and adherence to the regulatory requirement, the proposed OBMPU would have a less than significant contribution to cumulatively considerable geology or soils impacts within the Chino Basin.

Level of Significance After Mitigation: Less Than Significant

VII.4 2000 OBMP PEIR Mitigation Measures

Some of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Geology & Soils), and have been listed under the impact analysis provided under **I.2, Impact Discussion**, above. These mitigation measures are: **4.4-6, 4.4-8, 4.4-10, 4.4-11, 4.8-12, 4.4-15, 4.4-16, and 4.4-19**. All other 2000 OBMP PEIR Mitigation Measures are no longer applicable, primarily due to regulations by which compliance is mandatory that cover the intent of these remaining mitigation measures.

2000 OBMP PEIR Mitigation Measures **4.4-1** through **4.4-4, 4.4-17** and **4.4-18** apply to erosion control, which is required through the preparation and implementation of a SWPPP in accordance with the requirements of the statewide CGP (SWRCB Water Quality Order 2009-0009-DWQ). The SWPPP would identify BMPs to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. Compliance with the CGP, required SWPPP, and identified BMPs would ensure soil erosion and loss of topsoil impacts would be reduced to a level of less than significant. Therefore, 2000 OBMP PEIR Mitigation Measures **4.4-1** through **4.4-4, 4.4-17** and **4.4-18** are no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.4-5** applies to potential liquefaction related impacts, which are fully covered by the 2000 OBMP PEIR Mitigation Measures **4.4-6, 4.4-8, 4.4-16, and 4.4-19**. Therefore, 2000 OBMP PEIR Mitigation Measure **4.4-5** is no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.4-7, 4.4-9, 4.4-20, 4.4-21, 4.4-23, and 4.4-24** pertain to seismic design standards, geologic hazard design standards, and conformance with the CBC, which are each required to be implemented as part of the CBC. Therefore, as compliance with the CBC is a mandatory requirement, 2000 OBMP PEIR Mitigation Measures **4.4-7, 4.4-9, 4.4-20, 4.4-21, 4.4-23, and 4.4-24** are no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.4-13** and **4.4-14** pertains to subsidence monitoring, which has been integrated into Watermaster's Subsidence Monitoring Program, and is therefore no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.4-22** pertains to direct impacts of faults and incorporating mitigation for such impacts into project design, which is covered by 2000 OBMP PEIR Mitigation Measure **4.4-19**. Therefore, 2000 OBMP PEIR Mitigation Measure **4.4-22** is no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.4-1** through **4.4-5, 4.4-7, 4.4-9, 4.4-13, 4.4-14, 4.4-17, 4.4-18, 4.4-20, 4.4-21** through **4.4-24** are no longer applicable for the purposes of the OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a-b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in construction related and operational greenhouse gas (GHG) emissions. These emissions may exceed applicable thresholds for GHG emissions or otherwise conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. This issue will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

This section describes and evaluates issues related to hazards and hazardous materials within the Chino Basin. Discussed are the physical and regulatory settings, the baseline for determining environmental impacts, the criteria used for determining the significance of environmental impacts, and potential impacts and appropriate mitigation measures associated with implementation of the OBMPU.

IX.1 Environmental Setting

Introduction

The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such, or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases). The term “hazardous material” is defined as any material that, because of quantity, concentration,

or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.⁶

In some cases, past industrial or commercial activities on a site or an accidental spill could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials can cause health hazards when released to the soil, groundwater, or air. Individuals are typically exposed to hazardous materials through inhalation or bodily contact. Exposure can come as a result of an accidental release during transportation, storage, or handling of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from previous spills or leaks.

Chino Basin Service Area

This section describes the existing conditions of the Chino Basin (where the OBMPU will be implemented) with respect to hazards and hazardous materials. It discusses the potential to encounter hazardous materials in soil and/or groundwater in this area, potential fire hazards, and potential hazards related to proximity to schools and airports.

Hazardous Building Materials

Hazardous materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs), may be contained in building materials and released during demolition activities. The likelihood of hazardous materials in building components can be generally assessed based on the age of the structures, as these materials were phased out of use during the 1970s and 1980's. Any structures proposed for demolition in support of the OBMPU Program Elements will require evaluation of the date of construction and possible inspections by qualified professional to determine presence of ACM, LBP or PCB.

Asbestos Potential

Asbestos is a naturally-occurring fibrous material that was used as a fireproofing and insulating agent in building construction before such uses were banned by the U.S. Environmental Protection Agency (U.S. EPA) in the 1970's, although some nonfriable⁷ use of asbestos in roofing materials still exists. The presence of asbestos can be found in such materials as ducting insulation, wallboard, shingles, ceiling tiles, floor tiles, insulation, plaster, floor backing, lining for piping, and many other building materials. ACMs are considered both a hazardous air pollutant and a human health hazard. The risk to human health is from inhalation of airborne asbestos, which commonly occurs when ACMs are disturbed during demolition and renovation activities.

Lead Potential

Lead and lead compounds can be found in many types of paint. In 1978, the Consumer Product Safety Commission set the allowable lead levels in paint at 0.06 percent by weight in a dry film of newly applied paint. Lead dust is of special concern, because the smaller particles are more easily absorbed by the body. Common methods of paint removal, such as sanding, scraping, and burning, create excessive amounts of dust. Lead based paints are considered likely present in buildings constructed prior to 1960, and potentially present in buildings built prior to 1978.

PCBs Potential

PCBs are organic oils that were formerly placed in many types of electrical equipment, such as transformers and capacitors, primarily as electrical insulators. They may also be found in hydraulic fluid used for hoists, elevators, etc. Years after widespread and commonplace installation, it was discovered that exposure to PCBs may cause various health effects and that PCBs are highly persistent in the environment. The EPA

⁶ State of California Health and Safety Code Chapter 6.95, Section 25501(p).

⁷ Nonfriable asbestos refers to ACMs that contain asbestos fibers in a solid matrix that does not allow for them to be easily released.

has listed these substances as carcinogens. PCBs were banned from use in electrical capacitors, electrical transformers, vacuum pumps, and gas turbines in 1979.

Household Hazardous Materials

Household hazardous waste is generated at a place of residence, as defined in Section 25218.1 (e) of the California Health and Safety Code. Examples of common household hazardous wastes include antifreeze, household batteries, compressed gas cylinders, television/computer monitors, consumer electronic devices, home-generated sharps (e.g., needles, syringes, and lancets), oil-based paints, latex paints, motor oil, used oil filters, rodent poison, asbestos, gasoline, fluorescent lamps, partially used aerosol containers, and weed killers (CIWMB, 2002). A household hazardous waste collection facility is commonly operated by local public agencies or their contractors for the purposes of collecting, handling, treating, storing, recycling, or disposing of household hazardous wastes (Health and Safety Code Section 2518.1 (f)). A household hazardous waste collection facility may also accept wastes from small businesses that are conditionally exempt generators, defined as a small business that generates no more than 100 kilograms of hazardous waste per month.

The Valley region of San Bernardino County has multiple hazardous waste collection centers for permanent household hazardous waste located in the City of Chino, Upland, Ontario, and Rancho Cucamonga. Most facilities accept items such as lawn and garden care products, paint and paint-related products, automotive fluids and batteries, beauty products and medicines, household cleaners, electronic waste, and other common household hazardous wastes.

Hazardous Materials in Soil and Groundwater

Human activities have caused a variety of contamination within the Chino Basin. Historically, most cities within the region contained agricultural lands that utilized pesticides which may have contaminated soils throughout the project area. Several of the project areas envisioned for future OBMPU facilities may occupy agricultural areas where pesticide and herbicide use were once common. Soils in such areas can retain residual concentrations of such materials that may exceed significance thresholds. Future excavations in such areas may require special management, disposal, or blending with clean soils to reduce concentrations to acceptable levels. Furthermore, airports, gas stations, landfills, and other industrial facilities have resulted in contamination of groundwater. Groundwater plumes exist throughout the Chino Basin but are primarily concentrated around southern Ontario and Chino State Water Resources Control Board [SWRCB], 2023)).

To assess the potential for contamination in soil and groundwater within the project area an environmental database review was conducted to identify environmental cases,⁸ permitted hazardous materials uses,⁹ and spill sites.¹⁰ California Government Code Section 65962.5 requires state and local agencies to compile and update, at least annually, lists of hazardous waste sites and facilities. While Government Code Section 65962.5 makes reference to a “list”, commonly referred to as the Cortese List, this information is currently available from the following online data resources (California Environmental Protection Agency [CalEPA], 2023):

- State Water Resources Control Board (SWRCB) GeoTracker database, and
- California Department of Toxic Substances Control (DTSC) EnviroStor database.

⁸ Environmental cases are those sites that are suspected of releasing hazardous substances or have had cause for hazardous substances investigations and are identified on regulatory agency lists.

⁹ Permitted hazardous materials uses are facilities that use hazardous materials or handle hazardous wastes that operate under appropriate permits and comply with current hazardous materials and hazardous waste regulations.

¹⁰ Spill sites are locations where a spill has been reported to the State or federal regulatory agencies. Such spills do not always involve a release of hazardous materials.

Information regarding the potential presence of subsurface contamination within the Chino Basin is discussed below. Identified sites include the following types of environmental cases:

EnviroStor: The DTSC's EnviroStor database is an online search and Geographic Information System (GIS) tool for identifying sites that have known or potential contamination as well as facilities permitted to treat, store, or dispose of hazardous waste.

- **Facility Types:**

- School: Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. School sites are further defined as "Cleanup" (remedial actions occurred) or "Evaluation" (no remedial action occurred) based on completed activities. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight.
- State Response: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
- Evaluation: Identifies suspected, but unconfirmed, contaminated sites that need or have gone through a limited investigation and assessment process. If a site is found to have confirmed contamination, it will change from Evaluation to either a State Response or Voluntary Cleanup site type. Sites found to have no contamination at the completion of the limited investigation and/or assessment process result in a No Action Required (for Phase I assessments) or No Further Action (for Preliminary Endangerment Assessment (PEA) or Phase II assessments) determination.
- Corrective Action: Investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or State-only hazardous waste facilities (that were required to obtain a permit or have received a hazardous waste facility permit from DTSC or U.S. EPA) are called "corrective action."
- Voluntary Cleanup: Identifies sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Hazardous Waste Permitting (HWP): Hazardous Waste Permitting is a database that includes permitting, modifications, corrective action, closure and post-closure activities for hazardous waste facilities. It is the source database for facility information in the EnviroStor database and is in the process of conversion completely to the EnviroStor database.

GeoTracker: The SWRCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Table IX-1 shows the hazardous waste site type and number of hazardous waste sites found within the Chino Basin area.

**Table IX-1
LISTED SITES WITHIN THE PROJECT AREA**

Hazardous Waste Site Type	Number of Sites
EnviroStor State Response Cleanup Sites	3
EnviroStor Evaluation Sites	11
EnviroStor Voluntary Cleanup Sites	23
EnviroStor Corrective Action Sites	6
EnviroStor School Investigation Sites	1
GeoTracker LUST Cleanup Sites	11
GeoTracker Cleanup Sites	19

Hazardous Waste Site Type	Number of Sites
DTSC Hazardous Waste Permit Sites	26
Land Disposal Sites	34
Total	134
SOURCE: EnviroStor, GeoTracker, 2023	

Below is a list and brief description of hazardous materials release sites in the Chino Basin that have affected soil and/or groundwater. **Exhibit 23** shows the location of contamination plumes resulting from past industrial activities in the service area.

Active Sites

Chino Airport¹¹

The Chino Airport is located at 7000 Merrill Avenue in the city of Chino. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the Regional Water Quality Control Board (RWQCB) since 1990. This site is not on the national priorities list. From the early 1940s until 1948, the airport was used for flight training and aircraft storage. Since then, activities at this site included modification of military aircraft, crop dusting, aircraft engine-repair, painting, striping and washing, dispensing of fire-retardant chemicals and general aircraft maintenance. The primary chemicals of concern in the groundwater at the site are trichloroethene, 1,2,3-trichloropropane, cis-1,2-dichloroethene, 1,2-dichloroethane, and 1,1-dichloroethene. Offsite plume characterization field activities were initiated in 2007. The depth of groundwater ranged from 25 to 50 feet belowground surface (bgs), with the depth to water decreasing toward the south. Since the 2007 investigation, groundwater monitoring wells have been installed throughout the site for sampling. Groundwater is pumped in this area by production wells and used for agricultural supply, industrial supply and municipal water supply. The drinking water supply is of primary concern (SWRCB, 2021).

GE Engine Services Test Cell Facility¹²

The GE Engine Services is located at 2264 E. Avion Place in the city of Ontario. This site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the DTSC and RWQCB since 2013, but is not listed on the National Priorities List. General Electric (GE) has operated a jet engine facility at this site from 1956 to the present where both commercial and military engines are tested. About 6,000 gallons of hazardous waste were disposed of in dry wells. There is an estimated 600 cubic yards of waste and contaminated spill on the site. Results of preliminary investigation in 1987 indicated the presence of 1,1,1-trichloroethane (TCA), tetrachloroethene (PCE), chloroform, naphthalene, 2-methylnaphthalene, and volatile aromatics (xylene, toluene, ethylbenzene) in soils near the dry wells. As a result, chemical contaminants affected the groundwater, and a plume extends in a southwesterly direction to Grove Avenue. Concentrations of volatile organic compounds (VOCs) in shallow soils in areas at the site have reached acceptable closure levels. In April 2015, RWQCB stated that soil is no longer a source of the releases to groundwater. DTSC will proceed with the Land Use Covenant (LUC) to complete the site soil vapor remediation (SWRCB, 2021).

GE Flatiron Facility¹³

The GE Flatiron is located at 234 Main Street in Ontario. The site has been the subject of ongoing site assessments and clean ups under regulatory oversight of the RWQCB. The site is listed as an Open Cleanup Program Site undergoing remediation. This flatiron facility operated from 1927 to 1982. Since 1982, the property has been owned by Ontario Business Park and has been occupied by commercial and

¹¹ State Water Resources Control Board, GeoTracker database, Chino Airport.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208634049

¹² State Water Resources Control Board, GeoTracker database, General Electric Co – Jet Engine Test Cell Facility.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208133868

¹³ State Water Resources Control Board, GeoTracker database, General Electric – Flatiron.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0607132486

light industrial uses. Soil and groundwater beneath the facility has been contaminated. The depth of groundwater beneath the site is from 200 to 380 feet. The contaminants present in the groundwater are TCE, PCE, and chromium (Cr). The groundwater contaminate plume extended over 1/2- mile in width and approximately 1.5 miles in length in the southwesterly direction along the groundwater flow path. The contaminants present in soil are: PCE, TCE, Cr, total xylenes, toluene, ethylbenzene, 1,1,1- trichloroethene, and 1,1,2-trichloroethane. In December of 2009, a total of 2,406 pounds of VOCs (primarily TCE) and 769 pounds of chromium were removed and treated (SWRCB, 2021).

Kaiser Steel Site¹⁴

The Kaiser Steel site is located at 9400 Cherry Avenue in Fontana. Site assessments have been ongoing since 2012 by the RWQCB and the DTSC. This site is not on the national priorities list. Kaiser Steel is the result of merging four different Kaiser Steel Sites. The original Kaiser Steel Mill was located on approximately 1,200 acres in Fontana. The facility was a former integrated steel production plant that the Kaiser Steel Corporation owned and operated from approximately 1942 to 1983. Following shutdown, portions of the original Kaiser property were sold or otherwise transferred. The Department became aware of the potential presence of hazardous waste in 1985, when asbestos and liquids from a benzol production area were released during demolition of onsite structures. The asbestos was removed and is no longer of concern. In August 1988, and January 1989, Preliminary Assessment/Site Inspection Reports (PA/SI) were completed in an effort to identify areas of contamination. Of the 32 areas investigated, 12 were identified as requiring no further action and 20 were recommended for remedial investigation. Through further testing, constituents of concern detected at the sites included metals, petroleum, Polychlorinated Biphenyls (PCBs), Polycyclic Aromatic Hydrocarbons (PAHS), radioactive isotopes, and VOCs such as benzene and toluene. The past uses of the sites that caused groundwater contamination include: hazardous waste treatment, landfill and construction, metal plating and manufacturing, sewage and waste treatment, sewage treatment ponds, and wastewater ponds. Groundwater contamination is currently being monitored (SWRCB, 2021).

Milliken Sanitary Landfill (MSL)¹⁵

The Milliken Landfill is located at 2050 South Milliken Avenue in Ontario and has been undergoing monitoring as of 2014 by the RWQCB. The MSL is owned and operated by the County of San Bernardino Solid Waste Management Division. The total area of the MSL is 196 acres of which 140 acres were used for waste disposal. MSL has an estimated in-place volume of 25 million cubic yards of solid waste and cover material. MSL was operated as a Class III Sanitary Landfill from 1956 to March 1999. The landfill is undergoing corrective action, however recent monitoring has shown decreases of contaminant levels in soil and no statistical anomalies were identified for metals or VOCs. The majority of the monitoring wells have become dry and over the last two years, increasing trends are noted for most inorganics in samples. As of 2014, VOCs remain below state water drinking standards (SWRCB, 2023).

Algar Manufacturing Company Inc.¹⁶

The Algar Manufacturing Company, a Cleanup Program Site, is located at 724 Bon View in Ontario and has been under investigation by the RWQCB since 2000. In 1981, the City of Ontario inspectors conducted an inspection of the property in response to a complaint about heavy accumulation of oil throughout the interior of the buildings. Several building alterations and additions, which were completed without proper permits, including oil tanks installed below the floor of one building. In 1992 a site investigation selected soil samples for volatile organic compounds VOCs and TPH. The highest concentration of tetrachloroethylene (24,000,000 parts per billion (ppb)) was detected in soil samples collected from 25 feet bgs. Groundwater contamination levels remain above the drinking water supply standard (SWRCB, 2023\ d).

Upland Landfill¹⁷

¹⁴ State Water Resources Control Board, GeoTracker database, Kaiser Steel Corporation.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT8R1484121

¹⁵ State Water Resources Control Board, GeoTracker database, Milliken Landfill (Closed).

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=L10007458441

¹⁶ State Water Resources Control Board, GeoTracker database, Algar Manufacturing Company, Inc.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208413896

¹⁷ State Water Resources Control Board, GeoTracker database, Upland Landfill (Closed).

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=L10005341539

The Upland landfill is located off Campus Avenue between 14th and 15th street in Upland and has been under investigation by the RWQCB since 1982. The inactive landfill is located on the site of a former gravel quarry. The landfill is bisected by the West Cucamonga storm drain which is now lined with concrete where surface runoff empties into the drain. Ponding was evident for 6 to 8 years. VOCs, PCE, TCE and chlorides have been suspected of contaminating the groundwater that is used for multiple uses including drinking water and other domestic uses (SWRCB, 2023).

Foss Brothers Dairy¹⁸

The Foss Brothers Dairy is located at 6641 Riverside Drive in Chino. The Dairy consists of a retail commercial dairy market and parking areas. In March 2003, a 500-gallon underground gasoline storage tank was removed from the site. Soil sampling after tank removal identified a significant release of petroleum hydrocarbons from the tank system. The primary contaminate of concern is gasoline. Traces of these hydrocarbons affect the aquifer used for drinking water supply (SWRCB, 2023).

Van Hofwegen Dairy¹⁹

The Van Hofwegen Dairy is located fairly close to the Foss Brothers Dairy at 15913 S. Mountain Avenue in Chino. The RWQCB has been remediating the site since 2006. May of 1999 was when petroleum hydrocarbons were first detected in the soil and groundwater at the site. Primary contaminants of concern are gasoline, MTBE, TBA, and other fuel oxygenates that effect the aquifer used for the drinking water supply (SWRCB, 2023).

South Archibald TCE Plume²⁰

The South Archibald TCE Plume is located south of the Ontario Airport between E. Riverside Drive and S. Archibald Avenue in Ontario. This plume of groundwater is contaminated by VOCs, Nitrates and TCE (SWRCB, 2023).

Sensitive Receptors

Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors throughout the Chino Basin and there is the potential for many sensitive receptors to be within 0.25 miles of existing and proposed future OBMPU facilities.

Wildland Fire Hazards

California Department of Forestry and Fire Protection (CAL FIRE) maps the Fire Hazard Severity Zones (FHSZ) for the cities within the Chino Basin. The FHSZ are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history (CAL FIRE, 2023). The Chino Basin contains moderate, high, and very high fire severity zones shown on **Figure IX-1** shows the fire hazard severity zones (FHSZ) within the project area (CAL FIRE, 2023).

Airports

There are three public airports within the Chino Basin, including the Chino Airport, the Ontario International Airport, and the Cable Airport, listed in **Table IX-2** below.

¹⁸ State Water Resources Control Board, GeoTracker database, Foss Brothers Dairy.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607132420

¹⁹ State Water Resources Control Board, GeoTracker database, Van Hofwegen Dairy.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607199039

²⁰ State Water Resources Control Board, GeoTracker database, South Archibald TCE Plume.

https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000004658

Table IX-2
AIRPORTS WITHIN THE CHINO BASIN

Airport	Address
Chino Airport (CNO)	7000 Merrill Avenue Chino, CA 91710
LA/Ontario International Airport (ONT)	2500 East Airport Drive Ontario, CA 91761
Cable Airport (CCB)	1749 West 13 th Street Upland, CA 91786
SOURCE: Google Maps, San Bernardino Countywide Plan (2020)	

Schools

Based on a review of information, there are 13 school districts that operate within the Chino Basin, and there are approximately 309 existing schools within the project area.

IX.2 Regulatory Framework

Federal

Federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (US DOT). Major federal laws and issue areas include the following statutes and regulations:

U.S. Environmental Protection Agency

The U.S. EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to State and local environmental regulatory agencies. Federal regulations such as the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA), regulate the cleanup of known hazardous waste sites and compile lists of the sites investigated, or currently being investigated, for a release or potential release of a regulated hazardous substance under the CERCLA regulations. The NPL of Superfund Sites is the U.S. EPA's database of hazardous waste sites currently identified and targeted for priority cleanup action under the Superfund program including Proposed NPL sites, Delisted NPL sites, and NPL Recovery sites. The NPL Liens database contains a list of filed notices of federal Superfund Liens. Under the authority granted the U.S. EPA by CERCLA of 1980, the U.S. EPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability.

The Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 requires hazardous waste handlers (generators, transporters, treaters, storers, and disposers of hazardous waste) to provide information about their activities to State environmental agencies. These agencies pass the information to regional and national U.S. EPA offices.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, State, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to, and recover from a full range of emergencies.

Department of Defense

The United States Geological Survey (USGS) maintains the U.S. Department of Defense (DOD) database, which consists of federally owned or administered lands, administered by the DOD, that have an area equal to or greater than 640 acres in the United States, Puerto Rico, and/or the U.S. Virgin Islands.

Formerly Used Defense Sites

The U.S. Army Corps of Engineers maintains a database of locations of Formerly Used Defense Sites (FUDS) where the U.S. Army Corps of Engineers is actively working or will take necessary cleanup actions.

Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 (OSH Act) requires employers to provide a safe and healthful workplace. The Occupational Safety and Health Administration (OSHA) sets and enforces standards for safe and healthful working conditions.

Department of Transportation

The U.S. Department of Transportation (DOT) includes the Pipeline and Hazardous Materials Safety Administration (PHMSA) which is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of transportation, including pipelines. Code of Federal Regulations (CFR) Title 49 governs the manufacturing of packaging and transport containers; packing and repacking; labeling; and the marking of hazardous material transport.

Department of Housing and Urban Development

Federal and State regulations govern the renovation and demolition of structures where materials containing lead and asbestos are present. The U.S. Department of Housing and Urban Development (HUD) provides guidelines regulating lead exposure. CFR Part 61, Subpart M regulates asbestos exposure.

State

The primary state agencies with jurisdiction over hazardous chemical materials management are the DTSC and the Santa Ana RWQCB. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES)—California Accidental Release Prevention (CalARP) implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation), California State Water Resources Control Board (SWRCB), and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations promulgated thereunder:

SWRCB NPDES Vector Control Permit

On March 1, 2016, the State Water Board adopted the Vector Control Permit (Water Quality Order 2016-0039-DWQ). On October 4, 2022, the State Water Board Executive Director approved Water Quality Order 2022-0077-DWQ which adds the active ingredient pyriproxyfen and all pertaining findings, monitoring and reporting requirements to Water Quality Order 2016-0039-DWQ. This Vector Control Permit covers the point source discharge of biological and residual chemical pesticides to waters of the U.S. resulting from direct and spray applications for vector control. This permit only covers larvicides and adulticides that are currently registered by the California Department of Pesticide Regulation.

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.)

The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA “cradle-to-grave” waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations.

California Accidental Release Prevention Program (CalARP)

The purpose of the CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures.

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act)

The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing

where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including the California Environmental Protection Agency (CalEPA) and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 2550 et seq.

This code and the related regulations in 19 California Code of Regulations (CCR) 2620, et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local CUPA and to report releases to their CUPA and the State Office of Emergency Services. This code would apply to the program because the contractors would be required to prepare a HMBP that would provide procedures for the safe handling, storage, and transportation of hazardous materials.

California Division of Occupational Safety and Health (Cal/OSHA)

Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 25270, Aboveground Petroleum Storage Act

Health and Safety Code Sections 25270 to 25270.13 applies to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in "harmful quantities" into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.

Government Code Section 65962.5, Cortese List

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List" (after the Legislator who authored and enacted the legislation). The list, or a site's presence on the list, has bearing on the local permitting process, as well on compliance with CEQA. The list is developed with input from the State Department of Health Services, State Water Resources Control Board, California Integrated Waste Management Board, and DTSC. At a minimum, at least annually, the DTSC Control shall submit to the Secretary for environmental Protection a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code.

3. All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the Health and Safety Code
5. All sites included in the Abandoned Site Assessment Program.
6. All underground storage tanks for which an unauthorized release report is filed pursuant to Section 25295 of the Health and Safety Code.
7. All solid waste disposal facilities from which there is a migration of hazardous waste and for which a California regional water quality control board has notified the Department of Toxic Substances Control pursuant to subdivision (e) of Section 13273 of the Water Code.
8. All cease-and-desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharge of wastes that are hazardous materials.
9. All solid waste disposal facilities from which there is a known migration of hazardous waste.

The Secretary for Environmental Protection shall consolidate the information submitted pursuant to this section and distribute it in a timely fashion to each city and county in which sites on the lists are located. The Secretary shall distribute the information to any other person upon request. The Secretary may charge a reasonable fee to persons requesting the information, other than cities, counties, or cities and counties, to cover the cost of developing, maintaining, and reproducing and distributing the information. The Cortese List applies to this program because there are sites on the Cortese List within the Chino Basin

Utility Notification Requirements

Title 8, Section 1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Section 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig. This requirement would apply to this program because any excavation would be required to identify underground utilities before excavation.

Local

Certified Unified Program Agency (CUPA)

In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Waste
- Hazardous Materials Business Plan
- California Accidental Release Prevention Program
- Underground Hazardous Materials Storage Tanks
- Aboveground Petroleum Storage Tanks / Spill Prevention Control & Countermeasure Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

In the County of San Bernardino, the Hazardous Materials Division of the San Bernardino County Fire Department is designated as the CUPA responsible for implementing the above-listed program elements.

The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials and submit a Hazardous Materials Business Plan (HMBP) that describes the hazardous materials usage, storage, and disposal to the CUPA. The contractors constructing the specific project and the Implementing Agency, as the operator of the facility, would be required to prepare and implement an HMBP.

San Bernardino County Emergency Operations Plan²¹

The Emergency Management Program of San Bernardino County is governed and coordinated by the San Bernardino County Fire Department, Office of Emergency Services. The National Response Framework (NRF), National Incident Management System (NIMS), the Standardized Emergency Management System (SEMS) and the State of California Emergency Operations Plan provide planning and policy guidance to counties and local entities. These documents support the foundation for the County's Emergency Operations Plan (EOP), an all-hazard plan describing how the county will organize and respond to incidents. It is based on and compatible with the laws, regulations, plans, and policies listed above. The EOP describes how various agencies and organizations in the county will coordinate resources and activities with other Federal, State, county, local, and private-sector partners.

County of Riverside Emergency Operations Plan

The County of Riverside Emergency Management Department (EMD) is responsible for providing emergency management services. EMD has four divisions that combine traditional emergency management, public health disaster management, and emergency medical services into a single, comprehensive, all hazards department. EMD works with local cities, fire and law enforcement agencies, and special districts to support and implement emergency mitigation and preparation activities across Riverside County, secure resources for first responders, and coordinate with state and federal emergency agencies. EMD's emergency preparation and response activities, including implementing many of the Safety Element policies, are laid out in this Safety Element.

EMD is the responsible agency for developing and implementing Riverside County's Multi-Jurisdictional LHMP. In preparation of the LHMP, the LHMP Steering Committee gathers information and updates the plan using a whole community approach by engaging local jurisdictions, private sector organizations, and community partners. Agencies such as EMD, Riverside County Fire Department, Riverside County Department of Environmental Health, and the Riverside County Sheriff's Office are responsible for implementing some of the policies within this Safety Element. The Riverside County Planning Department's coordination and participation with these agencies are a critical component to effective disaster and hazard planning in unincorporated Riverside County (County of Riverside General Plan, 2021).

Los Angeles County Operational Area Emergency Response Plan

The OAERP establishes the coordinated emergency management system, which includes prevention, protection, response, recovery and mitigation within the OA. This plan describes:

- OA emergency organization.
- Authorities and responsibilities of the OA emergency organization.
- Mutual aid process during emergencies to ensure effective coordination of needed resources.

The OAERP provides an overview of emergency management in the OA; it is not a detailed response document. Emergency response plans and other pertinent documentation exist for agencies/jurisdictions in support of this plan. The OAERP incorporates and complies with the principles and requirements found in Federal and State laws, regulations and guidelines. The OAERP is compliant with the NIMS; the National Response Framework (NRF); and, the SEMS. The intent of the OAERP is to define responsibilities and to provide guidance to agencies/jurisdictions within the OA on how to interface with the OA Coordinator during emergencies and disasters.²²

²¹ San Bernardino County Emergency Operation Plan.

https://www.sbcounty.gov/uploads/SBCFire/documents/OES/2018_EOP_Update.pdf (accessed 03/16/23)

²² Los Angeles County Operational Area Emergency Response Plan. <https://ceo.lacounty.gov/wp-content/uploads/2019/12/OAERP-Approved-Adopted-Version-6-19-2012.pdf> (accessed 03/16/23)

San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP)

The MJHMP is reviewed, monitored, and updated to reflect changing conditions and new information every five (5) years. The updated San Bernardino County Unincorporated Area MJHMP was approved by FEMA. The MJHMP presents updated information regarding hazards being faced by the county, the San Bernardino County Fire Protection District, the San Bernardino County Flood Control District, Big Bear Valley Recreation and Parks District, Bloomington Recreation and Parks District (Districts), and those Board-governed Special Districts administered by the San Bernardino County Special Districts Department. The Plan also presents mitigation measures to help reduce consequences from hazards, and outreach/education efforts within the unincorporated area of the county since 2005.

County of Riverside Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP)

Riverside County's Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) is a plan to identify and profile hazard conditions, analyze risk to people and facilities, and develop mitigation actions to reduce or eliminate hazard risks in Riverside County and in incorporated jurisdictions in the county. The county prepared the LHMP in accordance with the federal Disaster Mitigation Act of 2000 and the Federal Emergency Management Agency's LHMP guidance. The mitigation actions in the LHMP include both short-term and long-term strategies, and involve planning, policy changes, programs, projects, and other activities. The LHMP and Safety Element address similar issues, but the Safety Element provides a higher-level framework and set of policies, while the LHMP focuses on more specific mitigation, often short-term, actions. The LHMP, as its name implies, focuses on mitigation-related actions, while the Safety Element also includes policies related to emergency response, recovery, and preparation activities (County of Riverside General Plan, 2021).

County of Los Angeles All-Hazards Mitigation Plan

As defined in Title 44 of the Code of Federal Regulations (CFR), Subpart M, Section 206.401, hazard mitigation is "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions, which include short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities, is the end result of this process. To meet the requirements of the DMA, the Los Angeles County Chief Executive Office—Office of Emergency Management (OEM) (hereinafter referred to as the Los Angeles County OEM) has prepared an All-Hazards Mitigation Plan (AHMP) (hereinafter referred to as the 2020 AHMP) to assess risks posed by natural hazards and to develop a mitigation action plan for reducing the risks in Los Angeles County. The 2020 AHMP replaces the AHMP that was approved in 2014.²³ The 2020 AHMP includes the following: a description of the planning process, a community profile, hazard identification and risk assessment, mitigation strategy, plan review, evaluation, and implementation, and plan adoption.

San Bernardino County Fire Department

The Chino Basin receives fire and emergency response services from the San Bernardino County Fire Department (SBCFD). The SBCFD is responsible, on both the city and county level, for enforcing the State regulations governing hazardous waste generators, hazardous waste storage, and underground storage tanks, including inspections and enforcement. The SBCFD also regulates the use, storage, and disposal of hazardous materials in San Bernardino County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities.

In addition to providing fire protection and emergency services, the SBCFD regulates the use and storage of hazardous materials for the county and provides emergency response in the event of accidental release of hazardous materials.

²³ Los Angeles County, Office of Emergency Management (OEM). <https://ceo.lacounty.gov/wp-content/uploads/2022/04/County-of-Los-Angeles-All-Hazards-Mitigation-Plan-APPROVED-05-2020.pdf> (accessed (03/16/23))

The SBCFD also administers the local Fire Code which incorporates articles of the Uniform Fire Code (UFC). The UFC is a model code, setting construction standards for buildings and associated fixtures, in order to prevent or mitigate hazards resulting from fire or explosion. The SBCFD reviews technical aspects of hazardous waste site cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. The SBCFD is also responsible for providing technical assistance to public and private entities which seek to minimize the generation of hazardous waste.

Riverside County Fire Department

Fire protection in unincorporated Riverside County is provided by the Riverside County Fire Department (RCFD) and CAL FIRE. Riverside County contracts with CAL FIRE to provide fire protection and rescue services in the unincorporated areas of the county. The RCFD and CAL FIRE participate in a Cooperative Fire Response Agreement, where fire agencies have agreed to automatically support each other on incidents using the closest available resource.

The RCFD is one of the largest regional fire service organizations in California. It is staffed with a combination of County of Riverside and CAL FIRE personnel and responds to both urban and wildland emergencies. The RCFD serves a vast geographic area and diverse communities. The County of Riverside supplements its staff by contracting with CAL FIRE to provide fire protection services. The RCFD, a unique partnership between CAL FIRE and the County of Riverside, serves residents of unincorporated areas as well as 21 partner cities. The Idyllwild Fire Protection District also provides firefighting, rescue, emergency medical services, and ambulance transport services for the unincorporated communities of Idyllwild and Fern Valley.

The RCFD provides fire protection, emergency medical services, and disaster preparedness and response. The department operates 101 fire stations in 6 divisions consisting of 15-line battalions, providing fire suppression, emergency medical, technical rescue, fire prevention, and related services.

CAL FIRE has a legal responsibility to provide fire protection on all state responsibility area (SRA) lands, which are defined based on land ownership, population density, and property use (County of Riverside General Plan, 2021).

Los Angeles County Fire Department

Los Angeles County Fire Department (LACFD). The LACFD serves more than 4.1 million residents and commercial business within 59 Cities along 72 miles of coastline, and all unincorporated areas within the county's 2,311 square miles. LACFD is one of the world's largest emergency service agencies, and also provides health, hazardous materials, and forestry services throughout the county.²⁴

Hazardous Materials Fire Code Requirements

As the CUPA, the SBCFD or RCFD enforces the hazardous materials-related standards of the California Fire Code, including requirements for signage of hazardous materials storage areas, storage of flammable materials, secondary containment for storage containers, and separation of incompatible chemicals.

IX.3 Impact Analysis

Significance Criteria

The criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G of the *CEQA Guidelines*. The proposed program would result in a significant impact with respect to hazards or hazardous materials if the program would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

²⁴ County of Los Angeles Fire Department. 2020. 2020 Statistical Summary. <https://fire.lacounty.gov/wp-content/uploads/2022/06/2021-Statistical-Summary.pdf> (accessed 03/14/23)

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

Methodology

This analysis focuses on the potential to encounter hazardous substances in soil and groundwater during construction and is based on regulatory database searches. The analysis also addresses the potential for the OBMPU projects to release hazardous materials during construction and operation, interfere with an adopted emergency response plan or emergency evacuation plan, and create fire hazards. Each potential impact is assessed in terms of the applicable regulatory requirements, and mitigation measures are identified as appropriate.

A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new well facilities north of State Highway 60 (SR 60).

In most instances these facilities do not involve the routine transport, use, or disposal of hazardous materials. However, in certain instances hazardous materials are used routinely in support of drilling wells, groundwater production operations and related treatment operations, and thus, some activities in support of Project Category 1 may generate routine transport of hazardous materials. Construction activities required for implementation of the Project Category 1 facilities would potentially involve drilling, trenching, excavation, grading, and other ground-disturbing activities. The anticipated construction activities described above would temporarily require the transport, use, and disposal of hazardous materials including gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials. Operational activities could require the installation of treatment facilities that use chemicals to ensure that recovered water from ASR and extraction, and pumping wells would be safe for drinking. For instance, if during extractions from the Chino Basin, groundwater is treated with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard to the environment. The established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for Project Category 1 facilities would be less than significant.

Although all stakeholders are required to manage both use of and disposal of hazardous or toxic materials in accordance with existing laws and regulations, the OBMP PEIR included five mitigation measures and the implementation of these measures can ensure that the use and generation of hazardous substances in support of Project Category 1 projects does not pose a significant hazard to workers, adjacent land uses and the environment. These mitigation measures (4.10-1 through and 4.10-5) will be applied to these future OBMPU projects. These measures have been re-numbered to be consistent with the topical numbering contained in this Initial Study.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently.

Impacts would be the same as Project Category 1. The mitigation measures identified for Project Categories 1 also apply to Project Category 2 facilities.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently. The expansion of water storage in the Chino Basin has a potential to adversely impact known contamination plumes and unknown vadose zone contamination. These issues are addressed in the Hydrology & Water Quality Section, Subchapter 4.7 of the RDSEIR in relation to increase groundwater storage.

Also, based on experience with existing recharge basins, all new surface water bodies associated with new storage basins and recharge facilities will require management of insects, primarily midges. This can be accomplished with a mix of insect control activities, but most often includes some use of pesticides. The use of pesticides, which are typically hazardous materials (poisons), is controlled through cooperation with those county agencies assigned the responsibility for controlling vectors, such as mosquitos. Mitigation is provided below to address management of pesticide use to minimize hazards for groundwater recharge activities and the environment surrounding the recharge basins and future surface storage facilities.

Other than the use of pesticides to control vectors, impacts would be the same as Project Categories 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment

facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long-term operation of such facilities as WRPs or AWPFS can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water or potable water sources prior to distribution. The mitigation measures identified for Project Categories 1, 2, and 3 also apply to Category 4 projects.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.10-1, 4.10-2, 4.10-3, and 4.10-5):

- 4.10-1** *For OBMP facilities that handle hazardous materials or generate hazardous waste the Business Plan prepared and submitted to the county or local city shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes.*
- 4.10-2** *The business plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material. Adequate funding shall be provided to acquire the necessary equipment, train personnel in responses and to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.*
- 4.10-3** *For the storage of any acutely hazardous material at an OBMP facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.*
- 4.10-5** *Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.*

The following mitigation measures shall be implemented under the proposed OBMPU:

- HAZ-1:** *Vector Management Plan. Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.*

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

The Chino Basin project area is largely urbanized with residential, commercial and industrial uses in most areas except southern Chino and Ontario, and Prado Basin. As the project area continues to develop, the

addition of more development could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. However, all cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials. Since the proposed OBMPU projects would result in less than significant impacts related to the routine handling, use or disposal of hazardous materials, the projects' contributions to such impacts would be potentially cumulatively considerable and therefore, would result in a significant cumulative impact.

Level of Significance Before Mitigation: Potentially significant

Cumulative Measures: 2000 OBMP PEIR Mitigation Measures 4.10-1 through 4.10-3, and 4.10-5 and Mitigation Measure HAZ-1 are required to minimize cumulative impacts.

Level of Significance After Mitigation: Less than Significant

- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

Construction

Construction activities associated with implementation of the proposed Project Category 1 facilities could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials used in construction activities and equipment. The construction activities would involve the use of adhesives, solvents, paints, thinners, petroleum products and other chemicals. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. If not properly handled; however, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. Agencies implementing Category 1 projects are required to comply with all relevant and applicable federal, state and local laws and regulations that pertain to the accidental release of hazardous materials during construction of proposed facilities such as Health and Safety Code, Section 2550 et seq. This includes prior to accepting a site that was determined to contain hazardous soils as remediated, testing and verifying that any residual concentrations meet the standard for future residential or public use of the site and meet the levels established by the applicable California Human Health Screening Levels and EPA-developed Regional Screening Levels. Compliance with all applicable federal, state and local regulations can reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant impact, but a contingency mitigation measure is provided to ensure accidental releases and any related contamination do not significantly affect the environment at facility locations.

Where structures may need to be demolished such structures could need appropriate abatement of identified asbestos prior to demolition. Federal and state regulations govern the demolition of structures where materials containing lead and asbestos are present. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal OSHA. These requirements include SCAQMD Rules and Regulations pertaining to asbestos abatement (including Rule 1403); Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from CCR Title 8; CFR Title 40, Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development (HUD). Asbestos and lead abatement

must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services.

In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos would be conducted according to Cal/OSHA standards. Adherence to existing regulations and the mitigation measure provided below would ensure that potential impacts related to ACMs and LMPs would be less than significant.

The use of hazardous materials and substances during construction would be subject to the federal, state, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Framework. With compliance with these regulations, hazardous material impacts related to construction activities would be less than significant.

Operation

Operation of the proposed facilities could include the storage and use of chemicals. Any storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Framework. The delivery and disposal of chemicals to and from water and wastewater treatment facility sites would occur in full accordance with all applicable federal, state, and local regulations. Additionally, during extractions from the Chino Basin, groundwater may require treatment with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would therefore not pose a significant hazard to the environment. The established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for Project Category 1 facilities would be less than significant.

As noted in the Regulatory Framework, an HMBP must be prepared and implemented for the proposed facility upgrades as required by the County of San Bernardino or County of Riverside CUPA. The HMBP would minimize hazards to human health and the environment from fires, explosions, or an accidental release of hazardous materials into air, soil, surface water, or groundwater. Compliance with all applicable federal, state and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs. Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently.

Construction

Construction impacts would be the same as Project Category 1. Compliance with all applicable federal, state and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact. This is because prior to accepting the site as remediated, the area contaminated must be tested to verify that any residual concentrations meet the standard for future residential or public use of the site and meet the levels

established by the applicable California Human Health Screening Levels and EPA-developed Regional Screening Levels. This is a regulatory requirement that must be complied with as future OBMPU facilities are proposed for implementation.

Operation

Operation of the proposed conveyance and ancillary facilities would consist of facilities designed to store, transport and discharge water. Hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would generally be the same as Project Categories 1 and 2. The primary differences are the major construction effort for the new basins (larger than most facilities required to support the OBMPU), and the flood MAR facilities and MS4 facilities (where the Watermaster's role will be secondary to that of the cities and Counties due to these agencies holding the MS4 permits from the Regional Board). The cities and Counties must be approached by the Watermaster or stakeholders to identify any specific role they can play in enhancing onsite surface runoff management, particularly onsite recharge at a MAR facility or MS4 facility/facilities. At this time, it is not possible to identify specific improvements that may be feasible to enhance this role.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

All of the above facilities (except the new advanced water treatment plant) are proposed to be implemented at existing facilities or disturbed locations. Construction impacts would be the same as Project Category 1, 2, and 3. Compliance with all applicable federal, State, and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials would help to reduce potential impacts to the public, employees, or the environment related to the potential upset and/or accident conditions involving the release of hazardous materials to a less than significant impact.

Operations

Operation of the proposed AWPf and wellhead treatment facilities would consist of facilities designed to treat water. Long-term operation of such facilities as AWPf and wellhead treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water and potable water sources prior to distribution. Therefore, implementation of mitigation measures are required to minimize potential impacts from accidental release of hazardous materials to a less than significant impact.

Combined Project Categories

Accidental release of hazardous materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. Future project proponents would be required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the transport, storage, and use of hazardous materials during construction and operation of all proposed facilities.

*Mitigation Measures: Mitigation Measures **HAZ-1** and 2000 OBMP PEIR Mitigation Measures **4.10-1** through **4.10-3** are required to minimize impacts.*

Compliance with applicable laws and implementation of Mitigation Measure **HAZ-1** and 2000 OBMP PEIR Mitigation Measures **4.10-1** above, and 2000 OBMP PEIR Mitigation Measures **4.10-2** and **4.10-3**, would minimize the potential hazard to the public or environment due to accidental release. With implementation of applicable laws and regulations, as well as Mitigation Measures **HAZ-1** and 2000 OBMP PEIR Mitigation Measures **4.10-1** through **4.10-3**, potential accidental hazard impacts would be less than significant.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin project area is largely urbanized with residential, commercial, and industrial uses in most areas except southern Chino and Ontario, and Prado Basin. As the project area continues to develop, the addition of more development could create a significant hazard to the public or the environment through potential hazard to the public or environment due to accidental release. However, all cumulative development would be subject to federal, State, and local regulations related to accidental release of hazardous materials. Since the proposed OBMPU individual projects would result in less than significant impacts related to accidental release of hazardous materials during both construction and operation of future facilities through the implementation of mitigation, the OBMPU's contributions to such impacts would be not be cumulatively considerable, and therefore, would not result in a significant cumulative impact.

Level of Significance Before Mitigation: Less than Significant

*Cumulative Measures: Mitigation Measures **HAZ-1** and 2000 OBMP PEIR Mitigation Measures **4.10-1** through **4.10-3** are required to minimize cumulative impacts.*

Level of Significance After Mitigation: Less than Significant

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

Due to the potentially extensive nature of facilities associated with implementing the proposed wells and ancillary equipment, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials, such as gasoline and diesel fuel. As a general rule, well and ancillary facility construction activities do not require any acutely hazardous materials. Additionally, a project proponent is required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, state and local regulations would help to reduce potential impacts to the public or the environment regarding hazardous waste discharges or emissions within one-quarter mile of a school during construction. Impacts would be less than significant.

Operation of the proposed projects would consist of facilities designed to produce, store and move water into and out of the groundwater aquifer. With two exceptions, hazardous materials would not be associated with the regular operation of Project Category 1 facilities, and no hazardous materials would be emitted or

handled within one-quarter mile of a school. One exception is if during extractions from the Chino Basin, owners of wells choose to treat the groundwater with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The other material is petroleum product used to support pump stations. In both cases, the established handling protocols would cause no significant operational impacts for category 1 facilities.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Due to the potentially extensive nature of facilities associated with implementing the proposed pipelines and ancillary facilities, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials during construction of pipelines and ancillary facilities, such as gasoline and diesel fuel. Additionally, future project proponents are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, state and local regulations would help to reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school. Impacts would be less than significant.

Operation of the proposed Category 2 projects would consist of facilities designed to store, convey, and discharge water. Therefore, hazardous materials would not be associated with the regular operation of the facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. The one exception to this could be pump stations with backup generators that would require fuels for operation. Future project proponents are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during operation of proposed facilities. Compliance with all applicable federal, state and local regulations would help to reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school during operations. Impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction

The construction of storage basins will occur in areas not located within ¼ mile of any existing schools. Therefore, no adverse impacts under this issue category will occur. Some of the existing recharge facilities, and future recharge facilities (ASR wells), may occur within ¼ mile of a school. The construction activity impacts at such facilities will be comparable to the impacts under Project Category 1 and 2 facilities. For the flood MAR and MS4 projects the specific location of such facilities is not yet defined, so such facilities could be located near a school. However, minimal construction activities would be expected for such facilities and the impacts would be comparable to the impacts under Project Category 1 and 2 facilities. Finally, the use of groundwater storage capacity up to 1,000,000 af has no potential to directly create any school hazards, other than some of the support facilities, such as ASR wells addressed under Category 1 facilities.

Operations

Operation of the proposed storage basins, recharge facilities and storage band facilities would consist of facilities designed to store, recharge and use storage space in the Chino Basin aquifer. Hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Construction

Most of the above facilities are proposed to be implemented at existing facilities or disturbed locations. Most of these locations are not near existing schools, but because of construction activities at these locations hazardous materials are likely to be used. Where such proximity to schools may occur, the impacts will be comparable to Categories 1 and 2.

Operations

Operation of the proposed AWPf and wellhead treatment facilities would consist of facilities designed to treat water. Long-term operation of such facilities as AWPf and wellhead treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water and potable water sources prior to distribution. Therefore, operational impacts would be potentially significant. Implementation of mitigation measures would be required to reduce potential impacts from accidental release of hazardous materials to less than significant levels.

Combined Project Categories

It is possible for many of the above facilities to be constructed within one quarter-mile of a school. Because construction activities would use limited quantities of hazardous materials and are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during construction, impacts would be less than significant. Furthermore, hazardous materials would be associated with the regular operation of the facilities within one-quarter mile of a school. Because operation activities would use limited quantities of hazardous materials and are required to comply with all relevant and applicable federal, State and local laws and regulations that pertain to the release of hazardous materials during use, impacts would be less than significant.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures: 2000 OBMP PEIR Mitigation Measures 4.10-1, 4.10-2, 4.10-3, and 4.10-5, in addition to Mitigation Measure HAZ-1 are required to minimize project impacts.

Operational impacts would be less than significant with implementation of 2000 OBMP PEIR Mitigation Measures 4.10-1, 4.10-2, 4.10-3, and 4.10-5, in addition to Mitigation Measure HAZ-1 .

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, emissions of hazardous emissions or handling of hazardous materials, substances, and/or waste within one-quarter mile of an existing or proposed school becomes a greater possibility with potential for cumulative impacts to occur. All cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials, including the facilities proposed under the OBMPU.

Level of Significance Before Mitigation: Less than Significant.

Cumulative Measures: 2000 OBMP PEIR Mitigation Measures 4.10-1, 4.10-2, 4.10-3, and 4.10-5, in addition to Mitigation Measure HAZ-1 are required to minimize project impacts. Cumulative projects should implement comparable mitigation measures, but IEUA and Watermaster can only impose and monitor mitigation measures for OBMPU projects.

With compliance with the regulatory framework, as well as through implementation of 2000 OBMP PEIR Mitigation Measures 4.10-1, 4.10-2, 4.10-3, and 4.10-5, in addition to Mitigation Measure HAZ-1, which would further reduce potential hazard related impacts, cumulative impacts would not be significant and the proposed OBMPU projects contributions would not be cumulatively considerable.

Level of Significance After Mitigation: Less Than Significant

- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

The hazardous sites analysis undertaken for this program, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin. Within the Chino Basin the contaminated locations can be divided into two categories. First, there are known surface contaminated sites of which there are more than 100 locations and which are generally limited in area. Second, there are larger legacy contamination sites that have caused extensive groundwater contamination plumes, such as the GE Flatiron plume. These larger known contaminated areas are not being evaluated in this section of the Initial Study. They will be evaluated in the RDSEIR under Subchapter 4.7, Hydrology and Water Quality because of the potential for future OBMPU activities to cause significant adverse impacts to these groundwater contamination plume areas.

Regarding the smaller, discrete surface contamination sites, the lack of specific locations for future wells, and ancillary facilities makes it infeasible at this time to forecast potential conflicts or impacts between Project Category 1 uses and possible adverse impacts associated with contaminated sites. Therefore, mitigation will be implemented to prevent future site-specific conflicts or impacts between Project Category 1 facilities and such sites.

Occasionally, a project that involves subsurface excavation or exploration may encounter an unknown contaminated site. Once encountered there are existing protocols to address such contamination in the regulations.

With implementation of mitigation measures, potential conflicts with contaminated sites can be reduced to a less than significant impact level for future OBMPU facilities.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

The hazardous sites analysis undertaken for this project, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin. The proposed projects would include construction of pipelines and ancillary facilities throughout the Chino Basin. During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Notification of regulatory agencies and following their guidance can ensure OBMPU facilities will help to reduce conflict with contaminated sites.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as Project Categories 1 and 2.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the OBMPU that would support this expansion as discussed herein. While the groundwater Basin itself has a potential to experience impacts from surficial or groundwater hazards within the Basin, these impacts are assessed on a continuous basis as a result of ongoing monitoring efforts. Ultimately, the discussion of groundwater quality impacts from implementing the OBMPU is outlined in Subchapter 4.7, Hydrology and Water Quality, as this issue is of paramount importance within the Basin, and infrastructure projects such as the OBMPU within the Basin must ensure that movement of the contamination plumes identified above, is contained to minimize contamination of groundwater at wells located in proximity, but outside these plumes. The analysis contained in Subchapter 4.7, Hydrology and Water Quality, determined that the proposed OBMPU would not result in significant movement of the groundwater plumes within the Basin.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

While several facilities proposed under this Project Category, such as those that would be located within existing sites (the existing desalter sites, IEUA's WRPs, and the WFA Agua de Lejos Treatment Plant), do not have any known contaminated locations within their boundaries, other facilities proposed under this Project Category would be developed within locations that have not yet been identified. Therefore, modifications to these existing facilities in support of the OBMPU pose no potential for adverse impacts to employees or environment. This finding is generally valid for individual well sites where new water treatment facilities may be installed. With regard to the remaining facilities (the AWPf, groundwater treatment facilities proposed near well sites, and groundwater treatment facilities at regionally located sites), impacts would be the same as Project Categories 1 and 2. Therefore, construction and operation of this type of facility would not result in a significant hazard to the public or environment with implementation of Mitigation Measures HAZ-2 and HAZ-3.

Combined Project Categories

During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measure **HYD-11** is required to reduce impacts below significance thresholds, in addition to Mitigation Measures **HAZ-2** and **HAZ-3**, below.*

HAZ-2: **Future Phase I ESA Requirement.** *Prior to final site selection for future OBMPU facilities, the implementing agency shall obtain an ASTM E1527-21-compliant Phase I Environmental Site Assessment (ESA) for the selected site. If a site contains contamination the agency shall either avoid the site by selecting an alternative location or shall remove any contamination (remediate) at the site to a level of concentration that eliminates hazard to employees working at the site and meets the levels established by the applicable California Human Health Screening Levels and EPA-developed Regional Screening Levels, and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law.*

HAZ-3: **Unknown Contamination Procedure.** *Should an unknown contaminated site be encountered during construction of OBMPU facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local Certified Unified Program Agency or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the Certified Unified Program Agency or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.*

The implementation of Mitigation Measures **HAZ-2** and **HAZ-3** would require site specific studies to identify known hazardous materials risks or the potential for risk related to hazardous materials. These studies would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of Mitigation Measures **HAZ-2** and **HAZ-3** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. Therefore, impacts to the public or the environment related to hazardous materials sites would be less than significant.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the region continues to develop, the addition of developments could be located on sites that are included on a list of hazardous materials sites and as a result, could create significant hazards to the public or the environment. Since the proposed OBMPU projects could be constructed on current hazardous material sites or unknown contaminated sites, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **HYD-11** is required to reduce cumulative impacts below significance thresholds, in addition to MM **HAZ-2** and **HAZ-3***

The implementation of Mitigation Measures **HAZ-2** and **HAZ-3** would ensure that the proposed facilities' contribution to cumulative development on hazardous materials sites would be reduced to less than cumulatively considerable by requiring site specific studies to identify known hazardous materials risks or the potential for risks related to hazardous materials and affected soils and groundwater. These studies would include recommendations and cleanup measures to reduce risk to the public and the environment from development on contaminated sites. As stated above, Mitigation Measure **HYD-11** addresses the plan

of response by Watermaster and the IEUA should Basin conditions come to vary from the projections that have been modeled as part of the OBMPU planning. As such, if Watermaster determines that the OBMPU operations may result in significant impacts to the movement of the plumes, thereby threatening water quality, Watermaster will require that the IEUA implement mitigation (enforced through Mitigation Measure **HYD-11**) to reduce their impacts to less than significant levels. Implementation of Mitigation Measure **HAZ-2** and **HAZ-3**, and **HYD-11** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils such that the proposed project would not contribute to significant cumulatively considerable impacts.

Level of Significance After Mitigation: Less Than Significant

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

The following three airports are located within the Chino Basin boundaries: Chino Airport, LA/Ontario International Airport, and Cable Airport in Upland. There are no private airstrips located within the Chino Basin.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

Project Category 1 facilities are all low to the ground and any small structures would be uninhabited. Although no specific Project Category 1 facilities are specifically proposed within any airport safety zone or flight paths, the ASR wells, that are proposed to be located north of SR 60 could be installed within the Ontario Airport's safety zone and flight path, excluding of course the runway protection zone. Other wells and ancillary facilities could be installed in similar areas at Chino and Cable Airports. During construction of facilities in close proximity to airports, there is a potential for workers at the site to be exposed to hazards from nearby airports. Construction contractors would be required to comply with Cal/OSHA regulations related to exposure to airport hazards, such as noise. The requisite adherence to these regulations would reduce construction worker exposure to airport-proximity related hazards such as noise, such that proposed OBMPU construction activities would not expose employees to airport safety hazards. Construction impacts across all project categories related to airport and aircraft hazards would be less than significant, and no mitigation is required.

Although OBMPU Project Category 1 facilities would not pose any specific conflict with any public airport operations, mitigation is provided to ensure airport operators have an opportunity to participate in a decision to locate OBMP facilities within safety zone or flight paths.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Pipelines are anticipated to be constructed below the ground surface within existing public rights-of-way, and no impacts would occur. Construction of pipelines would have the same impacts identified under

Project Category 1, above. Furthermore, all Project Category 2 facilities would be unmanned and therefore would not put any workers at risk. However, some ancillary facilities' locations (for example, reservoirs and booster pumps) have not yet been determined, and therefore, have the potential to be within an airport land use planning area. Ancillary facilities could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

All three types of Project Category 3 facilities occur at ground level or below in the case of the storage bands below the ground surface. With the following exception these Project Category 3 facilities have no potential conflicts with airports or airport operations. The proposed storage basin at CIM could create a potential conflict due to attraction of water birds, particularly during the annual migration seasons (fall and spring). It should be noted that geese commonly utilize the existing CIM property for layover and feeding under present conditions.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Chino Airport

The City of Chino Airport is located at the northeast corner of Euclid Avenue and Kimball Avenue in the City of Chino. RP-2 is located within the Chino Airport Safety Zone II, or Referral Area "B". This area is made up of a departure zone but does not fall within the runway protection zone (RPZ), which would put construction workers or operational employees at most risk. Furthermore, RP-5 and the CCWRF are located in the Chino Airport Safety Zone III, or Referral Area "C"; the threat of aircraft accidents in this area is below that of the other referral areas. Some of the proposed OBMPU facilities would be located within the Chino Airport land use planning area; however, all IEUA existing facilities are located in zones that do not substantially expose short-term construction workers or long-term employees to risks.

LA/Ontario International Airport

The City of Ontario International Airport is located approximately 1.7 miles north of RP-1 and not within any airport safety zones or flight paths. Improvements at RP-1 would not result in any safety hazards for people residing or working in the project area. However, some of the proposed OBMPU facilities would be located within the Chino Airport land use planning area as the locations for many of the facilities proposed under this Project Category are presently unknown.

Cable Airport

There are no Project Category 4 projects proposed near the Cable Airport. The existing treatment facilities and associated projects are located within the City of Chino, Ontario, and Rancho Cucamonga. The closest IEUA treatment facility is RP-1 located approximately 7.5 miles southeast in Ontario. No proposed projects within existing IEUA treatment facilities would be located within two miles of the Cable Airport

As with Project Category 1 and 2 facilities, the locations for the proposed AWPf, groundwater treatment facilities at or near well sites, and groundwater treatment facilities at regionally located sites are presently unknown. Although these facilities would not be installed to be of great height, the facilities could be installed in and around the airports located within the Chino Basin. Although Project Category 4 facilities would not

pose any specific conflict with any public airport operations, mitigation is provided to ensure airport operators would have an opportunity to participate in a decision to locate OBMPU facilities within safety zone or flight paths.

Combined Project Categories

Most proposed projects' locations have not yet been determined, and therefore, have the potential to be within an airport land use plan, which in turn could result in a safety hazard to airport flight patterns, light, or navigation.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-4: ***Airport Compatibility. Prior to finalizing site selection of an OBMPU facility within an airport safety zone, input from the affected airport management entity shall be solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use compatibility plan. If a potential conflict with an airport land use compatibility plan is identified, the Implementing Agency shall relocate the facility outside the area of conflict, or if the site is deemed essential, the Implementing Agency shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.***

Therefore, potential airport hazard impacts could be potentially significant. The implementation of Mitigation Measure **HAZ-4** would ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area during construction and operation of the OBMPU facilities. Implementation of Mitigation Measure **HAZ-4** would reduce potential impacts from development within an airport safety zone to a less than significant impact.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-4** is required.*

Implementation of Mitigation Measure **HAZ-4** and compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies would ensure that the proposed facilities would not contribute to cumulative impacts, significant or otherwise, related to development within airport safety zones..

Level of Significance After Mitigation: Less Than Significant

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The highly urbanized portion of the Chino Basin and the Prado Wetlands have been designated by the CAL FIRE as less than high or very high fire hazard severity zones (FHSZ). This is shown on the attached wildland fire "Fire Hazard Severity Zone" map provided as **Figure IX-1**, which shows the fire hazard zones in the relevant portions of San Bernardino and Riverside Counties that encompass the Chino Basin. Almost all "high" or "severe" wildland fire hazard areas are located on the edges of the Chino Basin, or adjacent to isolated hills (Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below, both the unmanned infrastructure proposed by the OBMPU and the location of this infrastructure would occur in areas with at most moderated wildland fire hazards.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

All project facilities under Category 1 would be contained within the boundaries of their specific sites which would not include any roadways. Project-related vehicles would not block existing street access to the sites project sites. Therefore, no impacts related to an adopted emergency response plan or emergency evacuation plan would occur from installation and operation of Project Category 1 OBMPU facilities.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities all consist of wells and ancillary infrastructure which, during operation, would not interfere with traffic flows. However, aboveground facilities would require periodic maintenance. Maintenance activities would be random and require minimal trips that would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

The construction of the pipelines and aboveground facility installations would require construction along or in public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. All proposed pipelines are proposed to be constructed within public rights-of-way. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts could be potentially significant.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The proposed storage basins, recharge facilities and storage bands would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making

the possibility of interfering with evacuation routes highly unlikely. Deepening existing basins and creation of new storage basins along with drilling of wells would require additional truck haul trips to transport construction and debris materials to and from project sites; however, the proposed project would not impact the roadway in a way that would impede emergency evacuations. The truck trips would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of groundwater storage, recharge and extraction infrastructure which, during operation, would not interfere with traffic flows. However, aboveground ancillary facilities and wells would require periodic maintenance and/or monitoring. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no conflicts with an adopted emergency response or evaluation plan are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

The proposed AWWP, desalters and groundwater treatment facilities would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making the possibility of interfering with evacuation routes highly unlikely. The truck trips associated with construction activities at the WRPs and Desalters would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impacts related to an emergency evacuation plan would occur.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of advanced treatment, wastewater, desalting, and water treatment infrastructure which, during operation, would not interfere with traffic flows. However, aboveground ancillary facilities and wells would require periodic maintenance and/or monitoring. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways. Impacts related to an adopted emergency plan would be considered less than significant during operation.

Combined Project Categories

Project Category 2 proposed pipelines would be constructed within public rights-of-way. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.10-6 and 4.10-7):

- 4.10-6** *During construction activities within existing road rights-of-way or other easements where continuous access is required, a road operation management plan shall be prepared and implemented. At a minimum this plan shall define how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes; adequate signage and other controls, including flagpersons, to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.*
- 4.10-7** *To the extent feasible, installation of pipelines or other construction activities in support of the OBMP shall not be located on major evacuation or emergency response routes within any communities in the Chino Basin. Where construction on such routes is necessary, local emergency response providers shall be contacted and emergency access and evacuation requirements shall be maintained at a level sufficient to meet their needs.*

The implementation of 2000 OBMP PEIR Mitigation Measures **4.10-6** and **4.10-7** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access. Therefore, potential significant impacts to emergency access would be reduced to less than significant.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the area continues to develop, the addition of more development could impair implementation of or physically interfere with an adopted emergency response plans or emergency evacuation plans by constructing facilities within public rights-of-way. Since the proposed OBMPU pipelines would be constructed within public rights-of-way, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of 2000 OBMP PEIR Mitigation Measures **4.10-6** and **4.10-7** are required.*

The implementation of 2000 OBMP PEIR Mitigation Measures **4.10-6** and **4.10-7** would ensure that the proposed facilities' contribution to cumulative emergency access impacts would be reduced to less than cumulatively considerable by requiring the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to emergency access.

Level of Significance After Mitigation: Less Than Significant

- g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

As discussed above, the highly urbanized portion of the Chino Basin has been designated by CAL FIRE as outside of the very high FHSZ. This is shown on the attached wildland FHSZ maps. Almost all "high" or "severe" wildland FHSZs are located on the edges of the Chino Basin, or adjacent to isolated hills (for

example, Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below, both the unmanned infrastructure proposed by the OBMPU and the location of this infrastructure would occur in areas with, at most, moderate wildland fire hazards.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. These wells would be installed throughout the Chino Basin, but with an emphasis on new ASR well facilities north of State Highway 60 (SR 60).

Proposed Project Category 1 projects would generally not expose people or structures to a significant risk of loss, injury or death involving wildland fires. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose people or structures to wildfire risks. Where these well or ancillary facilities are located on built up land with some open space. CAL FIRE designates all areas immediately within or surrounding these areas as “Non-Very High Fire Hazard Severity Zone (Non-very high FHSZ). However, if Category 1 infrastructure must be installed within high or severe fire hazard areas, a potential exists to cause a significant wildfire hazard.

During operation, the proposed facilities would function to pump and distribute water throughout the Chino Basin, and these facilities would not be constructed of flammable materials or involve any spark-producing activities, or human occupancy. Operational impacts of the proposed plan facilities would be less than significant with no mitigation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

The proposed pipelines and ancillary facilities would be constructed primarily within paved roadway rights-of-way. CAL FIRE designates most of the areas within the Chino Basin as outside the very high FHSZs but some very high FHSZs are in Chino Hills, Upland, Rancho Cucamonga, Fontana, and Jurupa Hills primarily around foothills containing wildlands near the boundaries of the Basin. Because not all of the ancillary facilities' locations are not determined at this time, there is a potential for facilities to be located within or near wildland areas with high fire risk. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose construction workers to wildfire risks. Impacts would be potentially significant.

During operation, the proposed facilities would distribute recycled, imported, and treated water throughout the project area, and these facilities would not be constructed of flammable materials or involve any spark-producing activities. However, many of the ancillary facilities will be supplied and operate on electricity.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as Project Categories 1 and 2.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment

facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

The desalters and WRPs already exist and are not within high or very high wildfire hazard zones. It is possible that the AWPf, and groundwater treatment facilities at or near well sites or at regionally location sites could be located in the northern portion of the Chino Basin in a high or very high wildfire hazard zone.

Combined Project Categories

Some proposed projects' locations are not determined at this time, and therefore, there would be potential for facilities to be located within or near a wildland area with high fire risk. Impacts would be potentially significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-5: High Fire Hazard Severity Zone Hazard Reduction Plan. Prior to construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (FHSZs) by CAL FIRE, fire hazard reduction measures shall be incorporated into a fire management/fuel modification plan for the proposed facility, and shall be implemented during construction and over the long-term for protection of the site. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site shall have access to functional fire extinguishers and related fire prevention equipment (such as emergency sand bags, etc.) at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by the Implementing Agency and CAL FIRE for review and comment, where appropriate, and approved prior to construction within high and very high FHSZs and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high FHSZ to minimize fire damage to a level acceptable to the Implementing Agency over the long term.

The implementation of Mitigation Measure **HAZ-5** would require the preparation of a fire management plan/fuel modification plan for OBMPU infrastructure proposed within very high FHSZs, and it would identify comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential significant impacts due to installation of proposed OBMPU infrastructure would be reduced to less than significant level with implementation of MM **HAZ-5**.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more development could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Since there would be potential for OBMPU projects to be located within or adjacent to areas with high wildland fire risks, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Mitigation Measure **HAZ-5** is required to minimize project impacts.*

The implementation of Mitigation Measure **HAZ-5** would ensure that the proposed facilities' contribution to cumulative impacts related to wildfires would be reduced to less than cumulatively considerable by

implementing fire hazard reduction measures during construction and operations in areas designated as very high FHSZs to reduce the potential for wildfire impacts on people or structures.

Level of Significance After Mitigation: Less Than Significant

IX.4 2000 OBMP PEIR Mitigation Measures

Some 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Hazards and Hazardous Materials), and have been listed under the impact analysis provided under **IX.3, Impact Discussion**, above. These are: **4.10-1** through **4.10-3**, and **4.10-5** through **4.10-7**. All other 2000 OBMP PEIR Mitigation Measures are no longer applicable, primarily due to regulations by which compliance is mandatory that cover the intent of these remaining mitigation measures, or due to coverage by the new Hydrology and Water Quality mitigation measures proposed under Subchapter 4.7 of the RDSEIR.

2000 OBMP PEIR Mitigation Measure **4.10-4** pertains to ensuring that contaminated material is managed by a licensed treatment, disposal, or recycling facility. Compliance with this measure is a mandatory requirement pursuant to federal law, and therefore 2000 OBMP PEIR Mitigation Measure **4.10-4** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.10-8** pertains to ensuring that alternative treatment systems proposed to be installed reduce health risks. This mitigation measure is no longer applicable because the standards governing the use of these treatment systems are intended to prevent health risks from occurring at nearby sensitive receptors due to their use. Therefore, 2000 OBMP PEIR Mitigation Measure **4.10-8** is no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.10-9** through **4.10-11** pertain to water production and ability to meet demand utilizing existing wells, spreading of contamination plumes, and groundwater quality impacts. These mitigation measures, with the exception of 2000 OBMP PEIR Mitigation Measures **4.10-10**, are no longer applicable to the analysis under the Hazards and Hazardous Materials issue. 2000 OBMP PEIR Mitigation Measures **4.10-9** is a regulatory requirement, such that any future facility that recycles water and discharges the treated water to the groundwater basin would be required by the SWRCB and RWQCB to demonstrate that the travel time to the groundwater basin meets SWRCB and RWQCB discharge standards. Furthermore, Mitigation Measures **4.10-9** would generally be more applicable under Subchapter 4.7, Hydrology and Water Quality, issue (b), which states that “Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin.”

2000 OBMP PEIR Mitigation Measures **4.10-10** requires modeling for recharge near contamination plumes, which has been evaluated as part of the 2023 Storage Framework Investigation, and it determined that the proposed OBMPU would not result in significant movement of the groundwater plumes within the Basin. However, Mitigation Measure **HYD-11** addresses the plan of response by Watermaster and the IEUA should the Basin conditions come to vary from the projections that have been modeled as part of the OBMPU planning. This measure would enable Watermaster to modify previously agreed upon mitigation measures to address actual Basin conditions and apply these measures to the OBMPU allowing for flexibility in how Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels. Furthermore, as part of Watermaster’s review of the future Storage and Recovery Program applications associated with OBMPU facilities, the effects of the OBMPU operations on the movement of major contaminant plumes in the Chino Basin will be re-assessed. If Watermaster determines that the operation of facilities or programs developed under the OBMPU may result in significant impacts to the movement of the plumes, Watermaster will require that the Implementing Agency implement mitigation (enforced through Mitigation Measure **HYD-11**) to reduce their impacts to less than significant levels. Therefore, given that Mitigation Measure **HYD-11** provides more broad coverage for all types of storage and recovery facilities proposed under the OBMPU, 2000 OBMP PEIR Mitigation Measures **4.10-10** is no longer applicable.

Additionally, 2000 OBMP PEIR Mitigation Measures **4.10-11** requires recycled water recharge operations to be monitored for adverse impacts to the Chino Basin. Similar to the circumstance for 2000 OBMP PEIR Mitigation Measures **4.10-10**, Subchapter 4.7, Hydrology and Water Quality Mitigation Measures **HYD-1** through **HYD-13** require Watermaster to utilize its monitoring network and its groundwater model to evaluate Storage and Recovery Program applications to determine whether they will cause MPI, and to deny the application or apply mitigation measures, if feasible. The extensive mitigation efforts provided herein will not allow for any project to be implemented unless feasible mitigation measures can minimize impacts to the groundwater basin below significance thresholds long established by Watermaster to evaluate MPI in accordance with standardized procedures. Therefore, given that Mitigation Measure **HYD-11** provides more broad coverage for all types of storage and recovery facilities, and the monitoring efforts thereof proposed under the OBMPU, 2000 OBMP PEIR Mitigation Measures **4.10-11** is no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.10-4**, **4.10-8** through **4.10-11** are no longer applicable for the purposes of the OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation onsite or offsite?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Or,	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a-e. *Potentially Significant Impact* – Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the OBMPU and associated facilities may be significant. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XI.1 Environmental Setting

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam.

The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Land Use Designations by County and City

San Bernardino County

The San Bernardino County Countywide Plan establishes 11 land use designations within 42,095 acres of the Valley Region. Nearly one-third, or 12,695 acres, of the Valley Region's 42,095 acres of unincorporated acreage is devoted to residential uses. Land use designations within the Valley Region of the General Plan are provided in **Table XI-1** below.

San Bernardino County is the largest county in the contiguous United States. Approximately 81 percent of the total, (10.5 million acres) are outside of the county jurisdiction. Only 4 percent of the land in the county is in incorporated jurisdictions and 96 percent of the land area is unincorporated. However, of the unincorporated areas, most (87 percent) is under federal, State, or tribal jurisdiction and outside of the county's administrative control.²⁵ While the county influences a certain degree of development activity within the 24 cities within the county (primarily administrative buildings, criminal justice facilities, and certain limited infrastructure, including county-maintained roads and flood control facilities), the City Councils of these cities directly regulate land use and planning therein.

²⁵ County of San Bernardino. 2020. San Bernardino Countywide Plan, Final Environmental Impact Report. <https://countywideplan.com/resources/document-download/> (accessed 03/07/23)

Table XI-1
COUNTY OF SAN BERNARDINO LAND USE DESIGNATIONS
IN THE VALLEY REGION PLANNING AREA

Land Use Designation	Acres
Resource & Land Management	1,626
Open Space	3,434
Rural Living	8,055
Very Low Density Residential	4,873
Low Density Residential	6,460
Medium Density Residential	1,362
Commercial	1,497
Commercial Industrial	1,246
Regional Industrial	2,999
Public Facilities	3,790
Special Development	6,702
TOTAL	42,095
SOURCE: County of San Bernardino. 2020. San Bernardino Countywide Plan for County of San Bernardino, Final Environmental Impact Report. https://countywideplan.com/resources/document-download/ (accessed 03/07/23)	

Riverside County

Compared to eastern Riverside County, the western portion of the county contains the greatest concentration of population and has experienced the greatest growth pressures. The majority of this population is concentrated in the incorporated cities of Corona, Riverside, Beaumont, Banning, Norco, Lake Elsinore, Perris, Hemet, San Jacinto, Moreno Valley, Calimesa, Canyon Lake, Murrieta, and Temecula.

The county's General Plan Land Use designations consist of five broad Foundation Component land uses: Agriculture, Rural, Rural Community, Open Space, and Community Development. Each of these is subdivided into more detailed land use designations at the area plan level. The Unincorporated Riverside County Cumulative Acreage Summary Table (**Table XI-2**) presents an itemized acreage summary for each General Plan Foundation Component. As shown on **Table XI-2**, the Rural, Agricultural, Rural Community and Open Space General Plan Foundation Component-designated lands account for 94% of the entire unincorporated area, with the remaining 7% devoted to urbanized uses, roadways, and Indian lands. Approximately 83% of the area in western Riverside County is designated for Agricultural, Rural, Rural Community, or Open Space uses, while these uses make up over 96% of the land in the eastern half of the county.

Table XI-2
COUNTY OF RIVERSIDE LAND USE DESIGNATIONS

Land Use Designation	Western County Area Plans Acreage	Total County Acreage
Agriculture	28,552	184,835
Rural	251,711	291,565
Rural Community	63,999	68,078
Open Space	659,418	3,288,199
Community Development	103,575	164,247
Other	79,087	109,540
TOTAL¹	1,186,342	4,106,464

Land Use Designation	Western County Area Plans Acreage	Total County Acreage
SOURCE: County of Riverside. 2021. County of Riverside General Plan, Land Use Element. June. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf (accessed 03/07/23) ¹ Includes Indian Lands and Major Roadways. Does not include cities and March Joint Powers Authority within Riverside County		

Chino

In the late 19th century, the City of Chino started as an agricultural community. Beginning in the 1980s, the land use focus in the city largely shifted away from agriculture towards industrial and warehouse/distribution uses. Industrial and warehouse uses are most common in the southern portions of the city and along major trucking routes and near rail lines and the Ontario Airport. The city's primary commercial areas are located along major transportation routes, including SR-71, Central Avenue, Riverside Drive, and Philadelphia Street. The land use designations within the city are summarized in **Table XI-3**.

Table XI-3
CITY OF CHINO LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	4,700
Open Space (including Agriculture)	6,134
Commercial	849
Industrial	3,014
Other (including Public, Public Schools, Mixed Use, Airport-Related, and Community Core)	1,983
TOTAL	16,680
SOURCE: City of Chino, 2010 General Plan 2025, Land Use Element. http://p1cdn4static.civicle.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%204%20Land%20Use%20GP%20Update%202013.pdf (accessed 03/07/23)	

Chino Hills

The City of Chino Hills is known for its rural atmosphere and its 3,000 acres of open space, 44 parks, 48 miles of recreational trails, and community buildings.²⁶ Historically, the city's primary land use was open space with some scattered rural residential ranches. Much of the natural habitat of the area is preserved within the City by Chino Hills State Park, which is now the largest State Park in California located amongst an urban setting. In the late 1970s, development pressures gradually started moving to the city. Residential development and communities were clustered and concentrated to protect as much open space as possible and most commercial development was placed along the SR-71 corridor.²⁷

According to the Land Use Element of the City of Chino Hills General Plan, much of the land in the city designated for development has been built. The majority of vacant land that remains consists of hillside properties and natural resource areas. Future development of residential uses will depend on regional transit links along major arterials. Land use designations are identified in the Chino Hills General Plan and included below in **Table XI-4**.

²⁶ City of Chino Hills. 2021. A Great Place to Be! <https://www.chinohills.org/93/A-Great-Place-To-Be> (accessed 03/07/23).

²⁷ City of Chino Hills. 2021. History. <https://www.chinohills.org/95/History> (accessed 03/07/23).

Table XI-4
CITY OF CHINO HILLS LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	12,536
Commercial	1,403
Open Space	12,181
Institutional/Public Facility	633
Mixed Use	46
TOTAL	26,799^a
^a The city's total area, including properties with Land Use Designations and right-of-way, is 28,736 acres (or approximately 45 square miles). Public and private streets and State Route 71 are not provided with a Land Use Designation and are not included within the Total Acreages. In addition, public and private right-of-way occupies an additional 1,937 acres within the city's boundaries that are not included in the Total Acreage. SOURCE: City of Chino Hills, 2015 General Plan, Land Use Element. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 03/07/23)	

Claremont

According to the City of Claremont General Plan (2005), Claremont is a residential community and is home to the renowned Claremont Colleges. The city's unique characteristics and environment are a result of careful and deliberate planning that has produce the city's: Distinctive neighborhoods, protective environment, status as a leading center of learning, feeling of being a village within a metropolis, pedestrian friendly surroundings, strong historic preservation efforts, tree-lined streets, well planned park, and open spaces, small-thriving commercial and industrial clusters, community of passionate and active volunteers. Claremont (2005) land uses in the city are summarized in **Table XI-5** below, which addresses existing land uses by percentage of area within the city.

Table XI-5
CITY OF CLAREMONT LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential 2	640.3
Residential 6	1,816.5
Residential 15	250.3
Residential 22	40.0
Mixed Use Areas	73.5
Commercial	46.0
Claremont Village	47.8
Freeway Commercial	45.9
Office/Professional	48.5
Commercial Recreation	16.8
Business Park	87.4
Commercial / Business Park	48.9
Public	338.2
Institutional	732.6
Park/Resource Conservation	992.5
Wilderness Park	1,863.1

Land Use Designation	Acres
Hillside	962.5
Hillside Residential Overlay	664.7
TOTAL	8,645.8
SOURCE: City of Claremont 2005 General Plan, Land Use Element. https://www.ci.claremont.ca.us/living/general-plan-1708 (accessed 03/07/23)	

Eastvale

A decade ago, the Eastvale area existed as part of the larger Chino Dairy area, a world-famous concentration of dairies that at its height contained some 400 dairies and thousands of dairy cows. Eastvale, located in Riverside County, is part of the small portion of the former dairy area that was outside of San Bernardino County and therefore not subject to the long-term protection offered by the San Bernardino County Agricultural Preserve. Riverside County facilitated development of Eastvale with the adoption of the Eastvale Area Plan in 2003. A part of the Riverside County General Plan, the Eastvale Area Plan established the plan for land uses that is basically reflected in the development in place today. Existing (2011) land uses in the Planning Area are summarized in **Table IX-6** below, which addresses existing land uses by percentage of area within the city.

Table XI-6
CITY OF EASTVALE LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential (8-14 dwelling units (du)/acre)	5%
Residential (5-8 du/acre)	3%
Residential (2-5 du/acre)	50%
Residential (0.5-acre minimum lot)	4%
Conservation	10%
Open Space Recreation	4%
Agriculture	1%
Water	4%
Light Industrial	8%
Business Park	5%
Commercial Retail	3%
Public Facilities	1%
Freeway	2%
SOURCE: City of Eastvale, 2012. General Plan, Land Use Element. https://www.eastvaleca.gov/home/showpublisheddocument/2360/635767198266670000 (accessed 03/07/23)	

Fontana

The City of Fontana was a rural and diversified farming community in the early 1900s and throughout the century shifted into a population-dense manufacturing center. The city is known by its early steel mill operations during World War II and was the region's leading producer of steel and steel-related products. The city's suburban location near I-10, I-15, and I-210, along with major rail transportation corridors, allows for a commuting option for citizens of surrounding areas.^{28,29}

²⁸ City of Fontana. 2018. General Plan. <https://www.fontana.org/DocumentCenter/View/26754/Chapter-15---Land-Use-Zoning-and-Urban-Design> (accessed 03/07/23)

²⁹ City of Fontana. 2021. About the City of Fontana. <https://www.fontana.org/31/About-Us> (accessed 03/07/23)

Fontana is now a major Inland Empire hub of warehousing and distribution centers. Industrial and trucking-based land uses prosper and the city also contains a large number of retailers and small businesses. Warehouses, distribution centers, and heavy industrial uses are concentrated in the city's southern half adjacent to the I-10 corridor.^{8,9}

Along with the commuter population, a range of residential land uses have developed within the city. Single- and multi-family neighborhoods are located primarily within the center of the city along with commercial land uses. Newer residential units are being developed along the northern edge of the city and a large portion of the land is undeveloped as a mix of planned communities and job centers.^{8,9}

Land use designations are identified in the Fontana General Plan and included below in **Table XI-7**.

Table XI-7
CITY OF FONTANA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	15,474
Commercial	1,170
Mixed Use	2,564
Industrial	8,526
Public	3,328
Transportation/Utility Right-of-Way	1,912
Open Space	1,599
TOTAL	33,454
SOURCE: City of Fontana. 2018. General Plan, Land Use, Zoning, and Urban Design Element. https://www.fontana.org/DocumentCenter/View/26754/Chapter-15--Land-Use-Zoning-and-Urban-Design (accessed 03/07/23)	

Jurupa Valley

In 2017, the young city is experiencing significant residential and industrial growth and has a mix of medium- and low-density residential development, equestrian and agricultural activities, and a mix of retail commercial, office, and industrial uses. In particular, the city is experiencing significant development interest for more industrial warehousing, and the Inland Empire's booming transportation/logistics industry has resulted in industrial and warehouse uses encroaching into historically residential and rural neighborhoods. This trend may have limited opportunities for development in the retail commercial, office, and job-rich manufacturing sectors.

Table XI-8 below shows the city's General Plan Land Uses, which are organized around 23 land use designations and 11 land use overlays.³⁰

Table XI-8
CITY OF JURUPA VALLEY LAND USE DESIGNATIONS

Land Use Designations	Acres
Rural Residential	103.6
Estate Residential	338.5
Very Low Density Residential	97.4
Low Density Residential	7,062.2
Medium Density Residential	3,901.1

³⁰ City of Jurupa Valley. 2017. 2017 General Plan, Land Use Element. <https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF> (accessed 03/07/23)

Land Use Designations	Acres
Medium-High Density Residential	793.0
High Density Residential	292.9
Very High Density Residential	88.8
Highest Density Residential	212.0
Commercial Retail	1,105.7
Commercial Tourist	122.6
Commercial Neighborhood	43.3
Commercial Office	14.9
Business Park	673.8
Business Park Specific Plan	514.4
Light Industrial	3,076.8
Heavy Industrial	736.9
Open Space-Recreation	1,452.2
Open Space-Rural	1,131.6
Open Space-Conservation	683.5
Open Space-Conservation Habitat	971.1
Open Space-Mineral Resources	300.7
Open Space-Water	884.1
Railroad	168.5
Roadways/other	2,549.7
Public Facility/Institutional	527.0
TOTAL	27,846.3
SOURCE: City of Jurupa Valley, 2017 2017 General Plan, Land Use Element. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 03/07/23)	

Montclair

The City of Montclair was once a greenbelt of citrus groves located between the agricultural communities of Pomona and Ontario. A majority of Montclair is zoned for residential use. Residential subdivisions comprising of modest, one-story single-family tract houses represent the most common type of development in the city. Almost all of these subdivisions appear to date to the post-World War II period and are associated with the rapid suburbanization that transformed Southern California into a regional metropolis during this time. Commercial development is generally confined to the city's foremost vehicular corridors, and demonstrates the profound and indelible impact that the car had on shaping the urban fabric in the post-World War II period. Holt Boulevard and Mission Boulevard – both of which were major highways prior to the construction of Interstate 10 in the 1950s – are replete commercial ventures that are oriented toward passing motorists. The northeast corner of the city, to the east of the Montclair Place, contains a small concentration of office parks and light industrial buildings. The northern-most section of the city is also home to a regional transit center with a bus terminal and a Metrolink commuter train station.

The city is well known for its close proximity to private universities and colleges, including the prestigious Claremont Colleges, State universities, and several community colleges. These educational institutions made the area a prime location for residential development. Additionally, the city is near Interstate 10, which allows for commuter access from Los Angeles County and other portions of the Inland Empire. Land use designations for the City of Montclair are identified in the Montclair General Plan and included below in **Table XI-9**.

**Table XI-9
CITY OF MONTCLAIR LAND USE DESIGNATIONS**

Land Use Designations	Acres
Residential	1,326
Mixed Use	1,031
Civic	180
Parks and Open Space	133
Freeway & Railroad Right-of-ways	880
TOTAL	3,550
SOURCE: City of Montclair, 2022. City of Montclair General Plan. http://www.montclairplan.org/wp-content/uploads/2022/07/Montclair-General-Plan.pdf (accessed 03/07/23)	

Ontario

Similar to other cities within the program area, the City of Ontario was first developed as an agricultural community, largely but not exclusively devoted to citrus. Since World War II, the city has become much more diversified and now reflects an industrial and manufacturing economy. The city is well provided with major transportation corridors including railroads and freeways, along with the well-known Ontario International Airport. The primary land use within the city is residential, closely followed by industrial uses.

The area of the city located northwest of Interstate 10 is an older and more historic area that is characterized by residential and industrial land uses. The airport areas northeast of State Route 60 contains a large area of hospitality, industrial, warehousing, and distribution uses. The portion of the city south of State Route 60 is characterized by residential and planned-residential communities and retail oriented commercial centers. Land use designations for the City of Ontario are identified in the Ontario Plan, which was adopted in 2022, and included below in **Table XI-10**.

**Table XI-10
CITY OF ONTARIO LAND USE DESIGNATIONS**

Land Use Designations	Acres
Residential	10,370
Mixed Use	1,748
Commercial	1,085
Business Park	1,149
Industrial	7,664
Other	10,007
TOTAL	32,022
SOURCE: City of Ontario, 2022; City of Ontario Policy Plan Land Use Element Future Build Out Table: https://www.ontarioca.gov/sites/default/files/Ontario-Files/Planning/The%20Ontario%20Plann/Land%20Use/Figure%20LU-03%20Future%20Buildout%20Table_5.pdf . (accessed 03/07/23)	

Pomona

Pomona's land uses are arranged in an overall pattern typical of the city's age, topography, and western U.S. location. The city's relatively uniform topography with few physical constraints has allowed for a relatively uniform street grid with residential neighborhoods and commercial corridors radiating from the traditional mixed-use Downtown core. Residential neighborhoods located farther from Downtown and along the hillsides to the north and south were built later in the 20th century and are more consistently residential in use. At the western and eastern edges of the city, large industrial areas have developed with access to

railway and major roadway arteries. Although Pomona is characterized by a diverse range of land uses, almost half of the city's land area (48%) is devoted to public uses including parks, dedicated open spaces, schools and community facilities as well as streets and other rights-of-way. The remaining land containing private development is composed primarily of housing, which accounts for 35% of the city's land area. Less predominant in terms of land area are industrial (8%), commercial (4%) and office (1%) uses. Vacant lands comprise 4% of the city's land area and are located throughout the city, particularly in the older areas and in the industrial districts.

Table XI-11
CITY OF POMONA LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential	35%
Streets and Other Right-of-Way	24%
Public Lands	24%
Vacant Land	4%
Industrial	8%
Commercial	4%
Professional Office	1%
SOURCE: City of Pomona, 2014. City of Pomona General Plan. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 03/07/23)	

Rancho Cucamonga

The City of Rancho Cucamonga is predominantly a residential community that is largely built-out. Commercial centers and industrial land uses are primarily clustered along Foothill Boulevard, Base Line Road, and several other major roadways. The northern edge of the city is dominated by open space and hillside terrain (Rancho Cucamonga, 2010).

The residential character of Rancho Cucamonga can be described as primarily low- density and consisting of high-quality, stable neighborhoods. Most residential uses located in the northern areas include large lot, detached homes. Commercial uses vary greatly, from regional shopping centers to smaller neighborhood retail stores. Industrial uses range from heavy industrial such as Tamco Steel and Mission Foods, to warehouses, distribution centers, and light industrial that include business parks and office uses. Most of the industrial uses are located south of Foothill Boulevard, with the heavy industrial uses located on both sides of I-15. Land use designations for the City of Rancho Cucamonga identified in the city's General Plan and included below in **Table XI-12**.

Table XI-12
CITY OF RANCHO CUCAMONGA LAND USE DESIGNATIONS

Land Use Designation	Acres
Semi-Rural Neighborhood	2,632
Traditional Neighborhood	1,904
Suburban Neighborhood Very Low	4,101
Suburban Neighborhood Low	2,506
Suburban Neighborhood Moderate	392
Urban Neighborhood	165
Neighborhood Corridor	245
City Corridor Moderate	319

Land Use Designation	Acres
City Corridor High	603
Neighborhood Center	284
Traditional Town Center	279
City Center	457
Office Employment District	122
21 st Century Employment District	466
Neo-Industrial Employment District	1,865
Industrial Employment District	980
Natural Open Space	1,467
Rural Open Space	3,782
General Open Space & Facilities	4,149
No Designation	281
Rights of Way	4,563
TOTAL	31,562
SOURCE: City of Rancho Cucamonga, 2021. City of Rancho Cucamonga General Plan. https://www.calameo.com/read/004790989e9f72034a64f (accessed 03/07/23)	

Upland

The City of Upland was once dominated by citrus groves. It is located at the foot of the San Gabriel Mountains and is known for preserving a small-town character while being a medium-sized city. The city is located directly east of the Los Angeles Metropolitan area and has attracted many commuters due to easy access to Interstate I-10 and I-210. The city's economic anchors are the downtown area, San Antonio Hospital, and Cable Airport. Planning efforts such as revitalizing the city's historic downtown area, protection of historic buildings, and strengthening of local business, support the integrity of the city's character. In recent years, the city developed planning efforts of becoming more economically diverse by shifting planned land uses from residential development to industrial and commercial uses. Land use designations for the City of Upland identified in the city's General Plan and included below in **Table XI-13**.

**Table XI-13
CITY OF UPLAND LAND USE DESIGNATION**

Land Use Designations	Acres
Residential	6,477
Commercial	216
Industrial	1,042
Mixed Use	560
Special/Institutional	1,868
Specific Plan	802
TOTAL	10,966
SOURCE: City of Upland. 2015. Final Program Environmental Impact Report, General Plan Update, Zoning Code Update, Climate Action Plan, and Cable Airport Land Use Compatibility Plan Update. https://www.uplandca.gov/uploads/files/DevelopmentServices/Environmental%20Review%20Documents/FINAL%20GENERAL%20PLAN%20EIR%20with%20comments%20COMBINED.pdf (accessed 03/07/23)	

Regional Plans

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the federally mandated Metropolitan Planning Organization representing six Counties: Los Angeles, Imperial, Orange, Riverside, San Bernardino, and Ventura. On September 3, 2020, SCAG adopted its Connect SoCal: The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal), which is an update to the previous 2016 RTP/SCS. Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide reduction targets and in so doing identifies the amount and location of growth expected to occur within the region.

San Bernardino Associated Governments

San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.1 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies.

Airport Land Use Compatibility Plans

The California State Legislature enacted airport land use planning laws which are intended to:

- Provide for the orderly development of each public use airport in the State and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to Section 21669 and to prevent the creation of new noise and safety problems; and
- Protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

The general mechanism that the statutes provided for compliance with the airport planning laws is for counties to establish an airport land use compatibility plan (ALUCP). The purpose of an ALUCP is to effectively identify areas, located outside of the airport proper, which would be influenced by the future operations of the airport. Planning boundaries are established on the perimeters of these areas, which are plotted, by applying the specific operational criteria of the airport, to various planning models that have been primarily developed by the FAA.

There are several airports within San Bernardino County and 15 airport land use compatibility plans for airports serving San Bernardino County. The three public airports within the program area include Chino Airport, the LA/Ontario International Airport, and the Cable Airport, all of which have ALUCPs.

XI.2 Impact Discussion

The precise design, location and configuration of facilities associates with each OBMPU project have not yet been finalized and are subject to adjustment based on future circumstances. Proposed facilities include aboveground structures such as groundwater treatment plants, treatment and desalter expansions, pump stations, storage reservoirs, wellheads, and portions of storage basins. Other facilities would be located underground or within surface flows, such as pipelines, monitoring devices, and wells. Land use impacts associated with underground structures would be short-term and would only occur during the construction phase of project implementation. Long-term land use impacts would be associated with aboveground structures.

The San Bernardino Countywide Plan states that:

The County can best serve our communities, businesses, institutions, and visitors by focusing new development in and around cities, towns, and communities with access to infrastructure and services, while preserving natural open spaces that define San Bernardino County and our way of life...

We believe:

- *Reliable and cost-effective water, stormwater, wastewater, sanitary, power, and communications systems are critical for maintaining and improving our communities, institutions, and businesses.*
- *Groundwater recharge, water conservation, water reclamation, and supplemental water are key components of a resilient water supply strategy. The effective management of water resources can reduce carbon emissions, energy consumption, and utility costs.*
- *Reducing, treating, and safely disposing solid and liquid waste will protect public and environmental health and preserve our natural resources.*
- *Flood control facilities are important for reducing the risks of flooding, contributing to groundwater recharge, and providing open space and habitat area.*
- *Collaborative efforts between government agencies and other stakeholders are necessary in order to effectively plan and efficiently provide infrastructure.*

Furthermore, the San Bernardino Countywide Plan states the following goals:

Goal IU-1 Water Supply: Water supply and infrastructure are sufficient for the needs of residents and businesses and resilient to drought.

Goal IU-2 Wastewater Treatment and Disposal: Residents and businesses in unincorporated areas have safe and sanitary systems for wastewater collection, treatment, and disposal.

Goal IU-2 Stormwater Drainage: A regional stormwater drainage backbone and local stormwater facilities in unincorporated areas that reduce the risk of flooding.

The statements and goals outlined above, which can be found in the San Bernardino Countywide Plan, are echoed throughout the city General Plans and County of Riverside General Plan that pertain to the area within which the Chino Basin is located, and as discussed under XI. Environmental Setting above. Therefore, the General Plans that pertain to the area within which the Chino Basin is located support the provision of adequate infrastructure, such as that which is proposed by the OBMPU.

Would the project:

a. *Physically divide an established community?*

The project does not propose any action that could physically divide an established community. The physical division of an established community generally refers to the construction of features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The exact locations of the proposed wells and monitoring devices have not yet been determined; however, there are no features of these wells and monitoring devices that would create a barrier or physically divide an established community, particularly given the small area (a half-acre or less) required to implement the facilities proposed as part of this Project Category. No impacts are anticipated.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed conveyance system pipelines and ancillary facilities are anticipated to be constructed primarily within existing public rights-of-way. Once linear pipelines are constructed, some ancillary facilities could be located aboveground within close proximity to the public rights-of-way. The exact locations of the ancillary facilities have not yet been determined; however, there are no features of these ancillary facilities, such as pump stations and water storage reservoirs, that would create a barrier or physically divide an established community, particularly given that in many communities, ancillary facilities such as steel or concrete reservoirs are integrated into the landscape unobtrusively. As such, no impacts are anticipated.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The potential to physically divide an established community related to the development of new and improvement of existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be minimal because these sites are currently developed and the addition of water storage facilities would be consistent with the existing uses. As such, no impacts are anticipated.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined; however, there are no features of these storage basins, MS4 facilities, and flood MAR facilities that in and of themselves would create a barrier or physically divide an established community. Therefore, no impacts are anticipated.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts. As such, no potential to physically divide an established community exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. There are no features of the treatment facility upgrades that would create a barrier or physically divide an established community. Aboveground facilities would be integrated into the existing urban/industrial character surrounding a treatment plant. As such, there would be no impact.

Similar to upgrades and improvements to existing treatment facilities, groundwater treatment facilities at well sites would occur within a site containing one or more wells. As such, the addition of groundwater

treatment facilities would be consistent with that which exists at present at the well sites, and would have no potential to physically divide an established community.

The exact locations of the proposed AWPf and groundwater treatment facilities (regional and near well sites) have not yet been determined; however, there are no features of these treatment facilities that would create a barrier or physically divide an established community. No impacts are anticipated.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact.

- b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

As stated in the Introduction under XII. Impact Discussion above, the cities and Counties that overlay the Chino Basin area have adopted General Plans that support the provision of adequate infrastructure, such as that which is proposed by the OBMPU.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet. The proposed extensometers would be installed within wells, and as such would not occupy any greater space than identified above, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water, and therefore would have no potential to conflict with land use designation. Because the precise location for future wells is presently unknown, wells may be developed across other designated land uses. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. The Watermaster or Implementing Agency would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. The Watermaster or Implementing Agency would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Mitigation is provided below to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible and would not conflict with land use designations or be incompatible with neighboring land uses. In addition, underground pipelines, once constructed would not pose long-term incompatibility with

land uses. Some pipelines and ancillary facilities may be installed across other designated land uses, though there is a potential for the implementing Agency to use existing structures for proposed ancillary facilities. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. The Watermaster or Implementing Agency would determine the most suitable locations to place facilities, taking into consideration surrounding land uses. The Watermaster or Implementing Agency would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Mitigation is provided below to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would be consistent with the existing land uses. All storage basin improvements would be consistent with the character of the facilities on site and would not substantially alter the existing character of the facilities. Furthermore, per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. As such, there is a less than significant potential to conflict with land use designations or existing neighborhood land uses.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined. Impacts to new storage basins, MS4 facilities, and flood MAR facilities at new sites would be the same as Project Categories 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to land use can occur from these facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The impacts to land use related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) and groundwater treatment facilities at well sites would occur within developed sites already containing desalter, water treatment facilities or wells, and as such, treatment facility upgrades would be located within existing sites designated for this use. All facility upgrades and improvements would be consistent with the character of the existing facility and would not substantially alter the existing character of the facilities. As such, there would be no conflicts with land use designations or existing neighborhood land uses.

The location for regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres. Impacts to regional groundwater treatment facilities and groundwater treatment facilities near well sites would be the same as Project Categories 1, 2 and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

This measure has been modified from the 2000 OBMP PEIR (measures 4.2-1 and 4.2-3) to more broadly apply to all future OBMPU-related facilities rather than just future desalter sites and water facilities:

LU-1: ***Land Use Consistency. Following selection of sites for future OBMPU facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.***

Mitigation Measure **LU-1** would ensure that the facilities associated with the OBMPU are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. This measure will minimize impacts below significance thresholds. For these reasons, the proposed project would result in a less than significant impact related to potential conflicts with land use plans, policies, or regulations.

Level of Significance After Mitigation: Less Than Significant Impact

XI.3 Cumulative Impact Discussion

The project would not divide an established community and would not contribute to cumulative impacts related to the physical division of an established community. Implementation of the proposed project would enable the implementation of an update to regional water resources and groundwater management for the Chino Basin. The project would help support water supply needs of future development within local cities and Counties as envisioned in the applicable General Plans. With implementation of mitigation to ensure land use conflicts are minimized upon implementation of the OBMPU, the project would not conflict with any land use plan, policy, or regulation in a manner that could result in a considerable contribution to a cumulative land use impact, significant or otherwise.

Level of Significance Before Mitigation: No Impact

Cumulative Measures: None Required.

Level of Significance After Mitigation: No Impact.

XI.4 2000 OBMP PEIR Mitigation Measures

All of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Land Use and Planning), but have been modified, as outlined under the impact analysis provided under **XI.2, Impact Discussion**, above. These are: **4.2-1** and **4.2-3**, which have been modified into Mitigation Measure **LU-1**, above, and **4.2-2**, which is not applicable to the Land Use Impact Analysis, but is applicable and has been modified to become Mitigation Measure **AGF-1**, to minimize Agriculture and Forestry Resource impacts.

Therefore, as these measures have been modified, 2000 OBMP PEIR Mitigation Measures **4.2-1** through **4.2-3** are no longer applicable to the proposed OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

XII.1 Environmental Setting

Mineral Resources

Minerals are naturally occurring chemical elements or compounds, or groups of elements or compounds that were not formed by organisms. Naturally occurring concentrations of minerals in the earth's crust are known as mineral deposits. Mineral resources are mineral deposits from which the economic extraction of a commodity (such as gold or copper) is currently potentially feasible. In addition to metallic minerals, materials used for construction (e.g., sand and aggregate), industrial and chemical processes (e.g., salt), and fuel (e.g., crude oil) are considered mineral resources in California.

In accordance with the Surface Mining and Reclamation Act of 1975, the California Department of Conservation, Division of Mines and Geology, currently known as the California Geological Survey (CGS), has mapped nonfuel mineral resources of the State to show where economically significant mineral deposits are either present or likely to occur based on the best available scientific data. These resources have been mapped using the California Mineral Land Classification System, which includes the following Mineral Resource Zones (MRZs):³¹

- MRZ-1: Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits are likely to exist, however, the significance of the deposit is undetermined.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

Mineral deposits in the Chino Basin area important to many industries, including construction, transportation and chemical processing. The value of mineral deposits within the Chino Basin area is enhanced by their close proximity to urban areas. However, these mineral deposits are endangered by the same urbanization that enhances their value. The only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap. The location of these resources is primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River.

³¹ County of Riverside, 2015. County of Riverside General Plan. <https://planning.rctlma.org/General-Plan-Zoning/General-Plan> (accessed 03/27/23)

The non-renewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources, in order to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources will protect not only future development of mineral deposit areas, but will also guide the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated.

The California Department of Conservation identifies large areas of the Chino Basin as MRZ-2 and MRZ-3. MRZ-3 designations are in the cities of Chino and most portions of Ontario and Jurupa Valley. Most of the MRZ-3 areas contain construction aggregate deposits, the significance of which cannot be evaluated from preliminary data. MRZ-2 areas are located within the cities of Upland, Montclair, Rancho Cucamonga, small portions of Jurupa Valley, the northern portion of Pomona, and some northern portions of Fontana in areas located in the City of Fontana North of the Interstate 10 Freeway, and in areas surrounding the San Antonio Creek as it flows through the Chino Basin.^{32,33,34} Currently, there are no active mining activities within Montclair. Past mining activities have left several large pits in Montclair and Upland, which are now being used for flood control and water conservation purposes. In addition, there are no active mineral extraction activities within Pomona.³⁵ The area within the City of Claremont that overlaps with the Chino Basin is designated as MRZ-2. Several aggregate mining operations occur in the Claremont-Upland Production region, two of which include large mining operations just east of Claremont. However, most of the undeveloped land within the designated areas of regional significance is included in the extensive landholdings of the Pomona Valley Protective Association (PVPA), and is used for watershed and groundwater recharge.³⁶

MRZ-1 designations occur in a small portion of eastern Jurupa Valley, southern areas of Chino and in the City of Chino Hills.³⁷ The MRZ-1 area located in the City of Chino is comprised primarily by shale, siltstone, carbonates and chlorite schist. These materials are considered unsuitable for use as aggregate. Fine grained sedimentary deposits also exist in this zone which are also unsuitable for use as aggregate.³⁸

XII.2 Impact Discussion

- a. *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

³² County of San Bernardino. 2019. San Bernardino Countywide Plan Draft PEIR. June.

http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-11-MIN.pdf (accessed 03/07/23)

³³ County of Los Angeles. 2015. General Plan. October.

https://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-6_mineral_resources.pdf (accessed 03/07/23)

³⁴ Riverside County General Plan. 2015. General Plan. December.

https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 03/07/23)

³⁵ City of Pomona. 2014. City of Pomona General Plan Update, Corridors Specific Plan, Active Transportation Plan, and Green Plan Final Environmental Impact Report. March.

<https://www.pomonaca.gov/home/showpublisheddocument/2869/637539009362330000> (accessed 03/07/23)

³⁶ City of Claremont. 2005. City of Claremont General Plan.

<https://www.ci.claremont.ca.us/home/showpublisheddocument/15332/637353406483130000> (accessed 03/07/23)

³⁷ Department of Conservation, <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc> (accessed 03/07/23)

³⁸ City of Chino General Plan

Implementation of the proposed well development and monitoring devices would not interfere with the exploitation of mineral resources. As stated under XII Environmental Setting above, much of the Chino Basin has been urbanized, resulting in very few areas containing mineral resources that are not utilized for mining activities. The flow meters will be located within surface water, and as such would not result in the loss of available known mineral resources. The proposed wells will be located within sites less than one half acre in size, and as such, are not anticipated to interfere with the exploitation of mineral resources. Many wells can be located within mineral extraction facilities with no conflict to the mining operations. Therefore, implementation of improvements within Project Category 1 would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Implementation of the proposed conveyance facilities would be located within existing rights-of-way that would not include areas actively being excavated or prevent areas from being accessed for future extraction of mineral resources. The proposed ancillary facilities such as pump stations and reservoirs are not anticipated to require a large footprint, such that ancillary facility projects would interfere with the exploitation of mineral resources. Therefore, implementation of improvements within Project Category 2 would not result in the loss of availability mineral resource that would be of value to the region and residents of the state. Impacts would be less than significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Proposed storage basins will be located within sites that have been identified. None of these sites contains mineral resources.³⁹ Flood MAR facilities and new MS4 compliance projects may have a large footprint though would not include any ancillary facility that would be large enough to interfere with the exploration of future mineral resources. However, if Flood MAR facilities or new MS4 compliance projects were to be implemented within a mineral resource zone, there is a nominal potential for future groundwater treatment facilities to be located within a site containing mineral resources, which could result in the loss of available mineral resources. As such, mitigation is required in order to minimize potential impacts thereof.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, no loss of mineral resources is anticipated.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and

³⁹ California Department of Conservation.

<https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps> (accessed 03/16/23)

improvements to existing groundwater treatment facilities. Mineral Resource impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

The proposed upgrades to the WFA Agua de Lejos Treatment Plant and to the Chino Desalters, new groundwater treatment facilities at well sites and improvements to existing groundwater treatment facilities would occur within developed sites containing infrastructure pertaining to the treatment of water or wastewater. Regionally significant mineral resources are not known to occur within the existing treatment facilities. Therefore, the proposed upgrades would not prevent the future availability of a known regionally-significant mineral resource to be obtained in other portions of the Chino Basin.

The proposed AWPf and new groundwater treatment facilities near well sites and at regionally located sites may have a large footprint, particularly regional groundwater treatment facilities. Given that there are a few important mineral resources zones located within Chino Basin, there is a nominal potential for such facilities to be located within a site containing mineral resources, which could result in the loss of available mineral resources. As such, mitigation is required in order to minimize potential impacts thereof.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

MR-1: ***Mineral Resource Avoidance. The Implementing Agency shall locate each facility proposed under the OBMPU outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, subsequent CEQA documentation shall be prepared.***

The implementation of Mitigation Measure **MR-1** would ensure that the proposed facilities associated with the OBMPU would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources.

Level of Significance After Mitigation: Less Than Significant

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

As outlined in the preceding documentation for the OBMP, including the Peace II Draft SEIR and the original OBMP PEIR, the only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap. The location of these resources is primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River. At the project specific level, the facilities associated with the OBMPU, such as wells, monitoring devices, and other facilities outlined in the remaining Project Categories may have a very small impact on mineral resources. Many of the new treatment facilities, wells,

and conveyance facilities will be installed within the footprints of existing water utilities sites, or will otherwise be located within areas either already developed with residential, commercial, industrial or open space uses. Projects in these types of locations would have no potential to adversely impact mineral resources because the resources would already be covered with facilities that would make recovery unlikely, and because mineral resource recovery is generally not a compatible land use adjacent to residential, commercial. Facilities such as wells would likely not be large enough to interfere with locally important mineral resources recovery sites. As such, impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

At the project specific level, the facilities associated with the OBMPU, such as storage basins and recharge facilities outlined in the remaining Project Categories may have a very small impact on mineral resources. Many of the new treatment facilities, wells, and conveyance facilities will be installed within the footprints of existing water utilities sites, or will otherwise be located within areas either already developed with residential, commercial, industrial or open space uses. The proposed storage basins will be located at sites that do not contain locally or regionally important mineral resources. However, the precise locations for the flood MAR facilities and new MS4-compliance facilities are presently unknown. Projects in these types of locations would have no potential to adversely impact mineral resources because the resources would already be covered with facilities that would make recovery unlikely, and because mineral resource recovery is generally not a compatible land use adjacent to residential, commercial. Facilities such as flood MAR facilities and new MS4-compliance facilities would be large enough to interfere with locally important mineral resources recovery sites, should these facilities be located within such sites. As such, mitigation is required to minimize potential impacts below significance thresholds. Therefore, the installation and operation of OBMPU facilities has little potential to have a direct adverse impact on mineral resources, unless the parcel(s) selected for such facilities are within an active mining area or are designated for recovery of mineral resources. Implementation of Mitigation Measure **MR-1** is sufficient to reduce the potential for impacts to mineral resources to a less than significant level.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. Increasing the safe yield of the Chino Basin, enhancing water quality through treatment and dilution and the provision of adequate waste treatment and reuse have no identifiable potential to cause or contribute to a transition of land with mineral resources to urban uses. As such, no impacts related to locally important mineral resources are anticipated to occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and

improvements to existing groundwater treatment facilities. Mineral Resource impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Category 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Refer to Mitigation Measure **MR-1**, above.*

Implementation of Mitigation Measure **MR-1** is sufficient to reduce the potential for impacts to mineral resources to a less than significant level through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources.

Level of Significance After Mitigation: Less Than Significant

XII.3 Cumulative Impact Discussion

The project has a minor potential to result in the loss of availability of mineral resources. Future cumulative development could be located in areas known to contain locally important mineral resources. Therefore, cumulative development could result in significant mineral impacts. The proposed OBMPU facilities would result in less than significant impacts to important mineral resources and mineral resource sites through the implementation of Mitigation Measure **MR-1**, which would ensure that OBMPU facilities are relocated outside of locations containing important mineral resource, or compensate for development proposed to be located within an area containing significant mineral resources. As such, the project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed project's cumulative impact on mineral resources is less than significant.

XII.4 2000 OBMP PEIR Mitigation Measures

No 2000 OBMP PEIR Mitigation Measures were identified to minimize Mineral Resource impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XIII.1 Environmental Setting

Noise Rating Terminology

A-weighted decibels (dBA, a measure of sound energy) are the most common units used for measuring the loudness of a noise source/event. The human ear has different sensitivity to different frequencies of sound (noise). A-weighting is an attempt to give the noise monitor the same frequency sensitivity as the human ear. Technically, it is the measurement of the energy being received when listening to (or monitoring) a source of noise. For example, the loudness of a highway may be 65 dBA when measured 50 feet away. The sound decreases (less energy is received by the ear) as one moves away from the source, and the same highway would have a noise level of about 62 dBA at 100 feet. The relationship between how one perceives a sound and the actual sound energy emitted by the source of noise is very complex. However, a good rule of thumb is that if a noise increases 10 dBA, its apparent loudness will double. Therefore, a noise that is 70 dBA will appear twice as loud as a 60 dBA noise.

A number of noise rating scales using A-weighted decibels are used in California for land use compatibility assessment and are described as follows:

- The Equivalent Noise Level (Leq) scale represents the energy average noise level over a sample period of time. It represents the average decibel sound level that would contain the same amount of energy as a fluctuating sound level over the sample time period.
- The Day-Night Noise Level (Ldn) scale represents a time weighted 24-hour average noise level based on the A-weighted decibel scale. Time weighted refers to the fact that noise which occurs during certain sensitive time periods (such as at night) is penalized for occurring at these times. For the Ldn scale, the nighttime period (10 p.m. and 7 a.m.) noises are penalized by 10 dBA.
- The Community Noise Equivalent Level (CNEL) scale is similar to the Ldn scale except that it includes an additional 5 dBA penalty for the evening time period (7 p.m. to 10 p.m.). Both noise rating scales are used by the local jurisdictions and the State in evaluating transportation noise, including airports and roadways.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate between 6 dBA for hard sites and 7.5 dBA for soft sites for each doubling of distance from the reference measurement. Hard sites are those with a reflective surface between the source and the receiver such as parking lots or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the changes in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise

from the source. Soft sites have an absorptive ground surface such as soft dirt, grass or scattered bushes and trees. In addition to geometric spreading, an excess ground attenuation value of 1.5 dBA (per doubling distance) is normally assumed for soft sites. Line sources (such as traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.

Fundamentals of Vibration

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g. earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g. explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The FTA assessment states that in contrast to airborne noise, ground-borne vibration is not a common environmental problem. Although the motion of the ground may be noticeable to people outside structures, without the effects associated with the shaking of a structure, the motion does not provoke the same adverse human reaction to people outside. Within structures, the effects of ground-borne vibration include noticeable movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. FTA assessment further states that it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. However, some common sources of vibration are trains, trucks on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment. The Federal Transit Association (FTA) guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential Project related vibration impacts.

Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. Residences, hotels, schools, day care centers, rest homes, and hospitals are generally more sensitive to noise than commercial and industrial land uses. There are numerous sensitive receptors throughout the Chino Basin and there is the potential for many sensitive receptors to be within 500 feet of OBMPU proposed facilities.

Noise Standards and Criteria

Noise rating scales, noise standards, community noise assessment criteria and noise mitigation measures are discussed below to provide a brief overview of how noise is evaluated and to explain the noise standards used in the Noise Elements Participating Jurisdiction's within the Project Area. This information is needed in order to understand the existing background noise conditions in the project area.

The CNEL scale is used as the criterion for assessing the compatibility of residential land uses with transportation-related noise sources by utilizing an interior and exterior noise standard. Typical noise standards within the local jurisdiction's general plans in the Chino Basin encourage interior noise standards of 45 dBA CNEL and an exterior standard of 60-65 dBA CNEL. The local jurisdictions use land use planning decisions relative to chronic noise exposure. An annual average noise level in excess of 60-65 dB CNEL is considered an excessive exterior exposure for most residential or other noise sensitive uses, unless mitigation is implemented to achieve this level where feasible. CNEL can be expressed as a daily average or as an annual average exposure to smooth out any day-to-day variations in noise generation.

Although CNEL is considered when using an annual average noise exposure such as along roadways or adjacent to airports, it is also calculated over a 24-hour period. Levels above 60-65 dB CNEL are considered intrusive for outdoor recreation, relaxation or normal conversation. Such intrusion could be considered an environmentally adverse impact even if no long-term noise incompatibility is created by the noise source. Environmental studies often use a change in the noise level by some given increment as a

criterion for potential impact significance. A change of 3 dBA in noise from a semi-continuous source, such as a roadway, is often defined as a perceptible, but non-significant increase. Changes of 5 dBA are commonly designated as "clearly noticeable" and may be considered a significant change in the background noise level.

Sources of noise can be divided into transportation sources and non-transportation sources. The existing noise environment within the Chino Basin is dominated primarily by transportation-related noise sources. These noise sources include traffic noise from nearby roadways, from adjacent railroad lines and the several airports within the project area, including Cable Airport, Chino Airport, Ontario Airport, and Rialto Municipal Airport. Secondary non-transportation noise sources include industrial activity, mining, music, amplified sound and activities on private property. For example, existing industrial activity noise is audible around the California Steel Plant in Fontana in the vicinity of this site from normal operation. Regardless, the predominant noise sources are those transportation related activities. Noise thresholds applied by the various agencies located within the Chino Basin are, in and of themselves, cumulative impact thresholds. As such, a significant impact may occur if the noise thresholds of an agency are exceeded.

San Bernardino County Development Code

Noise. Section 83.01.080 of the County of San Bernardino Development Code establishes standards concerning acceptable noise levels for both noise sensitive land uses and for noise generating land uses.

- B. Noise Impacted Areas.** Areas within the county shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.
- C. Noise standards for stationary noise sources.**
 - 1. Noise standards.** The following describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties.

Table 83-2: Noise Standards for Stationary Sources

Affected Land Uses (Receiving Noise)	7 a.m. -10 p.m. Leq dB(A)	10 p.m. – 7 a.m. Leq dB(A)
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70
SOURCE: San Bernardino County Development Code, May 2, 2019. http://www.sbcounty.gov/uploads/lus/developmentcode/dcwebsite.pdf (accessed 03/16/23)		

- 2. Noise limit categories.** No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:
 - a. The noise standard for the receiving land use as specified in Subsection B (Noise impacted areas), above, for a cumulative period of more than 30 minutes in any hour.
 - b. The noise standard plus 5 dB(A) for a cumulative period of more than 15 minutes in any hour.
 - c. The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour.

- d. The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour.
- e. The noise standard plus 20 dB(A) for any period of time.
- D. Noise standards for adjacent mobile noise sources.** Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following **Table**.

Table 83-3: Noise Standards for Adjacent Mobile Noise Sources

Land Use		LDN (or CNEL) dB(A)	
Categories	Uses	Interior ¹	Exterior ²
Residential	Single and multi-family, duplex, mobile homes	45	60 ³
Commercial	Hotel, motel, transient housing	45	60 ³
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65
Notes: (1) The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors. (2) The outdoor environment shall be limited to: <ul style="list-style-type: none"> • Hospital/office building patios • Hotel and motel recreation areas • Mobile home parks • Multi-family private patios or balconies • Park picnic areas • Private yard of single-family dwellings • School playgrounds (3) An exterior noise level of up to 65 dB(A) (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dB(A) (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation. SOURCE: San Bernardino County Development Code, May 2, 2019. http://www.sbcounty.gov/uploads/lus/developmentcode/dcwebsite.pdf (accessed 03/16/23)			

- E. Increases in allowable noise levels.** If the measured ambient level exceeds any of the first four noise limit categories in Subsection (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subsection (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.
- F. Reductions in allowable noise levels.** If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (Noise Standards for Stationary Noise Sources) shall be reduced by 5 dB(A).
- G. Exempt noise.** The following sources of noise shall be exempt from the regulations of this Section:
1. Motor vehicles not under the control of the commercial or industrial use.
 2. Emergency equipment, vehicles, and devices.
 3. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

83.01.090 Vibration.

- A. Vibration standard.** No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces

a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line.

- B. Vibration measurement.** Vibration velocity shall be measured with a seismograph or other instrument capable of measuring and recording displacement and frequency, particle velocity, or acceleration. Readings shall be made at points of maximum vibration along any lot line next to a parcel within a residential, commercial and industrial land use zoning district.
- C. Exempt vibrations.** The following sources of vibration shall be exempt from the regulations of this Section.
 - 1. Motor vehicles not under the control of the subject use.
 - 2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

County of Riverside Code of Ordinances

The following are policies within the Code of Ordinances of the County of San Bernardino that may be applicable to program construction activities taking place within the county:

9.52.020 - Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

- A.** Facilities owned or operated by or for a governmental agency;
- B.** Capital improvement projects of a governmental agency;
- L.** Heating and air conditioning equipment.

9.52.040 - General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1.

TABLE 1. SOUND LEVEL STANDARDS (dB Lmax)

General Plan Foundation Component		Maximum Decibel Level		
Land Use Designation General Plan	Land Use Designation Name	Density	7:00 a.m.—10:00 p.m.	10:00 p.m.—7:00 a.m.
Community development				
EDR	Estate density residential	2 acres	55	45
VLDR	Very low-density residential	1 acre	55	45
LDR	Low-density residential	½ acre	55	45
MDR	Medium-density residential	2—5	55	45
MHDR	Medium high-density residential	5—8	55	45
HDR	High-density residential	8—14	55	45
VHDR	Very high-density residential	14—20	55	45
H'TDR	Highest density residential	20+	55	45
CR	Retail commercial		65	55
CO	Office commercial		65	55
CT	Tourist commercial		65	55
CC	Community center		65	55
LI	Light industrial		75	55
HI	Heavy industrial		75	75
BP	Business park		65	45
PF	Public facility		65	45
SP	Specific plan-residential		55	45
	Specific plan-commercial		65	55

General Plan Foundation Component		Maximum Decibel Level		
Land Use Designation General Plan	Land Use Designation Name	Density	7:00 a.m.— 10:00 p.m.	10:00 p.m.— 7:00 a.m.
	Specific plan-light industrial		75	55
	Specific plan-heavy industrial		75	75
Rural community				
EDR	Estate density residential	2 acres	55	45
VLDR	Very low-density residential	1 acre	55	45
LDR	Low-density residential	½ acre	55	45
Rural				
RR	Rural residential	5 acres	45	45
RM	Rural mountainous	10 acres	45	45
RD	Rural desert	10 acres	45	45
Agriculture				
AG	Agriculture	10 acres	45	45
Open space				
C	Conservation		45	45
CH	Conservation habitat		45	45
REC	Recreation		45	45
RUR	Rural	20 acres	45	45
W	Watershed		45	45
MR	Mineral resources		75	45

9.52.060 - Special sound sources standards.

The general sound level standards set forth in Section 9.52.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

- B.** Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of ten p.m. and eight a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than one hundred (100) feet from the power tools or equipment.

9.52.070 - Exceptions.

Exceptions may be requested from the standards set forth in Section 9.52.040 or 9.52.060 of this chapter and may be characterized as construction-related, single-event or continuous-events exceptions.

- A.** Application and Processing.
 - 1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.

City of Chino Municipal Code

The following are policies within the Municipal Code of the City of Chino that may be applicable to program construction activities taking place within the city:

Chapter 9.40 Noise

9.40.030- Designated Noise Zones

The properties hereinafter described are assigned to the following noise zones:

- Noise Zone I: All single-, double- and multiple-family residential properties.
 - Noise Zone II: All commercial properties.
 - Noise Zone III: All manufacturing or industrial properties.
- (Ord. 95-10 § 1 (part), 1995.)

9.40.040 Exterior noise standards.

The following noise standards, unless otherwise specifically indicated, shall apply to all residential property with a designated noise zone:

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (seven a.m. to ten p.m.) than the night (ten p.m. to seven a.m.). The table below shows the acceptable levels at residential land uses during the daytime and nighttime.

Maximum Time of Exposure	Noise	Time Frame	
Metric	Noise Level Not to Exceed	7 am -10 pm	10 pm -7am
30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA

Each of the noise limits specified here shall be reduced by 5 dBA for impulse or simple tone noises, or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed:

- A. The noise standard for a cumulative period of more than 30 minutes in any hour; or
- B. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
- C. The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or
- D. The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
- E. The noise standard plus 20 dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of the day the noise level is measured.

- A. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

9.40.060- Special Provisions

- D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in Section 15.44.030 of this code, and provided the noise standard of sixty-five dBA plus the limits specified in Section 9.40.040(B) as measured on residential property and any vibration created does not endanger the public health, welfare and safety

9.40.070 Schools, churches, libraries, health care institutions – Special provisions.

It shall be deemed unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church or library while the same is in use, to exceed the noise standards specified in Section 9.40.040 prescribed for the assigned noise zone level, unreasonably interferes with the use of such institutions, or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institutions, provided conspicuous signs are displayed in three separate locations within one-tenth-mile of the institution or facility indicating a quiet zone.

9.40.110 Vibration

Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this chapter, the perception threshold shall be presumed to be more than 0.05 in/sec RMS vertical velocity.

City of Chino Hills Municipal Code

The following are policies within the Municipal Code of the City of Chino Hills that may be applicable to program construction activities taking place within the city:

16.48.020 - Noise

- B. Noise Standards.
 - 1. The Noise standards contained in Table N-1 "Noise /Land Use Compatibility Matrix" in the Noise Element of the General Plan shall apply to land uses Citywide and shall be used to define acceptable and unacceptable Noise levels.
 - 2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any Noise on property owned, leased, occupied or otherwise controlled by such person, which causes the Noise level, when measured on any other property, either incorporated or unincorporated, to exceed:
 - a) The "Zone C" Noise standard for that receiving land use specified in Table N-1 of the General Plan Noise Element for a cumulative period of more than thirty (30) minutes in any hour; or
 - b) The Noise standard plus 5 dBA for a cumulative period of more than five minutes in any hour; or
 - c) The Noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or
 - d) The Noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
 - e) The Noise standard plus 20 dBA for any period of time.
 - 3. If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.
 - 4. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in subsection (B)(2)(a) of this section shall be reduced by 5 dBA.

Table 7.1: Land Use/Noise Compatibility Matrix

Land Use Categories		CNEL	
Categories	Compatible Uses	Interior	Exterior
Residential	Single-Family, Duplex, Multiple-Family	45	65
	Mobile Homes		65
Commercial	Hotel, Motel, Transient, Lodging	45	65
	Commercial, Retail, Bank, Restaurant, Health clubs	55	
	Office Buildings, Research and Development, Professional Offices	50	
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	45	
	Gym (multi-purpose)	50	
	Manufacturing, Warehousing, Wholesale, Utilities	65	
Open Space	Parks		65
Institutional/ Public Facility	Hospital, Schools, Classrooms	45	65
	Churches, Libraries	45	
SOURCE: City of Chino Hills, Noise Element, 2015			

16.48.030 Vibration.

- A.** Vibration Standard. No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the subject property line, nor will any vibration be permitted which produces a particle velocity greater than or equal to 0.2 in/sec measured at or beyond the lot line.

City of Claremont

16.154.020 Noise and Vibration Standards

- B.** Decibel Measurement Criteria. Any decibel measurement made pursuant to the provisions of this section shall be based on a reference sound pressure of 20 micro-pascals as measured with a sound level meter using the "A" weighted network (scale) at slow response.
- C.** Designated Noise Zones. The properties hereafter described are hereby assigned the following noise zones:
NOISE ZONE I: All single, double and multiple family residential properties.
NOISE ZONE II: All commercial properties.
NOISE ZONE III: All manufacturing or industrial properties.
- D.** Exterior Noise Standards
- The Base Noise Level is the ambient noise level or the Ambient Base Noise Level, whichever is higher. The Ambient Base Noise Levels are as follows:
Each of the noise limits above shall be reduced 5 dBA for noise consisting of impulse or simple tone noise.

Type of Land Use	Type of Land Use	Time Interval	Exterior Noise Level
I	Single, double or multiple family residential (RS, HC, RR, AV, H or RM)	10 PM to 7 AM	55 dBA
		7 AM to 10 PM	60 dBA
II	Commercial (CP, CN, CL, CH, CV & CF)	10 PM to 7 AM	60 dBA
III	Industrial (B/IP)	7 AM to 10 PM	65 dBA
		Anytime	70 dBA

2. It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:
Basic Noise Level for a cumulative period of more than 15 minutes in any one hour;
or
Basic Noise Level plus 5 dBA for a cumulative period of more than 10 minutes in any one hour; or
Basic Noise Level plus 14 dBA for a cumulative period of more than 5 minutes in any one hour; or
Basic Noise Level plus 15 dBA at any time.
3. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.
4. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of day the noise level is measured.
The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the Director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

E. Interior Noise Standards

1. The interior Ambient Noise Level or the Ambient Base Noise Level is defined as:
Each of the noise limits specified above shall be reduced by 5 dBA for impulse or simple tone noise.

Type of Land Use	Time Interval	Allowable Interior Noise Level
Residential	10 PM to 7 AM	37 dBA
	7 AM to 10 PM	47 dBA

2. It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured within any other residential dwelling unit in any noise zone to exceed the Interior Basic Noise Standard in the manner described in Section 16.154.020.D.2.
3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the same procedures specified in Section 16.154.020.D.2 shall be deemed proper to enforce the provisions of this section.

F. Exemptions: The following activities shall be exempted from the provisions of this chapter:

1. City approved and/or sponsored activities conducted at public parks, facilities, and/or playgrounds, and on public or private school or college grounds including, but not limited to, athletic and school entertainment events between the hours of 7:00 a.m. and 10:00 p.m.
3. Any mechanical device, apparatus, or equipment used, related to or connected with emergency machinery, vehicle, work, or warning alarm or bell provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within 30 minutes in any hour of its being activated.
4. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property, or during authorized seismic surveys, provided:

- a. Activities take place between the hours of 7:00 a.m. and 8:00 p.m. weekdays and Saturdays, excluding national holidays; and
 - b. Noise levels, as measured on residential properties, do not exceed 65 dBA for a cumulative period of more than 15 minutes in any one hour, 70 dBA for a cumulative period of more than 10 minutes in any one hour, 79 dBA for a cumulative period of more than 5 minutes in any one hour or 80 dBA at any time; and
 - c. Any vibration created does not endanger the public health, welfare, and safety. Only that construction, repair, remodeling and grading activity that does not exceed the noise levels set by Section 16.154.020.D may occur on Sundays and national holidays.
5. All mechanical devices, apparatus or equipment associated with agricultural operations provided:
 - a. Operations take place between 7:00 a.m. and 8:00 p.m. weekdays and Saturdays, excluding national holidays, and operations do not take place on Sundays or national holidays, or
 6. Noise sources associated with the maintenance of real property provided said activities are approved by the Director and take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except Sunday, or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday. Lawn mowers, edgers, and similar lawn and garden maintenance equipment shall be exempted only until January 1, 1980.
 7. Any activity to the extent regulation thereof has been preempted by state or federal law.

City of Eastvale

The City of Eastvale has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above, in Eastvale Municipal Code Chapter 8.52..

City of Fontana Municipal Code

The following are policies within the Municipal Code of the City of Fontana that may be applicable to program construction activities taking place within the city:

Sec. 18-63. Scope, enumeration of prohibited noises.

- (a) This article shall apply to loud, excessive, impulsive or intrusive interior and exterior sound or noise that annoys or disturbs persons of ordinary sensibilities emanating from any type of property or source within the city.
- (b) The following acts, which create loud, excessive, impulsive or intrusive sound or noise that annoys or disturbs persons of ordinary sensibilities from a distance of 50 feet or more from the edge of the property, structure or unit in which the source is located, are declared to be in violation of this article, but such enumeration shall not be deemed to be exclusive, namely:
 - (4) Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motorboat or motor vehicle, except through a muffler or other device which will effectively prevent loud, excessive, impulsive or intrusive noises therefrom; provided, however, that the provisions of this section and article do not apply to any raceway, racetrack or drag strip which is being operated in accordance with the provisions of chapter 17, article IX.
 - (6) Loading, unloading or opening boxes. The creation of a loud, excessive, impulsive or intrusive and excessive noise in connection with loading or unloading of any vehicle or the opening and destruction of bales, boxes, crates and containers.
 - (7) Construction or repairing of buildings or structures. The erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or

less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or structure or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for such work to be done on weekdays within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

- (8) Noise near schools, courts, place of worship or hospitals. The creation of any loud, excessive, impulsive or intrusive noise on any street adjacent to any school, institution of learning, places of worship or court while the premises are in use, or adjacent to any hospital which unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital; provided conspicuous signs are displayed in such streets indicating that the street is a school, hospital or court street.

Sec. 30-543 – Industrial Zoning Districts – Performance Standards - Noise and vibration.

- (a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property:
- (1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 70 dBA.
 - (2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 65 dBA.
- (c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

City of Jurupa Valley Municipal Code

The City of Jurupa Valley has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above, in Jurupa Valley Municipal Code Chapter 11.05 (Noise Regulations).

City of Montclair Municipal Code

The following are policies within the Municipal Code of the City of Montclair that may be applicable to program construction activities taking place within the city:

6.12.040 - Base ambient exterior noise levels.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

CITY OF MONTCLAIR BASE AMBIENT EXTERIOR NOISE LEVELS

Zone	Time	Decibels
Residential	10:00 p.m.—7:00 am.	45 dB(A)
Residential	7:00 a.m.—10:00 p.m.	55 dB(A)
Commercial	10:00 p.m.—7:00 a.m.	55 dB(A)
Zone	Time	Decibels
Commercial	7:00 a.m.—10:00 p.m.	65 dB(A)
Industrial	10:00 p.m.—7:00 am.	60 dB(A)
Industrial	7:00 a.m.—10:00 p.m.	70 dB(A)

dBA = A-weighted decibel

Source: Montclair Municipal Code Section 6.12.040

6.12.050 - Maximum residential/ nonresidential noise levels.

It is unlawful for any person within any zone to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured on the exterior of the property, to exceed the base ambient noise level as adjusted below:

CITY OF MONTCLAIR MAXIMUM RESIDENTIAL/NONRESIDENTIAL NOISE LEVELS

Noise Level	Maximum Duration Period
Exceeded Level (BANL)	30 minutes in any hour
5—9 dB(A)	above BANL 15 minutes in any hour
10—14 dB(A)	above BANL 5 minutes in any hour
15—16 dB(A)	above BANL 1 minute in any hour
16 dB(A) or greater above BANL	Not permitted

BANL = base ambient noise level; dBA = A-weighted decibel

Source: Montclair Municipal Code Section 6.12.050

6.12.060 - Exemptions.

- D. Noise sources associated with construction, repair, remodeling or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on any given day and provided that the Building Official determines that the public health and safety will not be impaired. Industrial or commercial construction or public improvements, not otherwise feasible except between these hours, may be approved on a limited, short-term basis, subject to the approval of the Director of Community Development. (Ord. 99-791 Exhibit A (part); prior code § 5-4.07)

6.12.100 – Specific noises prohibited.

Notwithstanding any provision of this chapter, the following specified acts are declared to be unlawful and a nuisance in violation of this chapter:

- D. Machinery, Equipment, Fans and Air Conditioning. It is unlawful for any person to operate, cause to operate, or permit the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by 5 dBA.
- G. Exhaust. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motorboat, or motor vehicle, except through a muffler device that effectively prevents loud or explosive noises therefrom.

City of Ontario Municipal Code

The following are policies within the Municipal Code of the City of Ontario that may be applicable to program construction activities taking place within the city:

Sec. 5-29.04. Exterior noise standards

- (a) The following exterior noise standards, unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Allowable Exterior Noise Level (1)		Allowed Equivalent Noise Level, Leq. (2)	
Noise Zone	Type of Land Use	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

(1) If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.

(2) Measurements for compliance are made on the affected property pursuant to § 5-29.15.

- (e) If the measurement location is on a boundary between two (2) different noise zones, the lower noise level standard applicable to the noise zone shall apply.
(§ 2, Ord. 2888, eff. March 6, 2008)
- (b) It is unlawful for any person at any location within the incorporated area of the city to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:
- (1) The noise standard for the applicable zone for any 15-minute period; and
 - (2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus 20 dBA for any period of time (measured using A-weighted slow response).
- (c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- (d) The Noise Zone IV standard shall apply to that portion of residential property falling within 100 feet of a commercial property or use, if the noise originates from that commercial property or use.
- (e) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

Sec. 5-29.06. Exemptions.

The following activities shall be exempted from the provisions of this chapter:

- (a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the city or any school district within the city's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;
- (d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of Section 5-29.09;
- (e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys.

Sec. 5-29.09. Construction activity noise regulations.

- (a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.
- (b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.
- (c) Exceptions.
1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;
 2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of,

or on behalf of, any public agency; provided, however, this exception shall not apply to the city, or its employees, contractors or agents, unless:

- i. The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,
 - ii. The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or
 - iii. The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and
3. Any construction that complies with the noise limits specified in §§ 5-29.04 or 5-29.05. (§ 2, Ord. 2888, eff. March 6, 2008)

Sec. 5-29.11 Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

City of Pomona Municipal Code

Sec. 18-305. Exemptions.

The following activities shall be exempted from this article:

- (3) Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday, and provided the noise level created by such activities do not exceed the noise standard of 65 dB(A) plus the limits specified in section 18-311(b) as measured on residential property and any vibration created does not endanger the public health, welfare and safety.
- (5) Noise sources associated with the maintenance of real property, provided such activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except Sunday or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday.

Sec. 18-309. Vibration.

Notwithstanding other sections of this article, it shall be unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this article, the perception threshold shall be presumed to be more than 0.05 in/sec RMS vertical velocity.

Sec. 18-311. Exterior noise standards.

- (a) The following noise standards, unless otherwise specifically indicated, shall apply to all property within a designated noise zone:

CITY OF POMONA EXTERIOR NOISE STANDARDS

Allowable Exterior Noise Level		Allowed Equivalent Noise Level, L_{eq} ²	
Noise Zone	Type of Land Use ¹	7:00 a.m. to 10:00 p.m.	10:00 p.m. to 7:00 a.m.
I	Single-Family Residential Properties	60 dBA	50 dBA
II	Multi-Family Residential Properties	65 dBA	50 dBA
III	Commercial Properties	65 dBA	60 dBA
IV	Industrial Properties	70 dBA	70 dBA
V	High Traffic Corridors	70 dBA	70 dBA

¹ Defined by Pomona Municipal Code Section 18-130.

Source: Pomona Municipal, 2023. https://library.municode.com/ca/pomona/codes/city_code (accessed 03/16/23)

- (b) It shall be unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property, to exceed the following:
- (1) The noise standard for a cumulative period of more than 30 minutes in any hour;
 - (2) The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour;
 - (3) The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour;
 - (4) The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
 - (5) The noise standard plus 20 dBA for any period of time.
- (c) If the ambient noise level exceeds any of the noise limit categories in subsections (b)(1) through (4) of this section, the cumulative period applicable to such category shall be increased to reflect such ambient noise level. If the ambient noise level exceeds the noise limit category in subsection (b)(5) of this section, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- (d) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

Sec. 18-312. Interior noise standards.

- (a) The following noise standard , unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

CITY OF POMONA INTERIOR NOISE STANDARDS

Noise Zone	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 p.m. to 7:00 a.m.	40 dBA
		7:00 a.m. to 10:00 p.m.	50 dBA

dBA = A-weighted decibel

Source: Pomona Municipal, 2023. https://library.municode.com/ca/pomona/codes/city_code (accessed 03/16/23)

Each of the noise limits specified shall be reduced by 5 dBA for impulse or simple tone noises or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

- (b) It shall be unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level, when measured within any other residential dwelling unit in any noise zone, to exceed the following:
- (1) The noise standard for a cumulative period of more than five minutes in any hour;
 - (2) The noise standard plus 5 dBA for a cumulative period of more than one minute in any hour; or
 - (3) The noise standard plus 10 dBA for any period of time.
- (c) If the ambient noise level exceeds any of the limit categories in subsection (b)(1) or (2) of this section, the cumulative period applicable to such category shall be increased to reflect the maximum ambient noise level. If the ambient level exceeds the noise category in subsection (b)(3) of this section, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
- (d) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.
- (e) If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the same procedures specified in Section 18-311(e) shall be deemed proper to enforce this section.

Sec. 18-313. Schools, churches, libraries and health care institutions.

It shall be unlawful for any person to create a noise which causes a noise level at any school, hospital or similar health care institution, church, or library, while such is in use, to exceed the noise standards specified in Section 18-311 prescribed for the assigned noise zone in which the school, hospital, church or library is located or which noise level unreasonably interferes with the use of such institutions or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institution, provided conspicuous signs are displayed in three separate locations within 0.1 mile of the institution or facility indicating a quiet zone.

City of Rancho Cucamonga Municipal Code

The following are policies within the Municipal Code of the City of Rancho Cucamonga that may be applicable to program construction activities taking place within the city:

Sec. 17.66.050. - Noise standards.

C. Exterior noise standards.

1. It shall be unlawful for any person at any location within the city to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:
 - a. Basic noise level for a cumulative period of not more than 15 minutes in any one hour; or
 - b. Basic noise level plus five dBA for a cumulative period of not more than ten minutes in any one hour; or
 - c. Basic noise level plus 14 dBA for a cumulative period of not more than five minutes in any one hour; or
 - d. Basic noise level plus 15 dBA at any time.
2. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.
3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement's location, designated land use, and for the time of day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the planning director for the purpose of establishing the existing ambient noise level at the measurement location.

D. Special Exclusions

4. Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities:
 - a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.
 - b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line.

F. Residential noise standards.

Table 17.66.050-1 Residential Noise Limits

Location of Measurement	Maximum Allowable	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
Exterior	60 dBA	65dBA
Interior	45 dBA	50dBA

City of Upland Municipal Code

The following are policies within the Municipal Code of the City of Upland that may be applicable to program construction activities taking place within the city:

9.40.040 Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Decibels	Time	Zone Use
45 dB(A)	10:00 p.m.—7:00 a.m.	Residential
55 dB(A)	7:00 a.m.—10:00 p.m.	Residential
65 dB(A)	Anytime	Uses not specified
75 dB(A)	Anytime	Industrial and commercial

Actual decibel measurements exceeding the above levels at the times and within the zones corresponding thereto shall be employed as the base ambient noise level referred to in this chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels. (Prior code § 5400.500)

9.40.070 Maximum residential noise levels.

Exterior noise shall be measured on the exterior of any residential property, and no noise level shall exceed the following for the duration periods specified:

Noise Level Exceeded	Maximum Duration Period
Base ambient noise level (BANL)	30 minutes in any hour
5 dB(A) above BANL	15 minutes in any hour
10 dB(A) above BANL	5 minutes in any hour
15 dB(A) above BANL	1 minute in any hour
20 d(B)(A) above BANL	Not permitted

(Prior code § 5400.800)

Noise Criteria

The *CEQA Guidelines* do not define the levels at which permanent and temporary increases in ambient noise are considered “substantial.” Therefore, with regard to determining whether the project would result in a permanent and/or temporary increase in ambient noise levels in the project vicinity, the significance of the proposed project’s noise impacts can be determined by comparing estimated project-related noise levels to existing baseline (no-project) noise levels to assess the magnitude of increase in ambient noise levels. Generally speaking, the average healthy ear can barely perceive a noise level change of 3 dBA. A change from 3 to 5 dBA may be noticed by some individuals who are sensitive to changes in noise. A 5 dBA increase is readily noticeable, while the human ear perceives a 10 dBA increase as a doubling of sound. Thus, for the purpose of conducting a conservative analysis, an increase in the noise environment of 5 dBA or greater at an off-site sensitive receptor during project-related construction activities, which would be

temporary and short-term, is considered to constitute a significant noise impact with regard to a temporary substantial increase in ambient noise levels.

With regard to determining noise impacts associated with permanent increases in ambient noise levels generated from project operations, some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations. The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, it has been asserted that they are applicable to all sources of noise described in terms of cumulative noise exposure metrics such as the L_{dn} , as shown in **Table XIII-1**.

Table XIII-1
MEASURES OF SUBSTANTIAL INCREASE FOR NOISE EXPOSURE

Ambient Noise Level without Project (L_{dn})	Significant Impact Assumed to Occur if the Project Increases Ambient Noise Levels By:
<60 dB	+ 5.0 dB or more
60-65 dB	+ 3.0 dB or more
>65 dB	+ 1.5 dB or more
SOURCE: Federal Interagency Committee on Noise (FICON), 1992. https://fican1.files.wordpress.com/2015/08/about_ficon_findings_1992.pdf (accessed 03/24/23)	

Based on the noise criteria presented in **Table XIII-1**, the proposed program, would result in a significant operational noise impact if a mobile noise source (e.g., project-related traffic on local roadways) or stationary noise source (e.g., new treatment system, pump stations, etc.) associated with the program would result in increased noise levels of 1.5 dBA L_{dn} or more in an ambient noise environment greater than 65 dBA L_{dn} ; or increased noise of 3 dBA L_{dn} or more in an ambient noise environment between 60 and 65 dBA L_{dn} ; or increased noise of 5 dBA L_{dn} or more in an ambient environment of less than 60 dBA L_{dn} . The FICON thresholds are representative of noise increases from long-term (e.g., permanent) noise sources that could adversely affect sensitive receptors. The rationale for the **Table XIII-1** criteria is that as ambient noise levels increase, a small increase in decibel levels is sufficient to cause significant annoyance. The quieter the ambient noise level is, the more the noise can increase (in decibels) before it causes significant annoyance. Although an increase in the ambient noise environment may be significant based on the thresholds, if there are no sensitive receptors located in the vicinity of a project-related noise source that would be adversely impacted, then the noise would be deemed less than significant.

Vibration Criteria

The *CEQA Guidelines* also do not define the levels at which groundborne vibration or groundborne noises are considered “excessive.” Thus, in terms of construction-related vibration impacts on buildings, the adopted guidelines/recommendations by the FTA to limit groundborne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity are used in this analysis to evaluate potential groundborne vibration impacts. Based on the FTA criteria, construction impacts relative to groundborne vibration would be considered significant if any of the following were to occur:

- Project construction activities would cause a PPV groundborne vibration level to exceed 0.5 inches per second at a reinforced concrete, steel, or timber building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.3 inches per second at any engineered concrete and masonry building;
- Project construction activities would cause a PPV groundborne vibration level to exceed 0.2 inches per second at any non-engineered timber and masonry buildings; or

- Project construction activities would cause a PPV ground-borne vibration level to exceed 0.12 inches per second at any buildings “extremely susceptible to vibration damage” (i.e., a historical building).

In terms of groundborne vibration impacts associated with human annoyance, this analysis uses the FTA’s vibration impact thresholds for sensitive buildings, residences, and institutional land uses under conditions where there are an infrequent number of events per day. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations, 80 VdB at residences and buildings where people normally sleep, and 83 VdB at other institutional buildings (FTA, 2006). The 65 VdB threshold applies to typical land uses where vibration would interfere with interior operations, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. The 80 VdB threshold applies to all residential land uses and any buildings where people sleep, such as hotels and hospitals. The 83 VdB threshold applies to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference.

XIII.2 Impact Discussion

- a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Implementation of the OBMPU would involve the installation of several new facilities related to the Program Elements. These facilities include wells, monitoring devices, conveyance pipelines, pump stations, reservoirs, storage basins, upgrades to treatment plants, new treatment plants, and new groundwater treatment facilities all within the Chino Basin.

The construction noise impacts associated with each individual OBMPU project would be short-term in length of time and limited to the period of time when construction activity is taking place for that particular upgrade or improvement. Construction activity noise levels at and near construction areas within the project area would fluctuate depending on the particular type, number, and duration of usage of various pieces of construction equipment. Certain facilities may require the use of heavy construction equipment for activities such as site preparation, grading and excavation, trenching, installation of piping and equipment, paving, and assembly of structural elements and mechanical systems. Development activities could also involve the use of smaller power tools, generators, and other sources of noise. During each stage of development for each individual project, there would be a different mix of equipment operating and noise levels would vary based on the amount and type of equipment in operation and the location of the activity. Specific construction equipment lists, material lists, construction methods, construction schedules, and workforce details would be developed in the future as specific projects are planned and designed according to the Program Elements outlined in the OBMPU.

The USEPA has compiled data for outdoor noise levels for typical construction activities. These data are presented in **Table XIII-2**. The noise levels shown in **Table XIII-2** represent composite noise levels associated with typical construction activities, which takes both the number of pieces and spacing of heavy construction equipment that are typically used during each phase of construction. These noise levels would diminish rapidly with distance from the construction site at a rate of approximately 6 dBA per doubling of distance. For example, a noise level of 84 dBA Leq measured at 50 feet from the noise source to the receptor would reduce to 78 dBA Leq at 100 feet from the source to the receptor, and reduce by another 6 dBA Leq to 72 dBA Leq at 200 feet from the source to the receptor. **Table XIII-3** shows typical maximum and average noise levels produced by various types of construction equipment.

Table XIII-2
TYPICAL OUTDOOR CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, Leq) ^a
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

^a Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.
SOURCE: USEPA, 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.
<https://nepis.epa.gov/Exe/ZyNET.exe/9101NN3I.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Prior+to+1976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C70thru75%5CTxt%5C00000024%5C9101NN3I.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150q16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL> (accessed 03/24/23)

The construction activities for each proposed OBMPU project could temporarily expose their respective existing off-site surrounding land uses to increased noise levels while construction activities are ongoing. As shown in **Table XIII-3**, excavation activities can typically generate noise levels of 89 dBA Leq at 50 feet from the construction noise source.

It should be noted that the construction noise impacts at existing off-site receptors would be dependent on various factors, including the amount of construction activity occurring on a given day, the distance between the construction activities and the off-site receptors, the presence of any existing structures that may act as noise barriers for the off-site receptors, and the existing ambient noise levels at the off-site receptor locations. Some of the construction activities associated with the proposed projects would also have relatively shorter durations and, consequently, less frequent noise impacts on nearby off-site uses. For instance, noise impacts from installation of new regional treatment facilities, would be of much longer duration than pipeline construction since the construction activities would physically progress along the length of the public right-of-way rather than remaining stationary at one location.

Table XIII-3
NOISE LEVELS OF CONSTRUCTION EQUIPMENT AT
25, 50 AND 100 FEET (in dBA Leq) FROM THE SOURCE

Equipment	Noise Levels at 25 feet	Noise Levels at 50 feet	Noise Levels at 100 feet
Earthmoving			
Front Loader	85	79	73
Backhoes	86	80	74
Dozers	86	80	74
Tractors	86	80	74
Scrapers	91	85	79
Trucks	91	85	79

Equipment	Noise Levels at 25 feet	Noise Levels at 50 feet	Noise Levels at 100 feet
Material Handling			
Concrete Mixer	91	85	79
Concrete Pump	88	82	76
Crane	89	83	77
Derrick	94	88	82
Stationary Sources			
Pumps	82	79	70
Generator	84	78	72
Compressors	87	81	75
Other			
Saws	84	78	72
Vibrators	82	76	70

Source: USEPA, 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.
<https://nepis.epa.gov/Exe/ZyNET.exe/9101NN3I.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Prior+to+1976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C70thru75%5CTxt%5C00000024%5C9101NN3I.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL> (accessed 03/24/23)

A doubling of traffic volumes would increase roadway noise by 3 dBA. Local roadways have the greatest potential to experience roadway noise impacts because low existing traffic volumes result in lower ambient noise levels, which increases the potential for noise generated by program-related traffic volumes to be more perceptible. The following subsections evaluate the potential for each of the four project categories to result in significant off-site operational traffic noise impacts.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The installation of flow meters and extensometers would result in miniscule contributions to noise in the area through truck trips to each of the device installation points—the location for which are presently unknown. Additionally, on-going implementation of the OBMPU once the monitoring devices have been installed may require up to two truck trips to each device or surface water monitoring site per month. Noise exposure from the minimal truck trips required to implement the OBMPU would be below established standards for noise, and therefore, implementation of the flow meters associated with the OBMPU would have a less than significant potential to generate substantial temporary noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction

Construction of the proposed wells would involve 24-hour drilling activities for varying lengths of time depending on the depth to which each well must be drilled. The proposed wells would be implemented throughout the entire Chino Basin.

Given the urbanized environment of much of the Chino Basin area, many of the projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses. Thus, the construction and drilling activities that would occur as a result of well development associated within the OBMPU would expose existing land uses located in proximity to the proposed wells to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. Because not all locations of the projects are determined at this time, the construction noise standards and/or regulations that would apply to each of the projects would depend on the agency with jurisdiction over each project location. Noise during construction, depending upon the final location of facilities, may exceed local construction noise standards or violate local construction noise regulations, particularly given the continuous nature of well drilling. As a result, mitigation to address noise generated by construction activities is provided below.

Operation

The proposed wells have the potential to generate some operational noise due to operation of the well pumps required to operate the proposed wells or associated pump station. Given the urbanized environment of much of the Chino Basin area, the proposed well development could operate in proximity or adjacent to existing noise-sensitive land uses, such as residential uses, schools, hospitals, etc. The operation of the proposed wells could potentially expose the adjacent sensitive receptors to noise levels that exceed local established exterior noise standards. It is anticipated that the proposed pumps and other noise generating equipment would be designed to meet local nighttime ambient noise standards through enclosing such facilities in structures that would control noise, such that local sensitive receptors would not experience a substantial increase in noise; this will be enforced through the implementation of mitigation measures provided below.

Off-Site Traffic Noise

Individual projects under Project Category 1 would require minimal operation and maintenance activities once complete. Maintenance of injection, extraction, and monitoring wells typically occurs on a daily to weekly basis; therefore, each well would require approximately one vehicle trip per day for maintenance. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each OBMPU project site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 1 would increase off-site traffic noise levels by 3 dBA. Therefore, off-site traffic noise impacts would be less than significant, and no mitigation is required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction

Construction of conveyance and ancillary facilities would involve trenching for new pipelines and installation of supporting infrastructure to develop ancillary facilities such as reservoirs, booster pumps, etc. Construction of the proposed projects would occur intermittently over a 20-year horizon.

Given the urbanized environment of much of the Chino Basin area, many of the projects would be constructed in proximity or adjacent to existing land uses, including those that are noise-sensitive uses. In most cases, the construction of conveyance infrastructure along existing public rights-of-way would be located within 50 feet of nearby land uses, some of which may be sensitive land uses such as residences or churches. Thus, the construction activities that would occur as a result of implementation of facilities associated within the OBMPU would expose existing land uses located in proximity to the pipelines and ancillary facilities like pump stations to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. Because not all locations of the projects are determined at this time, the construction noise standards and/or regulations that would apply to each of the projects would depend on the agency with jurisdiction over each project location. Noise during construction,

depending upon the final location of facilities, may exceed local construction noise standards or violate local construction noise regulations. As a result, mitigation to address noise generated by construction activities.

Operation

The proposed conveyance facilities proposed as part of the OBMPU would be located belowground and as such would not generate any operational noise. The aboveground facilities have the potential to generate some operational noise due to operation of mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. Given the urbanized environment of much of the Chino Basin area, many of the aboveground facilities could operate in proximity or adjacent to existing noise-sensitive land uses, such as residential uses, schools, hospitals, etc. The operation of these facilities could potentially expose the adjacent sensitive receptors to noise levels that exceed local established exterior noise standards. Noise-generating equipment such as new aboveground pump stations and other ancillary facilities must be designed to meet local nighttime ambient noise standards, such that local sensitive receptors would not experience a substantial increase in noise, this will be enforced through the implementation of mitigation measures provided below.

Off-Site Traffic Noise

Individual projects under Project Category 2 would require minimal operation and maintenance activities once constructed. Maintenance of pipelines and turnouts typically occurs on a monthly to semi-annual basis, and maintenance of reservoirs and pump stations typically occurs on a daily to weekly basis. Therefore, each conveyance and ancillary facility would require up to approximately one vehicle trip per day for maintenance. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each conveyance or ancillary facility site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 2 would increase off-site traffic noise levels by 3 dBA. Therefore, off-site traffic noise impacts would be less than significant, and no mitigation is required.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction

Impacts would be the same as Project Categories 1 & 2.

Operation

Impacts would be the same as Project Categories 1 & 2.

Off-Site Traffic Noise

Impacts would be the same as Project Categories 1 & 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any noise generating impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts to noise can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment

facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Construction

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. Sensitive receptors are within 100 feet of the WFA Agua de Lejos Treatment Plant, while they are far removed from the easternmost of the Chino Desalters because it is surrounded by industrial and commercial uses. The westernmost Chino Desalter is also far removed from the nearest sensitive receptor as it is located less than a half-mile from the Chino Airport and is surrounded by industrial and agricultural uses. The proposed upgrades and improvements to existing facilities would result in construction activities that could expose existing land uses located in proximity to the proposed projects to increased temporary and intermittent noise levels that are substantially greater than existing ambient noise levels. The construction noise standards and/or regulations that would apply to existing facilities are the cities of Upland, Jurupa Valley, and Chino. Noise during construction of treatment facilities may exceed local construction noise standards or violate local construction noise regulations; however, it is likely that construction at the Chino Desalters would not violate local construction noise standards due to the distance from these facilities to the nearest sensitive receptors. Impacts related to construction noise at the Agua de Lejos Treatment Plant, as well as impacts related to construction noise at new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 due to the Plant's close proximity to sensitive receptors.

Operation

Once construction of the proposed treatment facility upgrades at each facility has been completed, the surrounding off-site land uses would be exposed to operational noise levels generated by the new aboveground facilities. Treatment facilities have the potential to generate the most operational noise due to operation of heating, ventilating, and air conditioning (HVAC) equipment and other mechanical equipment such as fans, pumps, air compressors, chillers, turbines, etc. However, the new facilities would be designed to meet acoustic performance criteria that would comply with the local ambient noise standards at the facility fence-line for a stationary noise source, which will be enforced through mitigation.

For the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities, there is a potential for operational noise to exceed established standards, particularly given that the precise locations of these facilities are unknown. As such, operational impacts would be that same as Project Categories 1 & 2.

Off-Site Traffic Noise

Individual projects under Project Category 4 would require minimal operation and maintenance activities once complete. Maintenance of water treatment facilities typically occurs on a daily basis. Depending on the number of employees traveling to the water treatment facilities, including the AWPf and new groundwater treatment facilities at or near well sites and at regionally located sites, on a daily basis there is potential for about 20 roundtrips to these sites each day, depending on the number of employees required to operate such facilities. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each water treatment facility site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 4 would increase off-site traffic noise levels by 3 dBA. Therefore, off-site operational traffic noise impacts would be less than significant, and no mitigation is required.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

These measures have been abstracted from the 2000 OBMP PEIR (measures 4.11-2, 4.11-3, 4.11-4, and 4.11-6):

- 4.11-2** *All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained mufflers.*
- 4.11-3** *All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities.*
- 4.11-4** *If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds.*
- 4.11-6** *Project design will include measures which assure adequate interior noise levels as required by Title 25 (California Noise Insulation Standards).*

The following mitigation measure includes a portion of 2000 OBMP PEIR Mitigation Measure 4.11-1, which pertained to limits on construction hours, but given that local ordinances pertaining to limits on construction hours have been modified since the 2000 OBMP PEIR was certified, so too has the mitigation measure presented below.

NOI-1: ***Construction Noise Minimization. The Implementing Agency shall implement the following measures during construction:***

- *Include design measures to reduce the construction noise levels if necessary to comply with local noise ordinances, or seek a variance from local noise ordinance if otherwise not feasible to comply. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site.*
- *Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals.*
- *Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.*
- *Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications.*
- *If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.*
- *For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.*
- *For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.*

- ***Construction activities shall occur within the hours considered to be acceptable for construction by the applicable jurisdiction within which an individual project is constructed, except for activities, such as well drilling which are continuous, and for emergencies. Where no such restrictions are in place that limit hours of construction, construction shall be limited to the hours of 7 AM and 6 PM on weekdays, 8 AM and 5 PM on Saturdays, and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.***

The following mitigation measures shall be implemented to minimize impacts related to the proposed OBMPU:

NOI-2: ***Non-Standard Construction Hours Procedure. Prior to authorizing construction activities during non-standard working hours, or hours that are not exempt from compliance with applicable City or County noise ordinances (e.g., 24-hour well drilling), the Implementing Agency will secure a noise waiver from the appropriate jurisdiction.***

NOI-3: ***Well Drilling Noise Minimization. Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g., engineered sound wall or noise blanket) during 24-hour construction activities if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible. Furthermore, where new wells are located adjacent to sensitive receptors, wells and any other associated noise generating facilities (i.e., associated treatment facilities, pumps, generators, etc.) shall be enclosed within a structure to attenuate noise to comply with the applicable noise threshold at the nearest sensitive receptor.***

The following mitigation measures cover 2000 OBMP PEIR Mitigation Measures 4.11-5, 4.11-7, and 4.11-8, which pertain to compliance with operational noise ordinances and minimizing impacts to sensitive receptors. These mitigation measures identified noise mitigation for certain facilities, but not for others. As such, the mitigation measure presented below represents a replacement for these measures to more broadly cover operational noise minimization.

NOI-4: ***Operational Stationary Noise Minimization. The Implementing Agency shall require that all OBMPU-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable City or County noise level requirements at neighboring property lines.***

2000 OBMP PEIR Mitigation Measures 4.11-2, 4.11-3, and 4.11-4 and Mitigation Measure NOI-1 would require the following: all construction activities to be conducted in accordance with the applicable noise regulations and standards, the implementation of noise reduction devices and techniques during construction activities, limits construction hours, and advance notification of the surrounding noise-sensitive receptors to a construction site about upcoming construction activities and their hours of operation. This measure is anticipated to reduce the construction-related noise levels at nearby receptors to the maximum extent feasible, which is anticipated to be sufficient for the types of projects proposed as part of the OBMPU. 2000 OBMP PEIR Mitigation Measure 4.11-4 and 4.11-6 will ensure that operational noise meets the applicable city or county noise level requirement, which will ensure that noise generating operational features at the proposed OBMPU facilities attenuate noise to a less than significant level. Mitigation Measure NOI-2 ensure that construction activities outside of standard working hours secure a noise waiver, which will minimize conflicts with the applicable noise standards. Mitigation Measure NOI-3 will enforce

noise minimizing techniques that will ensure that the proposed well developments will not result in excessive operation or construction related noise. Mitigation Measure **NOI-4** would ensure that stationary operational noise generated by OBMPU facilities would meet the applicable City or County noise level requirements at neighboring property lines.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of 2000 OBMP PEIR Mitigation Measures **4.11-2**, **4.11-3**, **4.11-4**, and **4.11-6** and Mitigation Measures **NOI-1 through NOI-4** are required.*

The geographic scope for cumulative noise impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed OBMPU. This geographic scope is appropriate for noise because the proposed program's noise impacts are localized and site specific. Beyond this distance, typical construction and operational noise would be indistinguishable from the background noise level due to distance attenuation and interference from environmental conditions (e.g., topography and air disturbance).

Construction Noise

If concurrent construction activities occur in close proximity to proposed OBMPU activities, combined construction noise would have the potential to impact the same sensitive receivers and result in cumulative construction noise levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction noise impacts may be potentially significant. Nevertheless, per 2000 OBMP PEIR Mitigation Measure **4.11-4** and **4.11-6** and **NOI-2**, individual projects with the potential to generate construction noise in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction noise studies and incorporate noise reduction measures to reduce noise levels to the FTA daytime and nighttime construction noise standards. As a result, regardless of whether a significant cumulative construction noise impact is occurring, the proposed OBMPU's noise contribution would not be cumulatively considerable with incorporation of 2000 OBMP PEIR Mitigation Measure **4.11-4** and **4.11-6** and Mitigation Measures **NOI-2**. Mitigation Measure **NOI-3** will enforce noise minimizing techniques that will ensure that the proposed well developments will not result in excessive operation or construction related noise.

Operational Noise

Depending on the specific locations of individual projects that may be implemented under the proposed OBMPU, it is possible that cumulative development is currently resulting in a significant cumulative operational noise impact if operational noise exceeds the applicable jurisdiction's noise level standards at sensitive receivers. Therefore, cumulative operational noise impacts may be potentially significant. Nevertheless, per Mitigation Measure **NOI-4**, individual projects with the potential to generate onsite operational noise in proximity to sensitive receivers would be required to complete project-level operational noise studies and incorporate noise reduction measures to reduce noise levels to the noise level standards of the applicable jurisdiction. As a result, regardless of whether a significant cumulative operational noise impact is occurring, the proposed OBMPU's noise contribution would not be cumulatively considerable with incorporation of Mitigation Measure **NOI-4**.

Off-site Traffic Noise

Cumulative growth in the Chino Basin would result in increased traffic volumes on local and regional roadways. However, as discussed above, due to the relatively low number of anticipated operation and maintenance trips associated with individual OBMPU projects, impacts related to off-site roadway noise would be incremental and likely inaudible; therefore, the proposed program would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise.

Level of Significance after Mitigation: Less Than Significant

b. Generation of excessive groundborne vibration or groundborne noise levels?

Construction of the OBMPU projects would include activities such as grading, excavation, and drilling, which would have the potential to generate low levels of groundborne vibration. Persons residing and working in an area located in proximity to a construction site could be exposed to excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Site ground vibrations from construction activities very rarely reach the levels that can damage structures, but they can be perceived in the detectable range and be felt in buildings very close to a construction site.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The installation of flow meters and extensometers would result in miniscule contributions to vibration in the area through truck trips to each of the device installation points—the location for which are presently unknown. Additionally, on-going implementation of the OBMPU once the monitoring devices have been installed may require up to two truck trips to each device or surface water monitoring site per month. Vibration exposure from the minimal truck trips required to implement the OBMPU would be well below established standards for vibration, and therefore, implementation of the flow meters associated with the OBMPU would have a less than significant potential to generate excessive groundborne vibration or groundborne noise.

Construction

As previously stated, the locations for the proposed wells are presently unknown. As such, there is a potential that the proposed wells could be located in close proximity to sensitive receptors. Construction of the proposed wells would involve 24-hour drilling activities for varying lengths of time depending on the depth in which each well must be drilled. The proposed wells would be implemented throughout the entire Chino Basin. Given the urbanized environment of much of the Chino Basin area, construction of a new well may have some potential to create vibration at the nearest sensitive receptor to a given well development site. Well drilling activities are anticipated to attenuate at the nearest sensitive receptor, however mitigation is provided below to minimize vibration to the greatest extent feasible. If removal of pavement is required, some jackhammer and loader activities may be necessary, but these activities do not typically generate enough vibration energy to adversely impact adjacent structures. Based on the type of equipment and construction activities required to install a well, the vibration impacts are forecast to be less than significant with implementation mitigation.

Operation

The proposed wells have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the proposed wells.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Construction

Construction activities required for the proposed conveyance systems and ancillary facilities projects would have the potential to impact their respective nearby sensitive receptors. Given the urbanized environment of the Chino Basin, the potential exists for construction of a specific project to be located within 25 feet of an adjacent land use. Consequently, existing off-site receptors that are located immediately adjacent to a construction site could be exposed to excessive groundborne vibration levels. It is anticipated that construction of the proposed projects would employ conventional techniques and the equipment to be used would typically not cause excessive ground-borne vibration. The installation of pipelines could also require jack and bore construction, depending on the local geology and location of the OBMPU projects, which can result in vibration levels similar to well drilling operations. Where potential adjacent receptors are located less than 25 feet from a construction site that employs drilling, the vibration levels experienced by these receptors would be even greater.

As the specific locations for the proposed pump stations, reservoirs and other ancillary facilities are presently unknown, and given the short-term nature of construction events, it is anticipated that there would be an infrequent amount of vibration events per day at sensitive land use receptors resulting from project-related construction activities. However, depending on how close an actual receptor location is to a construction site, and the type of building the receptor, it is possible that the vibration levels at a receptor location could exceed the FTA's vibration thresholds for building damage and human annoyance. As such, vibration impacts during construction associated with the proposed project on existing nearby receptors would require mitigation.

Operation

The proposed conveyance and ancillary facilities have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the ancillary and conveyance facilities.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Construction

Construction activities required for the proposed storage basins and recharge facilities would have the potential to impact their respective nearby sensitive receptors. Given the urbanized environment of the Chino Basin, the potential exists for construction of a specific project to be located within a perceptible distance to the nearest sensitive receptor. Construction of new storage basins would require substantial earth moving activities that would result in groundborne vibration, and as stated above, could affect the nearest sensitive land use. Therefore, as discussed under Project Categories 1 and 2, construction impacts would require mitigation to minimize vibration impacts. Impacts would be the same as Project Category 2.

Operation

The proposed storage basins and recharge facilities would have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate the storage basins and recharge facilities.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no vibration related impacts can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Construction

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) would occur within developed sites already containing desalter or water treatment facilities. Sensitive receptors are within 100 feet of the boundary of WFA Agua de Lejos Treatment Plant, while they are far removed from the easternmost of the Chino Desalters because it is surrounded by industrial and commercial uses. The westernmost Chino Desalter is also far removed from the nearest sensitive receptor as it is located less than a half-mile from the Chino Airport and is surrounded by industrial and agricultural uses. The proposed upgrades and improvements to existing facilities would result in construction activities that could expose existing land uses located in proximity to the proposed projects to excessive vibration. The construction vibration standards and/or regulations that would apply to existing facilities are the cities of Upland, Jurupa Valley, and Chino. Vibration during construction of treatment facilities may exceed local standards or violate local construction regulations governing vibration; however, construction at the Chino Desalters would not violate local construction vibration standards due to the distance from these facilities to the nearest sensitive receptors. Impacts related to construction-related vibration at the Agua de Lejos Treatment Plant, as well as impacts related to construction-related vibration at the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 due to the Plant's close proximity to sensitive receptors.

Operation

The proposed improvements to the WFA Agua de Lejos Treatment Plant, upgrades to the Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would have a less than significant potential to generate operational vibration. Operational vibration is anticipated to be less than significant given that there are no large pieces of heavy machinery that would be required to operate these facilities.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-5: Construction Vibration Minimization. The Implementing Agency shall require the construction contractor(s) to implement the following measures:

- ***Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized to below the local jurisdiction's acceptable level of vibration, or where no level has been established, 72 vibration decibels (VdB), within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various OBMPU projects. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.***
- ***The construction contractor for any individual OBMPU project shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities for any individual OBMPU project with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied***

residences. If vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.

NOI-6: Historic Building Vibration Protections. Where an OBMPU project would be constructed adjacent to an existing or potential historic building, the Implementing Agency shall require, through contract specifications, a certified structural engineer to be retained to submit a report documenting evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building prior to the commencement of any construction activities. Contract specifications shall be included in the construction documents for the applicable OBMPU project development.

Implementation of Mitigation Measure **NOI-5** would discourage the use of construction equipment that generates high levels of vibration within specific distances from existing land uses that are located near active construction areas and would ensure vibration field testing and subsequent minimization near occupied residences. This will reduce the construction-related vibration levels experienced by these existing off-site land uses to a level of less than significant. Additionally, implementation of Mitigation Measure **NOI-6** would serve to ensure the safety of existing historic buildings by requiring a certified structural engineer to analyze and provide evidence that no structural damage would result at these buildings due to the project's construction activities. Although construction related vibration could be experienced for some specific locations, impacts would be limited in scope and scale and substantially avoided or minimized with implementation of the Mitigation Measures **NOI-5** and **NOI-6**; therefore, vibration impacts would be less than significant with mitigation.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Less than Significant

The geographic scope for cumulative vibration impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed OBMPU. This geographic scope is appropriate for vibration because the proposed program's vibration impacts are localized and site specific. Beyond this distance, typical construction and operational vibration would be indistinguishable from the background vibration level due to distance attenuation and interference from environmental conditions.

If concurrent construction activities occur in close proximity to proposed OBMPU activities, combined construction vibration would have the potential to impact the same sensitive receivers and result in cumulative construction vibration levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction vibration impacts may be potentially significant.

*Cumulative Measures: Implementation of Mitigation Measures **NOI-5** through **NOI-6** is required.*

Per Mitigation Measures **NOI-5** and **NOI-6**, individual projects with the potential to generate construction vibration in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction vibration studies and incorporate vibration reduction measures to reduce vibration levels applicable standards, as feasible. As a result, regardless of whether a significant cumulative construction vibration impact is occurring, the proposed OBMPU's vibration contribution would not be cumulatively considerable with incorporation of Mitigation Measures **NOI-5** through **NOI-6**.

Level of Significance After Mitigation: Less than Significant

- c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

Public use airports and private air strips are located within and near the Chino Basin, including the Ontario International Airport, San Bernardino International Airport, Riverside Municipal Airport, Corona Municipal Airport, Chino Airport, Cable Airport, Flabob Airport, and Brackett Field Airport. Individual projects implemented under the OBMPU identified in Chapter 3, Project Description, of the RDSEIR, could be located within two miles of a public or private airport. Airport land use plans establish allowable land uses within areas that are subject to high noise levels related to aircraft operations.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin; however, the location for these facilities are presently unknown. Given that there are several airports located within the Chino Basin, it is possible that wells and monitoring devices may be installed within 2 miles of an airport. It is not anticipated that any employees would be located at a given well site full time; maintenance and inspection of the proposed wells and monitoring devices would be minimal during project operations. None of the proposed OBMPU projects involve operation of noise-sensitive receivers, such as residences or schools, that would be exposed to excessive airport noise in the Chino Basin. The Implementing Agency would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise during individual project operation. These regulations would reduce employee exposure to high noise levels such that operational activities would not expose employees to excessive noise levels. Therefore, operational impacts related to aircraft noise would be less than significant, and no mitigation is required.

It is possible that, during construction of proposed wells and visits to a well or monitoring device site that is located within 2 miles of an airport, employees could be exposed to excessive noise. For individual projects proposed under the OBMPU that are located within two miles of a public use airport or private airstrip, construction workers would be intermittently exposed to elevated noise levels during aircraft take-off and landing events, especially within the 75 and 85 dBA noise level contours of the nearest airport or airstrip. Although aircraft take-off and landing events would contribute to the noise environment, construction noise would be the dominant source of noise exposure for construction workers. Construction contractors would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise. Section 5096 of these regulations sets duration-based noise exposure limits for construction workers that require provision of personal protective equipment should exposure exceed the specified limits. The requisite adherence to these regulations would reduce construction worker exposure to high noise levels such that proposed OBMPU construction activities would not expose employees to excessive noise levels. Therefore, construction workers would not be exposed to excessive noise levels from aircraft noise. Construction impacts related to aircraft noise would be less than significant, and no mitigation is required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The following locations for proposed storage basins are located within 2 miles of an airport: Mills Pond (Chino Airport); and, California Institution for Men (directly adjacent to Chino Airport). The following locations for proposed storage basins are located more than 2 miles from an airport: Lower Cucamonga (more than 2 miles from Chino Airport and more than 3 miles from Ontario International Airport); Confluence Project (greater than 5 miles from the Chino Airport); Riverside Basin (greater than 2 miles from the Ontario International Airport); Jurupa Basin (more than 3 miles from the Ontario International Airport); and Vulcan Basin (greater than 7 miles from the Ontario International Airport). During construction and operation at Mills Pond and the California Institution for Men storage basins, there is a potential for employees working at, visiting or maintaining the site to be exposed to excessive noise from nearby airports. The remaining facilities would have no potential to be exposed to excessive airport-related noise, given the distance from these proposed storage basins to the nearest airport. In order to protect employees visiting Mills Pond or the California Institution for Men storage basins, the Implementing Agency would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise during individual project operation and construction. Impacts would be the same as Project Categories 1 & 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts other than the facilities discussed in the preceding text which are intended to support this expansion. As such, no impacts related to airport noise can occur.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The noise impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter are located within 2 miles of an airport. The Agua de Lejos Treatment Plant is located less than one mile from Cable Airport; the westernmost Chino Desalter is located adjacent to Chino Airport. The easternmost Chino Desalter is located more than 4 miles from the Ontario International Airport. During construction and operation at the WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter, there is a potential for full-time employees working at, visiting or maintaining the site to be exposed to excessive noise from nearby airports. The easternmost Chino Desalter would have no potential to be exposed to excessive airport-related noise, given the distance from these proposed storage basins to the nearest airport. In order to protect employees at the WFA Agua de Lejos Treatment Plant, and the westernmost Chino Desalter, mitigation is provided below that would minimize exposure to excessive airport noise. Impacts related to excessive airport noise at the proposed AWPFF, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities at would be the same as Project Categories 1, 2, & 3 because the locations of these facilities are presently unknown, and may be within 2 miles of an airport.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Some individual projects implemented under the proposed OBMPU may be located within two miles of a public use airport or private airstrip. However, none of the proposed OBMPU projects involve operation of noise-sensitive receivers, such as residences or schools, that would be exposed to excessive airport noise in the Chino Basin. Furthermore, most projects proposed under the OBMPU, including wells, conveyance pipelines, flow meters, reservoirs, water storage reservoirs, pump stations, and wellhead treatment facilities would be unmanned and would require infrequent maintenance visits that likely would not require extended exposure to aircraft noise if projects were located near airports or airstrips. As previously stated, the implementing agency would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise. These regulations would reduce employee exposure to high noise levels such that operational activities would not expose employees to excessive noise levels. Therefore, operational impacts related to aircraft noise would be less than significant, and no mitigation is required.

Mitigation Measures: none required

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

As discussed above, public use airports and private airstrips are located throughout the Chino Basin. The specific locations of individual projects that may be implemented under the proposed OBMPU are not all known at this time; therefore, it is also unknown whether individual projects or cumulative projects would be located within the vicinity of airports. Nevertheless, individual projects and cumulative projects would be required to comply with the applicable airport land use plan, federal and State Occupational Safety and Health Administration regulations, and applicable California Building Code standards related to the protection of residents and workers from exposure to excessive aircraft noise. As a result, regardless of whether a significant cumulative noise impact related to airport operations exists, the proposed program would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise, and no mitigation is required.

Cumulative Measures: No mitigation is required as impacts would be less than significant.

Level of Significance After Mitigation: No mitigation is required as impacts would be less than significant.

XIII.3 2000 OBMP PEIR Mitigation Measures

All 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Noise)—some have been listed for implementation under the impact analysis provided under **XIII.2, Impact Discussion**, above, and others have been modified and replaced by OBMPU specific measures. These are: **4.11-1** through **4.11-8**. 2000 OBMP PEIR Mitigation Measures **4.11-2 through 4.10-4 and 4.11-6** are incorporated as originally identified in the 2000 OBMP PEIR. The remaining measures have been modified to better address the minimization of potential impacts associated with the OBMPU.

2000 OBMP PEIR Mitigation Measure **4.11-1** pertains to limits on construction hours, but local ordinances pertaining to limits on construction hours have been modified since the 2000 OBMP PEIR was certified. Therefore, the provision of Mitigation Measure **NOI-1** reflects updated construction hour limitation minimization language to more broadly ensure future OBMPU facilities are installed within the construction hour limits of the jurisdiction within which the facility is installed. Therefore, as this measure has been modified, 2000 OBMP PEIR Mitigation Measure **4.11-1** is no longer applicable to the proposed OBMPU.

2000 OBMP PEIR Mitigation Measures **4.11-5, 4.11-7, and 4.11-8** pertain to compliance with operational noise ordinances and minimizing impacts to sensitive receptors during operation. These mitigation measures identified noise mitigation for certain facilities, but not for others. As such, Mitigation Measure

NOI-4 represents a replacement for these measures to more broadly cover operational noise minimization. Therefore, as these measures have been modified, 2000 OBMP PEIR Mitigation Measures **4.11-5**, **4.11-7**, and **4.11-8** are no longer applicable to the proposed OBMPU.

Therefore, 2000 OBMP PEIR Mitigation Measures **4.11-1**, **4.11-5**, **4.11-7**, and **4.11-8** are no longer applicable to the proposed OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XIV.1 Environmental Setting

As previously stated, the Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Claremont, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Introduction: Regional Population & Housing

The Southern California Association of Governments (SCAG) forecasts three major growth indicators including population, households, and employment. These forecasts are provided in the regional transportation plans that are periodically updated by SCAG. The SCAG Local Profiles for each of the cities (excluding unincorporated populations within the Counties) amounts to an estimated population within Chino Basin of an estimated 1,185,117 persons in 2020.⁴⁰ It is assumed that the projected population of the San Bernardino County and Riverside County unincorporated areas within Chino Basin was about 90,000 persons in 2020 when the US Census was taken.^{41,42} The unincorporated Riverside County population within Chino Basin was 1.6% of the overall unincorporated Riverside County population in 2020 as recorded by the SCAG Local Profile projections for each county,³⁶ while the unincorporated San Bernardino County population within Chino Basin was 26.26%⁴³ of the overall unincorporated San Bernardino County population in 2020. This calculation varies slightly from the population data contained in the Project Description; however, the population data provided within this Chapter reflects research efforts to determine what portions of the Unincorporated areas of Riverside and San Bernardino Counties are located within the Basin, and furthermore, reflects the population within the general areas in which OBMPU facilities are proposed to be developed. **Table XIV-1** below outlines the population projected by the SCAG 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS or Connect SoCal) within Chino Basin. The SCAG 2020-2045 RTP/SCS is a tool used as a guide for developing regional plans and strategies mandated by the federal and state governments.

⁴⁰ Southern California Associated Governments. https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 03/14/23)

⁴¹ San Bernardino County, Census County Division. <https://statisticalatlas.com/county-subdivision/California/San-Bernardino-County/San-Bernardino/Population#data-map/tract> (accessed 03/14/23)

⁴² Jurupa, Riverside County, Census County Division. <https://statisticalatlas.com/county-subdivision/California/Riverside-County/Jurupa/Population#figure/county-subdivision-in-riverside-area> (accessed 03/14/23)

⁴³ US Census Bureau, 2023. <https://data.census.gov/> (accessed 03/24/23)

**Table XIV-1
SCAG POPULATION FORECAST**

Cities/Counties	2020	2045	Population % Increase Between 2020 and 2045
Chino	89,115	121,300	36.1%
Chino Hills	82,846	92,800	12.1%
Eastvale	66,535	72,700	9.3%
Fontana	211,519	286,700	35.5%
Jurupa Valley	107,000	117,800	10.1%
Montclair	39,501	49,200	24.6%
Ontario	180,788	269,100	48.8%
Pomona	153,992	187,600	21.8%
Rancho Cucamonga	175,052	201,300	15.0%
Upland	78,769	93,000	18.1%
Unincorporated Riverside County*	~6,000	~9,404	36.2%
Unincorporated San Bernardino County*	~79,500	~91,696	13.3%
Misc. Los Angeles County ¹	~4,500	~4,945	9.9%
TOTAL	1,185,117	1,491,500	17.0%

Source: SCAG Local Profiles, 2020, https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 03/08/23)

Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf
SCAG 2016 RTP SCS Demographics and Growth Forecast

*within Chino Basin as discussed in the Introduction above.

¹Note: As only small portions of the City of Claremont exist within the Chino Basin area, the portions of the City of Claremont that are located within the Chino Basin have been calculated into the population total utilizing the census blocks and tracts at: Claremont, California. <https://statisticalatlas.com/place/California/Claremont/Overview> (accessed 03/08/23)

Along with the projected population increases, there will be a corresponding increase in the estimated number of dwelling units within the project area. Based upon information contained within the SCAG 2020-2045 RTP/SCS and in the SCAG Local Profiles,³⁶ the estimated number of households in 2045 and 2020 are outlined below. By 2045, the number of households is anticipated to be approximately 463,514 dwelling units within the Chino Basin. **Table XIV-2** summarizes the expected dwelling units for the affected agencies based upon SCAG data.

**Table XIV-2
SCAG HOUSEHOLD FORECAST**

Cities/Counties	2020	2045	Housing % Increase Between 2020 and 2045
Chino	24,152	33,100	37.0%
Chino Hills	24,914	28,000	12.4%
Eastvale	16,393	18,500	12.9%
Fontana	52,592	77,800	47.9%
Jurupa Valley	27,398	31,800	16.1%
Montclair	10,115	11,200	10.7%
Ontario	49,396	74,500	50.8%
Pomona	39,886	52,800	32.4%
Rancho Cucamonga	57,050	66,400	16.4%

Cities/Counties	2020	2045	Housing % Increase Between 2020 and 2045
Upland	27,217	32,800	20.5%
Unincorporated Riverside County*	1,881	4,011	53.1%
Unincorporated San Bernardino County*	25,645	30,529	16.0%
Misc. Los Angeles County ¹	1,744	2,074	16.0%
TOTAL	358,383	463,514	30.7%

Source: SCAG Local Profiles, 2020, https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 03/14/23)

Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf
SCAG 2016 RTP SCS Demographics and Growth Forecast

*within Chino Basin as discussed in the Introduction above.

¹Note: As only small portions of the City of Claremont exist within the Chino Basin area, the portions of the City of Claremont that are located within the Chino Basin have been calculated into the population total utilizing the census blocks and tracks at: Claremont, California. <https://statisticalatlas.com/place/California/Claremont/Overview> (accessed 03/08/23)

The SCAG region has returned to the pre-recession level of 8 million jobs in 2015 with a much lower unemployment rate of 6.6 percent in 2015 than in 2010 when the U.S. Census was taken. However, this level has been reduced even further as of 2020: the unemployment rate was 3.7 percent in Riverside County, and 3.3 percent in San Bernardino County in January 2020.⁴⁴ As shown in **Table XVI-3**, employment is projected to increase by 53.6 percent over the next 20 years and is estimated to have total employment of 1,165,002 in the Chino Basin by the year 2040.

Table XIV-3
SCAG EMPLOYMENT FORECAST

Cities/Counties	2016	2045	
Chino	50,400	57,400	
Chino Hills	16,400	17,900	
Eastvale	7,400	21,600	
Fontana	56,700	75,100	
Jurupa Valley	27,100	31,300	
Montclair	19,300	20,900	
Ontario	113,900	169,300	
Pomona	55,700	63,400	
Rancho Cucamonga	88,300	105,200	
Upland	35,900	42,200	
Unincorporated Riverside County*	1,187	2,498	
Unincorporated San Bernardino County*	15,347	18,931	
Misc. Los Angeles County ¹	2,350	2,505	
TOTALS	489,984	628,234	% Change: 28.2

SCAG Local Profiles, 2020, https://scag.ca.gov/sites/main/files/file-attachments/2021_local_profiles_dataset.xlsx?1661892901 (accessed 03/14/23)

Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf (accessed 03/14/23)

SCAG 2016 RTP SCS Demographics and Growth Forecast

*within Chino Basin as discussed in the Introduction above.

⁴⁴ California Employment Development Department, Labor Market Information Division (LMID), [https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive\\$pds.pdf](https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf) (accessed 03/14/23)

¹Note: As only small portions of the City of Claremont exist within the Chino Basin area, the portions of the City of Claremont that are located within the Chino Basin have been calculated into the population total utilizing the census blocks and tracks at: Claremont, California. <https://statisticalatlas.com/place/California/Claremont/Overview> (accessed 03/08/23)

XIV.2 Impact Discussion

The population growth forecasts presented above and associated occupancy of dwelling units required to support this population represent assumed growth with or without implementation of the OBMPU. Regional growth in southern California is driven by a combination of in-migration and recruitment (births over deaths) from the existing population. To understand the potential effect of the OBMPU on future growth and growth inducement within the Chino Basin area, it is necessary to understand the role that the OBMPU will play if it is implemented. The strategic drivers and trends that shaped the goals and implementation actions of the OBMP in the late 1990s have changed, and there are several drivers and trends in today's water management space that may challenge the ability of the Parties to protect their collective interests in the Chino Basin and their water supply reliability. Growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands of the Chino Basin Parties are expected to increase. The following is discussed in the Project Description, but is included here to depict the growth in water demand that is anticipated to occur within the Chino Basin through 2040 as a result of population growth within the Basin. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040. Total water demand is projected to grow from about 290,000 afy in 2015 to about 420,000 afy by 2040, an increase of about 130,000 afy. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses.

Table XVI-4
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040⁴⁵

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	148,467	139,236	144,314	151,525	164,317	173,522
Non-Chino Basin Groundwater	51,398	55,722	61,741	63,299	64,991	66,783
Local Surface Water	8,108	19,653	19,653	19,653	19,653	19,653
Imported Water from Metropolitan	53,784	90,444	97,657	103,684	105,152	111,036
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000
Recycled Water for Direct Reuse	17,554	23,678	24,323	26,910	30,451	33,953
Total	288,171	338,218	357,782	376,046	395,564	415,947
Percentage						
Chino Basin Groundwater	52%	41%	40%	40%	42%	42%
Non-Chino Basin Groundwater	18%	16%	17%	17%	16%	16%
Local Surface Water	3%	6%	5%	5%	5%	5%
Imported Water from Metropolitan	19%	27%	27%	28%	27%	27%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	100%	100%	100%	100%	100%	100%
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin, which explains the difference between the populations shown in this table, versus the projected SCAG populations, households, and employment shown in Table XVI-1 through

⁴⁵ Sourced from: WEI. (2019). *Final 2020 Storage Management Plan*. December 2019.

XV-3. The population data provided in the introduction to this Chapter provides a more accurate representation of the population within the Chino Basin than is listed in this table, and more accurately reflects the general areas OBMPU facilities are proposed to be developed.

The OBMPU is not intended to be directly involved in supplying municipal water supplies to customers. Thus, the Program and its implementation are one step removed from actual development and provision of adequate water supplies in support of building-out each jurisdictions' general plan. Water does not serve as a constraint to growth and by planning and expanding water system infrastructure to meet this future demand, water purveyors are growth accommodating, not inducing growth. It is assumed that growth decisions have already been made by local agencies governing land use decisions, and that, furthermore, each individual water agency (listed under CEQA Responsible Agencies in the Project Description) within Chino Basin produces an Urban Water Management Program. This document is prepared by a water purveyor to conduct long-term water supply and water resource planning and ensure reliability in water service sufficient to meet the needs of its customer base. As such, the OBMPU does not remove any existing constraint on future development, because Chino Basin water purveyors have alternative means to meet future water demands other than .

- a. *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

As discussed in the introduction to the Impact Discussion above, inducement of growth is, in part, based on the ability to meet the water demands of a given area, in this case, the Chino Basin. Current water demands are estimated to be 338,218 afy. Future water demands are anticipated to reach 415,947 afy by 2040. As discussed under the Project Description, the projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural and vacant land uses to urban uses. The cities and other water purveyors within the Chino Basin have evaluated water services requirements within their respective general plans based upon ultimate development (buildout) conditions. In addition, the water agencies within the Chino Basin have prepared Urban Water Management Plans, or otherwise prepared water supply plans, to assess the short-term and long-term water demands of their service areas. However, one of the goals of the OBMPU is "to encourage sustainable management of the Chino Basin to avoid Material Physical Injury, promote local control, and improve water-supply reliability for the benefit of all Chino Basin Parties." A second goal is "to increase the water supplies available for Chino Basin Parties and improve water supply reliability. This goal applies to Chino Basin groundwater and all other sources of water available for beneficial use." As such, the facilities proposed to be implemented by the OBMPU are intended to ensure water supply reliability for the water agencies utilizing groundwater from the Chino Basin. However, regardless of whether the OBMPU is implemented, individual water agencies have identified individual actions that they can implement to meet future water demands within the Chino Basin.

The OBMPU takes a more global approach to water demand and supply issues compared to the evaluations at a General Plan or Urban Water Management Plan level and looks toward providing more effective and efficient ways to protect the viability and sustainability of the entire Basin. Furthermore, emphasis is placed upon programs such as recycling water and conveying recycled water, improving water quality, extraction of salts, storage of water, facilitating more efficient recharge, and expansion of safe storage capacity within the Basin. The OBMPU functions as one path of fulfilling the water supply demands outlined in local jurisdiction general plans and Urban Water Management Plans. As such, the OBMPU is growth accommodating as outlined above under Environmental Setting, but it does not in and of itself create opportunities for additional people to move to the region, nor to construct additional facilities beyond those previously under consideration to accommodate the population envisioned within the applicable general plan at buildout within each community located in the Chino Basin. Based on this analysis, there is a less than significant potential for implementation of the OBMPU to cause or contribute to significant adverse population growth inducement within the Chino Basin.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells),

associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU does not include construction of new homes or businesses that would result in a direct increase in population or create a substantial number of new jobs that would result in new residents of the Chino Basin area. Construction of the proposed wells and installation of the proposed monitoring devices would require temporary employment. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, given the large area that makes up the Chino Basin, it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. Given that between 2.2 and 4.7 percent of the labor force within Chino Basin is unemployed,⁴⁶ with the unemployment average being about 3.1 percent, it is reasonable to assume that there are available workers for the construction activities associated with the proposed OBMPU improvements. As such, it is assumed that there would be an adequate number of workers within the Chino Basin that could be available for construction jobs and could commute to the temporary construction jobs rather than relocate and induce growth in the area.

Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 35 employees, for a total of 40 employees required for the overall facilities proposed as part of the OBMPU. These employees are expected to be drawn from existing population. This population increase is minimal and is within the population increase anticipated to occur within the Chino Basin over the 20-year horizon period in which the OBMPU would be implemented. As such and as stated above, the proposed project is growth accommodating, but it does not in and of itself create opportunities for additional people to move to the region, nor to construct additional housing beyond those previously under consideration to accommodate the population envisioned within the applicable General Plans at buildout within each city and county located in the Chino Basin area. Therefore, the implementation of the proposed project would result in less than significant impacts related to inducement of population growth.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts would be the same as described above for Project Category 1 and 2.

⁴⁶ Employment Development Department. <https://labormarketinfo.edd.ca.gov/data/unemployment-and-labor-force.html> (accessed 03/16/23)

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially induce population growth exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, though in most cases, the area a well would occupy would be about 10 feet by 10 feet. The proposed extensometers would be installed within wells, and the proposed flow meters would be located at or belowground level within streams and channels to monitor surface water, and therefore would have no potential to displace persons or housing. No housing is proposed to be displaced or eliminated by the proposed wells, particularly given the small footprint of wells. The goal of the project and the effect of the physical changes to the environment is to install infrastructure to enhance safe yield and water quality within the Chino Basin. However, given that the locations of the proposed wells are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. If future OBMPU facilities must be located on parcels occupied by existing housing and displace that housing as a result, the Implementing Agency will assist with a relocation plan in conformance with Section 7260 et seq. of the California Government Code ("California Relocation Assistance Law" or the "Act") to ensure that short- and long-term housing of comparable quality and value are made available to the home owner(s) prior to initiating construction of the facility. This is a regulatory requirement by which the Implementing Agency must comply, and therefore compliance thereof will ensure that the proposed project would not cause a significant displacement of existing housing or persons.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. However, given that the locations of the proposed conveyance and ancillary facilities are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. As such, impacts under this Project Category are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Facilities located within existing storage basins at existing facilities (Jurupa Basin, Lower Cucamonga Ponds, Mills Wetlands, and Riverside Basin) would occur within sites that do not contain housing or residents. As such, no potential exists for development at these sites to result in displacement of housing or persons.

The construction of new storage basins (CIM, Vulcan Basin, and Confluence Project), MS4 facilities, and flood MAR facilities at new sites would be developed at either known sites that have not been developed, or at sites for which the location has not been determined. Impacts to new storage basins, MS4 facilities, and flood MAR facilities at new sites would be the same as Project Category 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to displace persons or housing exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The population and housing related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Upgrades and improvements to existing facilities (WFA Agua de Lejos Treatment Plant, Chino Desalters, and existing groundwater treatment facilities) and groundwater treatment facilities at well sites would occur within developed sites already containing desalter, water treatment facilities or wells, and as such, treatment facility upgrades would be located within existing sites designated for this use. As such, no displacement of persons or housing would occur.

The location for proposed AWPf, regional groundwater treatment facilities and groundwater treatment facilities near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres. Impacts to regional groundwater treatment facilities and groundwater treatment facilities near well sites would be the same as Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures:

Level of Significance After Mitigation: Less Than Significant

XIV.3 Cumulative Impact Discussion

As previously discussed, the proposed project would not result in a cumulatively considerable contribution to population growth within the region. While development in the region may result in displacement of people or housing, through compliance with existing regulations pertaining to displacement of persons or housing applicable to public agency projects, the project would have a less than cumulatively considerable potential to displace people or housing and would therefore not result in a considerable contribution to cumulative impacts to population and housing.

XIV.4 2000 OBMP PEIR Mitigation Measures

None of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Population and Housing). The only mitigation measure identified in the 2000 OBMP PEIR to minimize impacts under Population and Housing was 2000 OBMP PEIR Mitigation Measure **4.3-1**, which required facilities proposed to be located on parcels occupied by existing housing to ensure comparable housing for the tenants or homeowners of such properties. The California Relocation Assistance Law, California Government Code Section 7260 et seq and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 require the implementation of a relocation plan and relocation benefits for agencies that displace housing or persons. As this is a regulatory requirement, and therefore compliance thereof is mandatory, 2000 OBMP PEIR Mitigation Measure **4.3-1** is no longer applicable.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XV.1 Environmental Setting

As previously stated, the Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Basin includes limited areas of unincorporated Riverside and San Bernardino Counties.

Fire/Emergency Protection Services

State

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California. In most cases, SRAs are protected directly by CAL FIRE. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the county under contract with CAL FIRE (CAL FIRE, 2016). However, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the county (CAL FIRE, 2012). CAL FIRE serves the Chino Basin area with the Prado Station located at 14467 Central Avenue in Chino. There is a second CAL FIRE location—CAL FIRE West Riverside—within the Chino Basin area at 7545 Mission Boulevard, Jurupa Valley, CA 92509.

Local

San Bernardino County Fire Department

The San Bernardino County Fire Protection District is a community-based, all hazard emergency services provider. The San Bernardino County Fire Department (SBCFD) provides fire and emergency response services to more than 60 communities/cities and all unincorporated areas of the county. SBCFD's Office of Emergency Services (OES) serves as the Operational Area Lead Agency, coordinating the provision of emergency services with the 24 cities and towns in San Bernardino County.⁴⁷ SBCFD has 48 professionally staffed fire stations within its service area, 9 paid/volunteer fire station, and covers 19,200 square miles.⁴⁸

⁴⁷ San Bernardino County Fire Protection District, 2023. About. <https://sbcfire.org/about/> (accessed 03/14/23)

⁴⁸ San Bernardino County Fire Protection District, 2022. Statistics <https://sbcfire.org/statistics/#district-facts-anchor>

There are 1,071 county fire personnel and 683 fire suppression personnel. Within the Chino Basin, the county serves the City of Fontana and the City of Upland, as well as unincorporated San Bernardino County. Stations within the Chino Basin service area are listed below in **Table XV-1**.

Table XV-1
SAN BERNARDINO COUNTY VALLEY DIVISION FIRE STATIONS

Station Name	Station Number	Full Address
Fontana	79	5075 Coyote Canyon Rd, Fontana, CA, 92336
Fontana	78	7110 Citrus Ave, Fontana, CA, 92335
Fontana	73	8143 Banana Ave, Fontana, CA 92335
Fontana	71	16980 Arrow Blvd, Fontana, CA, 92335
Fontana	72	15380 San Bernardino Ave, Fontana, CA, 92335
Fontana	74	11500 Live Oak Ave, Fontana, CA, 92335
Fontana	77	17459 Slover Ave, Fontana, CA, 92316
Upland	12	2413 N Euclid Ave, Upland, CA 91784
Upland	164	1825 N Campus Ave, Upland, CA 91784
Upland	161	475 N 2nd Ave, Upland, CA 91786
Upland	163	1350 N Benson Ave, Upland, CA 91786
SOURCE: San Bernardino County Fire Protection District. 2021. Service Zone FP-5. https://sbcfire.org/fp5/ (accessed 03/14/23)		

The San Bernardino County Fire Chief's Association compiled a *Fire and Rescue Mutual Aid Operational Plan* to integrate their operational plan as part of the current State of California Fire and Rescue Emergency Plan. The plan provides for the systematic mobilization, organization, and operation of fire and rescue resources within each zone of the county to reduce and minimize effects of emergencies and disasters. The plan provides updated fire and rescue service inventory of personnel, apparatus, and equipment amongst all local, regional, and State fire officials. The Chino Basin is within Zone 1 (West Valley) and within a small portion of Zone 2 (East Valley). The plan indicates which fire agencies participate in each zone and the specialized equipment available to each agency.⁴⁹ The participating fire agencies within a Mutual Aid Agreement within the Chino Basin area include:

Zone 1

- Chino Valley Fire District
- San Bernardino County Fire Department
- California Institution for Men Fire Department
- California Institution for Women Fire Department
- Montclair Fire Department
- Ontario Fire Department
- Rancho Cucamonga Fire Protection District
- Upland Fire Department
- Ontario International Airport Fire Department

Zone 2

- Fontana Fire Department (contracted with San Bernardino County Fire Department)
- Rialto Fire Department
- San Bernardino County Fire Department

(accessed 03/24/23)

⁴⁹ San Bernardino County Fire Chiefs' Association. 2014.

<http://www.sbcounty.gov/Uploads/SBCFire/content/pdf/Mutual-Aid-Manual-with-Zone11.pdf> (accessed 03/14/23)

County of Riverside

Limited portions of Riverside County are within the Chino Basin area. The City of Jurupa Valley is served by the RCFD, as are the unincorporated communities of Riverside County located within and outside of the Chino Basin. In 2018, the RCFD responded to 165,989 incidents; the average number of daily calls was 454. The fire stations located within the Chino Basin are outlined under **Table XV-3** and **XV-4**, no other RCFD stations are located within Chino Basin.

CONFIRE

The Chino Valley Fire District (CVFD), Rancho Cucamonga Fire District, and Rialto Fire Department are member agencies of the CONFIRE Joint Powers Authority. The Montclair Fire Department (MFD) also has a dispatch service contract with CONFIRE. CONFIRE has an "All Hazard" emergency aid system via mutual-aid and automatic-aid agreements. These aid agreements allow each fire agency to plan and prepare for large-scale incidents that would otherwise deplete the local available emergency resources.⁵⁰

Cities of Chino and Chino Hills

The cities of Chino and Chino Hills are served by the Chino Valley Fire District (CVFD), which is located in the southwest region of San Bernardino County. The CVFD is not a city Department, but is a separate political agency with its own elected Board of Directors. The District's jurisdiction covers approximately 80 square miles in size and has an estimated population of 170,845. The cities of Chino, Chino Hills, and surrounding unincorporated areas of San Bernardino County are served by the CVFD. The Chino Valley Fire District (CVFD) employs 140 professional firefighters. In 2020, personnel responded to 12,866 emergency incidents. CVFD is made up of 7 stations, one administration building, and one training center, as listed in **Table XV-2**.⁵¹

Table XV-2
CHINO VALLEY FIRE DISTRICT FIRE STATIONS

Station Number/Facility	Full Address
Station 61	5078 Schaefer Avenue Chino, CA 91710
Station 62	5551 Butterfield Ranch Road Chino Hills, CA 91709
Station 63	7550 Kimball Ave Chino, CA 91710
Station 64	16231 Canon Lane Chino Hills, CA 91709
Station 65	12220 Ramona Avenue Chino, CA 91710
Station 66	13707 Peyton Avenue Chino Hills, CA 91709
Station 67	5980 Riverside Drive Chino, CA 91710
Administration Building	14011 City Center Drive Chino Hills, CA 91709
Training Center	5092 Schaefer Avenue Chino, CA 91710
SOURCE: Chino Valley Fire District. 2022. Annual Report 2022 https://chinovallefire.org/wp-content/uploads/2022/06/cvfd-annual-comprehensive-financial-report-2021.pdf (accessed 03/14/23)	

City of Claremont

Fire Services in Claremont are provided by the Los Angeles County Fire Department. Three fire stations are within the city limits providing excellent coverage and response times. One of the stations, 101, also houses a paramedic squad that handles medical emergencies along with the crews on the engines.⁵² **Table XV-3** outlines the location of the fire departments within the City of Claremont.

⁵⁰ CONFIRE. 2021. CONFIRE- Who We Are, What We Do. <https://www.confire.org/about-us> (accessed 03/14/23)

⁵¹ Chino Valley Fire District. 2022. Annual Report 2022 <https://chinovallefire.org/wp-content/uploads/2022/06/cvfd-annual-comprehensive-financial-report-2021.pdf> (accessed 03/14/23)

⁵² City of Claremont. 2023. Fire Services. <https://www.eastvaleca.gov/government/fire-services> (accessed 03/14/23)

Table XV-3
LOS ANGELES COUNTY FIRE DEPARTMENT STATIONS IN CLAREMONT

Station Number/Facility	Full Address
Station 101	606 W. Bonita Avenue, Claremont, CA 91711
Station 102	2040 N. Sumner Avenue, Claremont, CA 91711
Station 62	3701 N. Mills Avenue, Claremont, CA 91711
SOURCE: City of Claremont. 2023. Fire Services. https://www.eastvaleca.gov/government/fire-services (accessed 03/14/23)	

City of Eastvale

The City of Eastvale, RCFD, CAL FIRE have two Fire Stations, Station 27 and Station 31. The Eastvale Fire Department provides full service, municipal and wildland fire protection, pre-hospital emergency medical response by paramedics and EMT's, technical rescue services and response to hazardous materials discharges. About 83% of the 1400 incidents that are responded to in a year on average are medical emergencies and about 13% are fires. The other 4% of incidents include technical rescues and hazardous materials incidents.⁵³ **Table XV-4** outlines the location of the fire departments within the City of Eastvale.

Table XV-4
EASTVALE FIRE STATIONS

Station Number/Facility	Full Address
Station 27	7067 Hamner Avenue, Eastvale, CA 92880
Station 31	14491 Chandler Street, Eastvale, CA 92880
SOURCE: City of Eastvale. 2023. Fire Services. https://www.eastvaleca.gov/government/fire-services (accessed 03/14/23)	

City of Fontana

Fire and emergency response services are provided to the City of Fontana from the Fontana Fire District (FFD). In July 2005, the San Bernardino County Board of Supervisors initiated the reorganization of its fire operations and filed an application with the San Bernardino Local Agency Formation Commission (LAFCO) to review and consider the reorganization of the SBCFD. The Fontana City Council proposed that a subsidiary fire district should be made for the city and that the Council would govern it. The city now contracts services to the SBCFD who serves Fontana's corporate limits and county areas within the city's sphere of influence.⁵⁴ The FFD staffs about 33 employees and is comprised of 7 stations (listed above under **Table XV-1**).⁵⁵

City of Jurupa Valley

The County of Riverside, through its cooperative agreement with CAL FIRE, provides the City of Jurupa Valley with fire protection, hazardous materials mitigation, technical rescue response, fire marshal, emergency medical services, public service assists, and disaster preparedness and response.

⁵³ City of Eastvale. 2023. Fire Services. <https://www.eastvaleca.gov/government/fire-services> (accessed 03/14/23)

⁵⁴ City of Fontana. 2021. About the Fontana Fire District. <https://www.fontana.org/635/About-the-Fontana-Fire-District> (accessed 03/14/23)

⁵⁵ City of Fontana. 2021. Stations & Equipment. <https://www.fontana.org/639/Stations-Equipment> (accessed 03/14/23)

Table XV-5
JURUPA VALLEY FIRE STATIONS

Station Number/Facility	Full Address
CAL FIRE / Riverside County Fire Department Administrative Headquarters	210 W San Jacinto Avenue Perris, CA 92570
Glen Avon Fire Station 17	10500 San Sevaie Way Jurupa Valley, CA 91752
Pedley Fire Station 16	9270 Limonite Avenue Jurupa Valley, CA 92509
Rubidoux Fire Station (38)	5721 Mission Boulevard Jurupa Valley, CA 92509
West Riverside Fire Station 18	7545 Mission Boulevard Jurupa Valley, CA 92509
SOURCE: City of Jurupa Valley. 2023. Cal Fire. https://www.jurupavalley.org/212/Cal-Fire (accessed 03/14/23)	

City of Montclair

The MFD operates two stations (Station 1 and 2), providing 7 days per week, 24 hours per day, and 365 days per year of "all hazard" emergency services to the city. The MFD provides firefighter/paramedics and offers an emphasis on emergency medical services, fire prevention, fire suppression, hazardous materials management, and disaster preparedness.⁵⁶ **Table XV-6** outlines fire stations within Montclair.

Table XV-6
MONTCLAIR FIRE STATIONS

Station Number/Facility	Full Address
Station 1 (MFD)	8901 Monte Vista Avenue, Montclair, CA 91763
Station 2 (MFD)	10825 Monte Vista Avenue, Montclair, CA 91762
SOURCE: City of Montclair. 2023. Fire Department. https://www.cityofmontclair.org/departments/fire-department/ (accessed 03/14/23)	

City of Ontario

The Ontario Fire Department (OFD) works out of 10 stations (Stations 1 through 10, listed below in **Table XV-7**). These fire stations house nine 4-person paramedic engine companies, three 4-person truck companies, an 8-person air rescue and fire-fighting station, 1 fire investigation supervisor, and 2 battalion chiefs. The OFD serves a population of approximately 185,000 and responds to more than 20,000 calls per year, an average of 55 calls per day.⁵⁷ OFD employs 182 firefighters and 39 professional staff members.

Table XV-7
ONTARIO FIRE STATIONS

Station Number/Facility	Full Address
Station 1	425 East B Street Ontario, CA 91764
Station 2	544 West Francis Street Ontario, CA 91762
Station 3	1408 East Francis Street Ontario, CA 91761
Station 4	1005 North Mountain Avenue Ontario, CA 91761
Station 5	1530 East Fourth Street Ontario, CA 91764
Station 6	2931 East Philadelphia Avenue Ontario, CA 91761

⁵⁶ City of Montclair. 2023. Montclair Fire Department History. <https://www.cityofmontclair.org/montclair-fire-department-history/> (accessed 03/14/23)

⁵⁷ City of Ontario. 2023. Fire Department. <http://www.ontarioca.gov/fire> (accessed 03/14/23)

Station Number/Facility	Full Address
Station 7	4901 East Vanderbilt Street Ontario, CA 91761
Station 8	3429 East Shelby Street Ontario, CA 91761
SOURCE: City of Ontario. 2023. Fire Stations, https://www.ontarioca.gov/Fire/FireStations (accessed 03/14/23)	

City of Pomona

The City of Pomona is served by the Los Angeles County Fire Department (LACFD). The LACFD serves more than 4.1 million residents and commercial business within 59 Cities along 72 miles of coastline, and all unincorporated areas within the county's 2,311 square miles. LACFD is one of the world's largest emergency service agencies, and also provides health, hazardous materials, and forestry services throughout the county.⁵⁸ **Table XV-8** outlines the LACFD located within the City of Pomona.

**Table XV-8
POMONA FIRE STATIONS**

Station Number/Facility	Full Address
Station 181 (Division and Battalion Headquarter)	590 S. Park Avenue Pomona, CA 91766-3038
Station 182	1059 N. White Avenue Pomona, CA 91768-3038
Station 183	708 N. San Antonio Pomona 91767-4910
Station 184	1980 W. Orange Grove Pomona 91768-2046
Station 185	925 E. Lexington Pomona, 91766-5204
Station 186	280 E. Bonita Pomona, 91767-1924
Station 187	3325 Temple Avenue Pomona, 91768-3256
Station 188	18 A Village Loop Road Pomona, 91766-4811
Station 189 (open during LA County Fair)	1101 McKinley Avenue Pomona, 91768
SOURCE: City of Pomona, 2023. Fire Department. https://www.pomonaca.gov/government/departments/fire-department?locale=en (accessed 03/27/23)	

City of Rancho Cucamonga

The City of Rancho Cucamonga is served by the Rancho Cucamonga Fire Protection District (RCFPD). The RCFPD serves a 50 square mile area that serves more than 176,000 residents.⁵⁹ The RCFPD's 7 fire stations are each staffed with a 3-person fire engine with two of the stations also housing a 4-person fire truck.⁶⁰ The RCFPD operates out of seven stations, within its jurisdiction, as listed below in **Table XV-9**. RCFPD is a member agency of CONFIRE.

**Table XV-9
RANCHO CUCAMONGA FIRE STATIONS**

Station Number/Facility	Full Address
Station 171	6627 Amethyst Street Rancho Cucamonga, CA 91737
Station 172	9612 San Bernardino Road Rancho Cucamonga, CA 91730
Station 173	12270 Fire House Court Rancho Cucamonga, CA 91739

⁵⁸ County of Los Angeles Fire Department. 2020. 2020 Statistical Summary. <https://fire.lacounty.gov/wp-content/uploads/2022/06/2021-Statistical-Summary.pdf> (accessed 03/14/23)

⁵⁹ City of Rancho Cucamonga. 2023. About the Rancho Cucamonga Fire District. <https://www.cityofrc.us/news/about-rancho-cucamonga-fire-district> (accessed 03/14/23)

⁶⁰ City of Rancho Cucamonga. Fire District - Our History. <https://www.cityofrc.us/sites/default/files/2020-10/Our%20History.pdf> (accessed 03/14/23)

Station Number/Facility	Full Address
Station 174	Jersey Boulevard Rancho Cucamonga, CA 91730
Station 175	11108 Banyan Street Rancho Cucamonga, CA 91737
Station 176	5840 East Avenue Rancho Cucamonga, CA 91739
Station 177	9270 Rancho Street Rancho Cucamonga, CA 91737
SOURCE: City of Rancho Cucamonga. 2023. Rancho Cucamonga Fire Protection District. https://www.cityofrc.us/sites/default/files/2021-02/Station%20Locations%202021_0.pdf (accessed 03/14/23)	

City of Upland

Fire protection and emergency medical response services in Upland are provided by the San Bernardino County Fire District, Division 1 Headquarters (Station 161) located at 475 North Second Avenue in Upland.

Police Protection Services

State

The California Highway Patrol (CHP) is a law enforcement agency created in 1929 to provide uniform traffic law enforcement for the state of California. The CHP has jurisdiction over all Interstates and State Routes in the IEUA service area including: I-10, I-15, SR-60, SR-71, SR-142, SR-210, SR-83, and SR-66. The IEUA service area is served by the Inland Division, which has two facilities in the area. The Inland Communications Center (ICC) is located at 13892 Victoria Street in Fontana, CA 92336, and is the fourth largest CHP communications center with a complement of nearly 70 employees including 56 Public Safety Dispatchers. ICC serves the citizens of one of the fastest expanding areas of California answering approximately 55,000 calls for service each month.⁶¹ The Rancho Cucamonga Station is located at 9530 Pittsburgh Avenue in Rancho Cucamonga, CA 91730, and patrols over 250 square miles of freeways and unincorporated roadways in and around the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, Mt. Baldy, and San Antonio Heights.

Local

San Bernardino County Sheriff's Department

The San Bernardino County Sheriff's Department (SBCSD), in collaboration with various cities and other agencies that have jurisdiction in the county, provides law enforcement services to the incorporated and the unincorporated communities in the county. Many cities have contracted police protection services to the SBCSD, including Chino Hills and Rancho Cucamonga. The personnel of the SBCSD provide law enforcement services to the county's citizens through 21 patrol stations and 18 specific divisions.

Riverside County Sheriff's Department

Riverside County is the 4th-largest of California's 58 counties in both population and sheer land mass. It has consistently been among the fastest growing counties in the country, serving across more than 7,200 square miles and policing 17 of the 28 cities in Riverside County. The Riverside Sheriff's Department is the 2nd-largest Sheriff's Office in California, managing five correctional facilities, Coroner-Public Administrator duties, and providing court services.⁶² The Chino Basin area is served by the Jurupa Valley Station, which is commanded by a Captain and consists of a patrol function and an investigative function providing contract police services for the cities of Norco, **Eastvale and Jurupa Valley**, and for county unincorporated areas in its vicinity. The Jurupa Valley Station is located at 7477 Mission Boulevard, Jurupa Valley, CA 92509.

City of Chino

The Chino Police Department (CPD), located at 5450 Guardian Way, Chino, CA 91710, is comprised of more than 150 employees, both sworn and professional staff, and over 50 dedicated volunteers. CPD

⁶¹ California Highway Patrol, Inland Empire Communications Center. [https://www.chp.ca.gov/find-an-office/inland-division/offices/\(818\)-inland-empire-communications-center](https://www.chp.ca.gov/find-an-office/inland-division/offices/(818)-inland-empire-communications-center) (accessed 03/14/23)

⁶² Riverside County Sheriff, Special Needs Reunification Programs. <http://www.riversidesheriff.org/> (accessed 03/14/23)

serves more than 85,000 residents within 30 square miles. The CPD handles over 9,600 calls for service each month and provides full service operations in various divisions, such as: Patrol, Traffic Enforcement, Criminal Investigations, Special Enforcement Team, School Resource Officer, Crime Analysis, Communications, and Crime Prevention, amongst many others. As mentioned above, some portions of Chino are also served by the Chino Hills Station in contract with the SBCSD.⁶³

City of Chino Hills

As mentioned above, the Chino Hills Police Department (CHPD) has been contracted with SBCSD since 1991. The city consists of approximately 46 square miles with a population of 85,000 residents within 30 square miles. The CPD handles over 9,600 calls for service each month and provides full service operations in various divisions, such as: Patrol, Traffic Enforcement, Criminal Investigations, Special Enforcement Team, School Resource Officer, Crime Analysis, Communications, and Crime Prevention, amongst many others. There are 38 patrol deputies, and were 40,628 calls for service in 2018 according to the San Bernardino Countywide Plan Program EIR (2020).⁶⁴

City of Claremont

The Claremont Police Department is located at 570 W. Bonita Avenue, Claremont, CA 91711. The Claremont Police Department is comprised of dedicated individuals committed to ensuring the safety of our community. The Police Department consists of 38 sworn police officers, 3 sworn reserve police officers, 23 full-time professional employees, 8 part-time employees, and over 30 volunteers.⁶⁵

City of Fontana

The Fontana Police Department (FPD), located at 17005 Upland Avenue Fontana, CA 92335, currently staffs 188 sworn officers and serves approximately 42 square miles and over 200,000 people.⁶⁶ The FPD works with SBCSD in a combined effort to provide protection services for the 300 square mile area that also includes Bloomington, Rialto, and Lytle Creek. FPD deputies also team with the surrounding agencies of Rialto Police, Rancho Cucamonga Police, and Riverside County Sheriff Department. There are 28 patrol deputies, and were 34,313 calls for service in 2018 according to the San Bernardino Countywide Plan Program EIR (2020).

City of Montclair

The Montclair Police Department (MPD) serves a 5.5 square mile community of approximately 37,000 residents. MPD staffs 60 sworn officers that offer specialized assignments such as a Detective Bureau, Narcotics Investigations Task Force, Motor Officer Program, and Technical Services. In addition to MPD's sworn force, the MPD employs 50 full and part-time civilian support personnel and 18 volunteers. Lead by the Chief of Police, MPD comprises three divisions: Administrative, Support Services, and Field Services, and is located at 4870 Arrow Highway Montclair, CA 91763.

City of Ontario

The Ontario Police Department (OPD) has three main service bureaus and employs 409 sworn and civilian positions, and K-9 units.⁶⁷ OPD has one main station, located at 2500 South Archibald Avenue Ontario, CA 91761, and one substation at the Ontario Mills Mall, located at 1 Mills Circle Ontario, CA 91764. In addition to serving the City of Ontario, the OPD participates in mutual aid agreements with different public agencies to provide the optimum level of service during times of emergency. The OPD holds a mutual aid agreement with the SBCSD and various jurisdictions surrounding Ontario. The City of Ontario also participates in a statewide mutual aid program facilitated by the Governor's Office of Emergency Services (OES).

⁶³ City of Chino Police Department. 2023. Our Operations.

<https://www.cityofchino.org/cms/One.aspx?portalId=10382662&pageId=11471237> (accessed 03/14/23)

⁶⁴ City of Chino Hills Police Department, 2023. Police. <https://www.chinohills.org/17/Police> (accessed 03/14/23)

⁶⁵ City of Claremont, About the Police Department. <https://www.ci.claremont.ca.us/government/departments-divisions/police-department/about-us> (accessed 03/14/23)

⁶⁶ City of Fontana Police, About Us. <https://www.fontana.org/2509/About-Us> (accessed 03/14/23)

⁶⁷ Ontario Police Department: Mission, Vision and Values. <https://www.ontarioca.gov/Police> (accessed 03/14/23)

City of Pomona

The Police Department provides law enforcement services to the community which preserve and protect life and property; enforces city, county, state and federal statutes, ordinances and laws; investigates criminal activities; apprehends criminals and recovers stolen property; provides programs to educate the public in crime prevention, and processes all parking citations. The Operations Division is the largest in the organization and is responsible for the field services provided to the City of Pomona by uniformed personnel. Specialized units within the Division including the K9 Unit, Youth Services Unit, SWAT team, Bike Patrol, and all augment Patrol Services. These units work together in an effort to reduce crime and increase service delivery with the ultimate goal of public safety in a city of an estimated 150,000 people in 23 square miles. Pomona is the fourth largest city by population in the County of Los Angeles. Patrol Services represent the primary function of the Police Department. This program has the responsibility of protecting life and property as well as maintaining law and order, preserving peace and security in the community, and positively impacting the quality of life for Pomona's residents. The Police Department is located at 490 W Mission Blvd, Pomona, CA 91766.⁶⁸

City of Rancho Cucamonga

As previously described, the Rancho Cucamonga Police Department (RCPD) contracts with the SBCSD to provide law enforcement services for the city. The SBCSD's 187 Sheriff's personnel serve Rancho Cucamonga citizens out of one main station, located at 10510 Civic Center Drive Rancho Cucamonga, CA 91730, and one sub-station in Victoria Gardens Shopping Center, located at 7743 Kew Avenue Rancho Cucamonga, CA 91739. The SBCSD serves a 38 square mile area with approximately 177,000 people. The RCPD also works in cooperation with the law enforcement agencies of neighboring cities and jurisdictions, as well as State and Federal agencies.⁶⁹ There are 107 patrol deputies, and were 155,537 calls for service in 2018 according to the San Bernardino Countywide Plan Program EIR (2020).

City of Upland

The Upland Police Department (UPD) is comprised of three divisions and 70 sworn and professional personnel that work out of one station located at 1499 West Thirteenth Street Upland, CA 91786. UPD serves approximately 16 square miles and over 76,000 residents (United States Census Bureau, 2014). As mentioned above, some portions of Upland are also served by the SBCSD Chino Hills Station. UPD works with neighboring cities to provide 24 hours a day / 7 days a week protection services.^{70,71}

Schools

San Bernardino County Superintendent Schools

With a countywide kindergarten through 12th grade (K-12) public school student population of approximately 398,648 students attending about 564⁷² public schools for the 2022-2023 year, the San Bernardino County Superintendent of Schools (SBCSS) office, located at 601 North East Street in San Bernardino is a regional agency that provides vital and necessary service, leadership, and advocacy to the K-12 school districts in the county.⁷³

The Chino Basin area within San Bernardino County is made up of eight K-12 school districts and has a student population of approximately 137,763 students attending 178 schools. **Table XV-10**

⁶⁸ City of Pomona. Operations Division. 2023. <https://www.pomonaca.gov/government/departments/police-department/operations-division> (accessed 03/14/23)

⁶⁹ City of Rancho Cucamonga, 2023. Police Department. <https://www.cityofrc.us/public-safety/police> (accessed 03/14/23)

⁷⁰ City of Upland. 2023. Police Department. <https://www.uplandca.gov/police> (accessed 03/14/23)

⁷¹ City of Upland. 2023. Patrol. <https://www.uplandca.gov/patrol> (accessed 03/14/23)

⁷² Public School Review, 2023. San Bernardino County Public School Review. <https://www.publicschoolreview.com/california/san-bernardino-county> (accessed 03/15/23)

⁷³ Education Data Partnership, 2023. San Bernardino County – County Summary. <http://www.ed-data.org/County/San-Bernardino> (accessed 03/14/23)

Table XV-10
SAN BERNARDINO COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2021-2022)
Chino & Chino Hills	Chino Valley Unified School District	44	26,822
Fontana	Fontana Unified School District	44	35,101
Upland	Upland Unified School District	14	10,580
Montclair & Ontario & Rancho Cucamonga	Chaffey Joint Union High School District	11	23,566
	Mountain View School District	4	2,707
	Ontario-Montclair School District	32	18,909
Rancho Cucamonga	Central School District	7	4,331
	Cucamonga Elementary School District	4	2,443
	Etiwanda Elementary School District	18	13,304
Total	--	178	137,763

SOURCE: Education Data Partnership. 2023. District Summary. <https://www.ed-data.org/district/San-Bernardino/San-Bernardino-County-Office-of-Education> (accessed 03/14/23)

Los Angeles County Office of Education

With a countywide K-12 public school student population of approximately 1,380,880 students in the 2022-2023 school year, attending more than 2,228 schools (2022-2023), the Los Angeles County Office of Education, located at 69300 Imperial Highway, Downey, CA 90242, is a regional agency that provides vital and necessary service, leadership and advocacy to the K-12 districts in the County.

The Chino Basin within Los Angeles County is made up of two K-12 districts in total and has a student population of approximately 31,848 students that attend 53 schools (Education Data Partnership, 2023). **Table XV-11** shows the cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

Table XV-11
LOS ANGELES COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2021-2022)
Pomona	Pomona Unified School District	41	25,448
Claremont	Claremont Unified School District	12	6,400
Total	--	53	31,848

SOURCE: Education Data Partnership, 2023.
<https://www.ed-data.org/district/Los-Angeles/Pomona-Unified> (accessed 03/14/23)
Claremont Unified School District, 2023. <https://www.cusd.claremont.edu/about> (accessed 03/14/23)

Riverside County Office of Education

With a countywide K-12 public school student population of approximately 420,687 students in the 2021-2022 school year, attending more than 519 schools (2023),⁷⁴ the Riverside County Office of Education in Riverside is located at 3939 Thirteenth St, Riverside, CA 92501, is a regional agency that provides vital and necessary service, leadership and advocacy to the K-12 districts in the county.

The Chino Basin within Riverside County is made up of two K-12 districts in total and has a student population of approximately 74,411 students that attend 78 schools (Education Data Partnership, 2023).

⁷⁴ Public School Review, 2023. Riverside County Public School Review. <https://www.publicschoolreview.com/california/riverside-county> (accessed 03/15/23)

Table XV-12 shows the cities in the area, and school districts are associated with the cities, the number of schools in each district, and the total student population/enrollment.

Table XV-12
RIVERSIDE COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2021-2022)
Eastvale	Corona-Norco Unified School District	53	55,793
Jurupa Valley	Jurupa Unified Schools District	25	18,618
Total		78	74,411
SOURCE: Education Data Partnership, 2023. https://www.ed-data.org/county/Riverside (accessed 03/14/23) National Center for Statistics, 2023. https://nces.ed.gov/ccd/districtsearch/district_detail.asp?ID2=0619260 (accessed 03/14/23)			

Parks and Recreation

Federal Lands

Three national parks managed by the National Park Service are located within San Bernardino County and offer a variety of recreational opportunities to residents in the local area, including Death Valley National Park, Mojave National Preserve, and Joshua Tree National Park. None of these National Parks, however, lie within the Chino Basin.

Federal lands managed by the U.S. Forest Service including the Angeles and San Bernardino National Forests border the northern portion of the Chino Basin and offer a variety of recreational activities to local residents (County of San Bernardino General Plan). In addition, lands just south of the San Bernardino County line are managed by the Bureau of Land Management (BLM). However, none of these National Forest or BLM lands lies within the Chino Basin.

California State Parks and Recreation Department

The California State Parks and Recreation Department helps to preserve the state's biological diversity, protect its natural and cultural resources, and create opportunities for outdoor recreation. The Department manages several public parks within San Bernardino and Riverside Counties, but only one is included within the Chino Basin.

The Chino Hills State Park is located partially within the Chino Basin, off of SR-91 to Highway 71 North, and encompasses 12,452 acres consisting of oaks, sycamores, and rolling grassy hills that stretch approximately 31 miles from the Santa Ana Mountains to the Whittier Hills. Open year-round, the Chino Hills State Park allows for activities such as hiking, biking, horseback riding, and camping (County of San Bernardino General Plan).

San Bernardino County Regional Parks Department

The San Bernardino County Regional Parks Department operates a total of 8,515 acres of regional parks in all four County regions. The two regional parks located within the Chino Basin area of the County are:

Cucamonga-Guasti Regional Park: This is a 150-acre day-use park in Ontario. Park facilities include two lakes for fishing, a swimming complex with water slides, a zero-depth water play park, concessions, picnic areas with shelters, and lawns for special events.

Prado Regional Park: The largest park in the County Regional Parks system, Prado Regional Park encompasses 2,293 acres of land in Chino. Facilities include two 18-hole golf courses; an Olympic shooting range; archery range; camp sites; picnic areas and shelters; universally accessible playground with a zero-

depth water play area; and trails for walking, hiking, mountain biking, and horseback riding. There is also a 60-acre lake for fishing and kayaking.

Riverside County Regional Parks Department

The Riverside County Regional Park and Open-Space District (RivCoParks) manages parks within the unincorporated portions of Riverside County.⁷⁵

RivCoParks maintains 35 regional parks, encompassing roughly 23,317 acres. Other local parks fall under the jurisdiction of Riverside County Recreation and Park District and serve the following areas: Beaumont-Cherry Valley area; Coachella Valley; Jurupa area; and Valleywide area incorporating San Jacinto Valley, Winchester area, Menifee Valley, and Anza Valley. Included as part of the RivCoParks' facilities is the Jurupa Valley Boxing Club and the Rancho Jurupa Regional Sports Park, which is home to 32 acres of lush, natural, and synthetic turf fields. Comprised of four large marked and lighted synthetic turf fields, two large natural turf fields as well as nine smaller natural turf fields, the park is available by reservation for many outdoor activities.⁷⁶

City Recreation Departments

Chino

The Chino Community Services Department provides residents with a complete system of community and neighborhood parks, trails, facilities, and recreational opportunities.⁷⁷ The City of Chino strives to provide a variety of programs and services for individuals, families, youth, and seniors (50+) that include healthy lifestyle options, recreational and educational classes, counseling and prevention education, trips and tours, youth and adult sports, etc. Recreational centers within the city include the Neighborhood Activity Center, located at 5201 D Street, which is designed to provide centralized recreation and Human Service programs for Chino residents; the Preserve Community Center, located at 15800 Main Street; and the Carolyn Owens Community Center, located at 13201 Central Avenue. In addition, there are 26 parks within Chino.

Chino Hills

The City of Chino Hills Recreation Division provides recreation activities to residents of Chino Hills. There are approximately 42 parks and five community recreation facilities within Chino Hills.⁷⁸

Eastvale

The City of Eastvale includes two different park districts located within the boundaries of the city: the Jurupa Community Services District (JCSD) and the Jurupa Area Recreation and Park District (JARPD). Residents that live west of Hamner Avenue within the city are part of the JCSD.

JCSD provides park and recreation services as well as maintaining frontage landscaping and providing water, sewer, and street lights for the City of Eastvale.⁷⁹ There are currently 18 parks in Eastvale with additional parks planned or in different stages of development. This accounts for approximately 250 acres of open space in Eastvale. Currently there are approximately 50 recreation programs for families to choose from, which include recreational programming for off-track, before school, after school and Fun Fridays at three Elementary Schools in the Eastvale Area.⁸⁰

⁷⁵ Riverside County Regional Park and Open-Space District. 2023. Welcome to the RivCoParks. <https://www.rivcoparks.org/about-us/> (accessed 03/14/23)

⁷⁶ Riverside County Planning Department. 2015. General Plan, Multipurpose Open Space Element. December. https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 03/14/23)

⁷⁷ City of Chino. 2023. Chino Creates Community. <https://www.chinocreatescommunity.com/about-us.html> (accessed 03/14/23)

⁷⁸ Chino Hills. 2023. Parks & Facilities. <https://www.chinohills.org/87/Park-Facility-Guide> (accessed 03/14/23)

⁷⁹ Jurupa Community Services District, 2023. About the Parks Department. <https://www.jcsd.us/services/parks-recreation> (accessed 03/14/23)

⁸⁰ City of Eastvale. 2023. Parks and Recreation. <https://www.eastvaleca.gov/community/parks-and-recreation> (accessed 03/14/23)

The Board of Directors of the Jurupa Area Recreation and Park District are elected by Division to a four-year term. Each Director must live within the Division they represent.⁸¹

Claremont

Claremont is home to 22 of parks offering lush green belts, walking paths, play structures, and sports fields. Many residents enjoy using group picnic areas for family gatherings, birthdays, and celebrations.⁸²

Fontana

The City of Fontana Community Services Department responds to the needs of the community through recreational, cultural, and other human services programs. The City of Fontana maintains over 41 parks, playgrounds, sports facilities, and other recreation facilities in the community.⁸³ the City has 1,255 acres of land for public use, including large regional parks (City of Fontana GPEIR 2018).

Jurupa Valley

As stated under the Parks and Recreation discussion for Eastvale, the Jurupa Area Recreation and Park District (JARPD) was formed in 1984. Their charter states that their goal is “To provide parks and recreational facilities for current and future families in the 91752 and 92509 zip code areas.” With the growth of the Jurupa area, JARPD has grown too. We currently offer a wide variety of year-round recreational opportunities at 30 different parks and other facilities throughout the Jurupa Valley area.⁸⁴

Montclair

Montclair has over 76 acres of land that is owned or leased as parkland, and eleven parks that are maintained by the City’s Public Works Department. The Chino Basin Conservation District has a two-acre garden at its headquarters at 4594 San Bernardino Street in Montclair dedicated to educating the community about water-efficient landscaping. Montclair has a variety of parks, including a skate park for the community. The City also offers recreational opportunities for the public, through classes and workshops available to view and sign up for the City’s website (City of Montclair GPEIR 2022). Montclair has 13 parks that occupy 46.27 acres, providing 1.18 acres of park land per 1,000 residents.

Ontario

The City of Ontario Recreation and Community Services Department provides recreational, educational, and cultural activities to the community. The Recreation and Community Services Department provides services at community centers, parks and schools throughout the City of Ontario. The City has approximately 481 acres of parkland; it has 7 miniparks, 15 neighborhood parks, 6 community parks, 4 linear and special use parks, and 1 regional park (Ontario Plan SEIR 2022).⁸⁵

Pomona

The Community Services Department provides low-cost/free recreation programs for all ages, assists Pomona’s Youth and Family Master Plan, coordinates rentals of city facilities (including community centers and picnic pavilions), and issues permits for special events and park usage. There are 27 parks within the City of Pomona, which include the following amenities: restrooms, parking, barbeque grills, picnic tables, drinking fountains, community centers, patios, playgrounds, baseball/softball fields, soccer fields, basketball courts, tennis courts, swimming pools, and concession stands.⁸⁶

Rancho Cucamonga

The City of Rancho Cucamonga Park and Recreation Commission acts in an advisory capacity to the City Council with respect to park and recreation facilities and services. The city has approximately 447.5 acres

⁸¹ Jurupa Area Recreation and Park District, 2023. About Us. <https://www.jarpd.org/about-us> (accessed 03/14/23)

⁸² City of Claremont, 2023. City Parks. <https://www.ci.claremont.ca.us/government/departments-divisions/human-services/parks> (accessed 03/14/23)

⁸³ City of Fontana, 2023. Facilities and Parks. <https://www.fontana.org/156/Facilities-Parks> (accessed 03/14/23)

⁸⁴ Jurupa Area Recreation & Parks District, 2023. Rancho Jurupa Sports Park. <https://www.jurupavalley.org/242/Jurupa-Area-Recreation-Park-District-JAR> (accessed 03/14/23)

⁸⁵ City of Ontario, 2023. Parks. <https://www.ontarioca.gov/Parks> (accessed 03/14/23)

⁸⁶ City of Pomona, 2023. Parks & Facilities. <https://www.pomonaca.gov/government/departments/public-works/parks-and-facilities?locale=en> (accessed 03/14/23)

of parkland and recreational facilities. This area includes 25 neighborhood parks, 4 community parks, and 4 special use facilities, and 2 trails for various activities, including walking, running, biking, hiking, and horseback riding. The City controls 130 acres of undeveloped parkland, not including undeveloped trail acreage (Rancho Cucamonga GPUEIR 2021).

Upland

The Community Services Department provides Upland citizens with quality services, recreational programs, and well-maintained parks. Within the Community Services Department, the Recreation Division provides recreational programs and community services and maintains first rate parks and recreational facilities. The Recreation Division is located at the Magnolia Recreation Center. The city provides 13 parks, with amenities such as amphitheaters, ballfields, barbeque areas, dog parks, fitness trails, picnic tables, playgrounds, skate parks, etc.

Library Services

Like parks, open space, recreational facilities and cultural opportunities, libraries contribute to the quality of life in a community. These community facilities can enhance a region's character as a good place to live and raise a family. In addition, a good library system contributes to the quality of educational opportunities in the area. Library facilities are provided throughout the Study Area by the cities and counties. Again, these are provided according to levels of service established through the respective jurisdictions General Plans.

XV.2 Impact Discussion

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire Protection?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU does not include construction of new homes or businesses that would result in a direct increase in population or create a substantial number of new jobs that would result in new residents of the Chino Basin area. Construction of the proposed wells and installation of the proposed monitoring devices would require temporary employment. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, as discussed under Subsection XIV, Population and Housing of this Initial Study, it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. This applies to the operation of the proposed wells and monitoring devices; operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 35 employees, for a total of 40 employees required for the overall facilities proposed as part of the OBMPU.

Operational activities associated with the proposed well development and monitoring devices could require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given site. However, should any treatment of the groundwater extracted by the proposed wells occur (addition of sodium hypochlorite, ammonia, etc.), a Hazardous Materials Business Plan (HMBP) may be required, though many of the water agencies within the Chino Basin have developed safety standards and operational procedures for safe transport and use of its operational and maintenance

materials that are potentially hazardous, which comply with all federal, state and local regulations, thereby minimizing the potential for fire services. Although proposed well development may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by agencies implementing the proposed OBMPU facilities would result in a nominal increase in service. Any OBMPU project requiring structures will be required to meet building codes, including those related to fire protection. The indirect increase in population and the use of hazardous materials associated with the well development would result in a nominal increase in fire services. As a result, no new fire facilities would be required. Therefore, no environmental effects would occur because construction of a new fire facility would not be required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

The implementation of the proposed pipelines and ancillary facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for fire protection services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for fire protection services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact fire protection services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

Construction of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would require temporary

employment to develop these facilities. It is unknown whether these employees would be drawn from within or outside of the Chino Basin area; however, as discussed under Subsection XIV, Population and Housing it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area. This applies to the operation of the facilities outlined above; operation at new and existing facilities may require the employment of about 40 persons total. Operational activities associated with the proposed facilities could require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given site. However, a HMBP may be required for new facilities, though, as stated above under Project Category 1, many of the water agencies within the Chino Basin have developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous, which comply with all federal, state and local regulations, thereby minimizing the potential for fire services. Although the proposed desalter and water treatment facility projects may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by agencies implementing the proposed OBMPU facilities would result in a nominal increase in service. Therefore, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

b. Police Protection?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire Protection above, the development of wells and monitoring devices will not cause a significant demand for police protection services. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for additional police protection services beyond that which is anticipated in the jurisdiction's General Plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 35 employees, for a total of 40 employees required for the overall facilities proposed as part of the OBMPU. Operational activities associated with the proposed well development and monitoring devices could require police department service in the unlikely event of an emergency or trespass at a given site. However, it is anticipated that all sites containing facilities associated with the proposed OBMPU would be fenced, which would minimize the future need for police protection from trespass. The Chino Basin area is currently served by police departments and agencies under authority of the various jurisdictions that comprise the Chino Basin as discussed under Environmental Setting above. Overall levels of police service will be increased based upon the future population growth and demands of the local agencies within the Chino Basin. Though a significant demand for police protection services is anticipated, mitigation is proposed to address trespass issues.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located belowground, ancillary facilities would be installed aboveground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact police protection services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The police protection related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an

increased demand for police protection services. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

4.12-1 OBMP facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites or recharge sites.

Implementation of 2000 OBMP PEIR Mitigation Measure **4.12-1** above would minimize the potential for trespass that could exacerbate police protection services. As such, impacts are less than significant.

Level of Significance After Mitigation: Less Than Significant

c. Schools?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire and Police Protection above, the development of wells and monitoring devices will not cause a significant demand for schools. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area. Implementation of the OBMPU is not forecast to change existing land uses or increase either the number of residential units located within the Study Area or the number of students generated from the Study Area beyond that which is anticipated in the local agency general plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 35 employees, for a total of 40 employees required for the overall facilities proposed as part of the OBMPU. School districts in the Chino Basin have adopted classroom loading standards (number of students per classroom) and collect development fees per square foot of residential, commercial and industrial development. Because the proposed project is not forecast to change land uses, or create activities that can increase demand for additional school capacity beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development, no potential for adverse impacts to schools is identified. No mitigation is required for schools on behalf of OBMPU projects.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located belowground, ancillary facilities would be installed aboveground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of

operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact schools and classroom capacities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The school facilities related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, the proposed AWPF, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for schools. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

d. Parks/Recreation?

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The development of wells and monitoring devices will not cause a significant demand for parks and recreational facilities; however, there is a potential that a proposed well or other OBMPU related facility could be located within parks or facilities designated for residential use. Construction and staging areas may result in the temporary closure of parks or portions of parks. However, several parks in the Chino Basin area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to well development within existing parks, there is a potential for wells or other OBMPU facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such, mitigation is provided below to ensure that, for OBMPU facilities located within vacant land designated for park uses, or OBMPU facilities larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

Once in operation, the proposed wells and monitoring devices would not directly increase the population as discussed under Police Protection, Fire Protection, and Schools, though there is a potential for this development to result in nominal indirect population growth. Overall demand for parks and recreation facilities will be increased based on the future population-based demands of the local agencies within the Chino Basin. The OBMPU is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located belowground, ancillary facilities would be installed aboveground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations

of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact parks or recreation facilities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The park and recreation related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for parks and recreation facilities. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of OBMPU related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

PS-1: **Parkland Disturbance Avoidance or Supplementation.** ***OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2) Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.***

Implementation of Mitigation Measure **PS-1** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant.

Level of Significance After Mitigation: Less Than Significant

e. *Other Public Services/Libraries?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Similar to the discussion under Fire and Police Protection services above, the development of wells and monitoring devices will not cause a significant demand for or increase in library services. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for or increase in library services beyond that which is anticipated in the jurisdiction's General Plans. Operation of the proposed wells and monitoring devices is not forecast to require more than 5 additional permanent employees; however, the overall OBMPU facilities outlined below in the remaining Project Categories are anticipated to require 35 employees, for a total of 40 employees required for the overall facilities proposed as part of the OBMPU. Implementation of the OBMPU will result in direct physical change to existing land uses within the Chino Basin which will facilitate indirect changes in land use by contributing to an adequate water supply to meet long-term, ultimate growth and development projections within the Study Area; however, it is not forecast to change land uses or otherwise create activities that can increase demand for additional library capacity services beyond that which is anticipated in local agency general plans. Libraries are currently provided by the Counties and local agencies under authority of the various jurisdictions that comprise the Chino Basin. OBMPU projects will not produce any direct demand for library capacity or contribute to indirect demand for such services. Mitigation is not required to reduce potential library capacity impacts to a level of less than significant since none is forecast to occur. Overall levels of library service will also be increased based upon the future population based the demands of the local agencies. No potential for any significant demand for library services is identified and no mitigation is required.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located belowground, ancillary facilities would be installed aboveground and would be fenced. As stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of pipelines and ancillary facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR

facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The implementation of the proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of proposed new storage basins, improvements to existing storage basins, new MS4-compliance facilities, and new flood MAR facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact library services exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The library and other public service-related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

The implementation of the proposed improvements at WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, the proposed AWPf, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would not result in a substantial increase in permanent employees in support of the OBMPU operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of OBMPU implementation, which is inclusive of operations of the proposed improvements at the WFA Agua de Lejos Treatment Plant, upgrades to Chino Desalters, new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities. This nominal increase in potential new residents within the Chino Basin may contribute to an increased demand for or increase in library services. As a result, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant.

XV.3 Cumulative Impact Discussion

As previously discussed, the proposed project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would not substantially increase demand for public services. However, the proposed project has a potential to, without 2000 OBMP PEIR Mitigation Measure 4.12-1, which requires all OBMPU project sites to be fenced, attract trespass, and thus result in greater demand for police protection. With the implementation of 2000 OBMP PEIR Mitigation Measure 4.12-1, police protection impacts would be reduced to a level of less than cumulatively considerable, and

therefore would not contribute to significant cumulative impacts thereof. However, the proposed project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the OBMPU could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result. MM **PS-1** would ensure that OBMPU site selection would not impact the cumulatively available parkland within the region, thus reducing the impacts to parks to less than cumulatively considerable. Therefore, the project would not result in a considerable contribution to cumulative impacts to public services.

XV.4 2000 OBMP PEIR Mitigation Measures

The singular 2000 OBMP PEIR Mitigation Measure intended to minimize public services impacts is applicable to the analysis under this issue (Public Services), and has been listed under the impact analysis provided under **XV.2, Impact Discussion**, above. This is: **4.12-1**.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

XVI.1 Environmental Setting

Please refer to the discussion under Parks and Recreation under Public Services XV.1 Environmental Setting for a description of the recreational facilities within the Chino Basin.

XVI.2 Impact Discussion

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

Combined Project Categories

Please refer to the discussion under XV(d) above. Analysis that determined whether the OBMPU would increase the use of existing neighborhood and regional parks or other recreational facilities and physical deterioration thereof is provided under XV(d) above.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation Measure **PS-1**, repeated from Section XV, Public Services above, is required.

PS-1: ***OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2). Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.***

The significance determination is less than significant with the implementation of Mitigation Measure **PS-1**.

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure **PS-1** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant.

- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The development of wells and monitoring devices will not involve the construction or expansion of recreational facilities. There is a potential that a proposed wells or other OBMPU related facility could be located within parks or facilities designated for residential use. Depending on the area required for the well development (anticipated to be less than 0.5 acre), an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts would be the same as described above for Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Storage facilities within existing facilities and storage facilities at the known sites identified in the Project Description would have no potential to impact existing parks or recreational facilities necessitating construction or replacement because none of these sites contains park or recreational facilities.

For flood MAR facilities and new MS4-compliance facilities, impacts would be the same as described above for Project Category 1 and 2, because the location of such facilities is presently unknown.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any large, visible aboveground impacts beyond those facilities outlined herein that would support this expansion. As such, no potential to substantially impact parks or recreation facilities exists.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. The recreation related impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR, and will not be analyzed further as part of this Initial Study.

Improvements at the existing Chino Desalters, improvements to existing groundwater treatment facilities, and at the WFA Agua de Lejos Treatment Plant would occur within existing facilities, and as such, are not designated for park and/or recreation, and as such, would have no potential to impact existing parks or

recreational facilities necessitating construction or replacement because none of these sites contains park or recreational facilities.

For the proposed AWP, new groundwater treatment facilities at or near well sites and at regionally located sites, impacts would be the same as described above for Project Category 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: **PS-1** outlined under issue XV(d) above.*

Implementation of Mitigation Measure **PS-1** above would minimize the potential for loss of park or recreational facilities as a result of OBMPU projects located within facilities designated for such uses. As such, impacts are less than significant.

Level of Significance After Mitigation: Less Than Significant

XVI.3 Cumulative Impact Discussion

As previously discussed, the proposed project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would not substantially increase demand for recreation facilities. However, the proposed project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the OBMPU could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: **PS-1** outlined under issue XV(d) above.*

MM **PS-1** would ensure that OBMPU site selection would not impact the cumulatively available parkland within the region, and should loss of recreation or park facilities occur, the Implementing Agency would be required to prepare subsequent CEQA documentation for any Park or Recreation facilities required to be developed as part of implementation of Mitigation Measure **PS-1**—i.e., in the event an OBMPU Facility would be result in loss of parkland or recreation facilities. This is a mandatory requirement that would be adhered to by implementing agencies, and would thereby ensure impacts to recreational facilities are minimized. Therefore, the project would not result in a considerable contribution to cumulative impacts to public services.

Level of Significance After Mitigation: Less than Significant

XVI.4 2000 OBMP PEIR Mitigation Measures

No 2000 OBMP PEIR Mitigation Measures were identified to minimize Recreation impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

This section describes the existing traffic and transportation system, as well as applicable regulatory framework, potential impacts associated with implementation of the proposed OBMPU, and mitigation measures to reduce those impacts to a level of less than significant.

XVII.1 Circulation System Setting

The Chino Basin is located in southern California within the west end of San Bernardino Valley, just east of Los Angeles County, and northeast of Orange County. The Basin extends barely into the northwest of Riverside County, west of the Santa Ana River and into Los Angeles County at its easternmost edge in the Cities of Claremont and Pomona. The Chino Basin consists overlaps with the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills, and Rancho Cucamonga in San Bernardino County. Portions of the cities of Eastvale and Jurupa Valley are in the Chino Basin, as well as areas of unincorporated San Bernardino and Riverside Counties.

Freeways, arterial highways, and local streets serve as the dominant system of transportation within the Chino Basin. In addition to automobile travel, other transportation systems within the counties include mass transit (bus and passenger train systems), bicycle routes, rail service, pedestrian facilities networks and air transportation. The discussions in the following sections are generally focused on the regional transportation system but also include local transportation/circulation system elements in the Basin. The traffic analysis focuses on the unincorporated county and the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, Eastvale and Jurupa Hills.

The Chino Basin is primarily located in San Bernardino County which currently contains about 10,000 miles of roadways, which includes interstate freeways, U.S. highways, state highways and local roadways (San Bernardino Countywide Plan, 2020). The roadways described below (regional and local) are located within the San Bernardino Valley Region of the county, and many of the roadways extend into western Riverside County and the cities of Eastvale and Jurupa Valley. The roadways referenced in the following text could be affected by commute trips by facilities workers (construction and operations) and truck trips (construction and operations) associated with the proposed project.

Regional Roadways

Interstate 15 (I-15) – I-15 extends north from the San Diego metropolitan area through the western portions of San Bernardino and Riverside Counties and continues in a north-easterly direction to Las Vegas, Nevada and beyond.

Interstate 215 (I-215) – I-215 provides an alternative route to I-15 through San Bernardino County and Riverside County by splitting from I-15 near Devore and reconnecting with the I-15 south in the City of Murrieta.

Interstate 10 (I-10) – I-10 travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Interstate 210 (I-210) – I-210 begins at an interchange with the Golden State Freeway (I-5) in Los Angeles County and continues east across the Valley region to its current terminus at an interchange with the I-10 in Redlands, California.

State Route 60 (SR-60) – SR-60 is an east-west route that extends across the Chino Basin in both counties. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east.

State Route 83 (SR-83) – SR-83 is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between The Foothill Freeway (I-210), Foothill Boulevard (SR-66), the San Bernardino Freeway (I-10), the Pomona Freeway (SR-60) and the Chino Valley Freeway (SR-71).

State Route 71 (SR-71) – SR-71 travels southeast from the I-10/I-210 Interchange in San Dimas to the Riverside Freeway (SR-91) in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 66 (SR-66) – In San Bernardino County, SR-66 begins as Foothill Boulevard at the Los Angeles County line and is classified as a state highway (US 66/SR-66). It extends eastward through the cities of Upland, Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto.

Major Roadways

Chino Basin – East/West Facilities

16th Street / Base Line Road – This primary two- to six-lane arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino and Highland.

4th Street – This four- to six-lane roadway is located in the City of Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside the City of Ontario as San Bernardino Avenue.

Arrow Route – This two- to four-lane roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana and ends in Rialto.

Edison Avenue – This four- to six-lane roadway begins just east of SR-71 in the city of Chino and extend eastward through the city of Ontario. It is classified as a primary arterial.

Grand Avenue – This four- to six-lane primary arterial extends from the boundary between the cities of Chino and Chino Hills westward through Chino Hills into Los Angeles County.

Highland Avenue – Highland Avenue passes through the cities of Rancho Cucamonga, Fontana, Rialto, San Bernardino and Highland. This two- to four-lane roadway originates as a secondary arterial at Amethyst Street in the City of Rancho Cucamonga and continues east to Milliken Avenue.

Merrill Avenue / Mill Street – This two- to four-lane secondary arterial originates at Cherry Avenue in unincorporated San Bernardino County west of the City of Fontana.

San Bernardino Avenue / 4th Street – This two- to four-lane roadway extends across a large portion of San Bernardino County and travels through the cities of Montclair, Ontario (as 4th Street), Rancho Cucamonga, unincorporated San Bernardino County, Fontana and Rialto before ending in the City of Colton.

Valley Boulevard – This four-lane primary arterial runs parallel to I-10 to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and the Cities of Fontana and Rialto before terminating at Mount Vernon Avenue in the City of Colton.

Mission Boulevard – This is a four-lane primary arterial that extends across the Chino Basin from Pomona east through Jurupa Valley where it transitions to become Van Buren Avenue.

Riverside Drive – This roadway varies between a four- and two-lane arterial that extends across the Chino Basin from SR 71 on the west through Eastvale and Jurupa Valley, terminating at Etiwanda Avenue in the latter city.

Basin – North/South Facilities

Alder Avenue – Alder Avenue is a two- to four-lane north-south connector that provides access along the eastern boundary of the City of Fontana. This facility is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This four- to six-lane primary arterial extends from Hillside Road in the City of Rancho Cucamonga, through the City of Ontario and into Riverside County. This facility is a major north-south corridor across San Bernardino County that provides access to both I-210, I-10 and SR-60 as well as Ontario International Airport.

Central Avenue – This four- to six-lane roadway travels through the cities of Upland, unincorporated San Bernardino County, Montclair and Chino along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this facility provides a north-south connection between I-10, SR-60 and SR-71.

Cherry Avenue – This four- to six-lane roadway is located almost entirely within the City of Fontana with a portion travelling through unincorporated San Bernardino County. This roadway extends from north of I-15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This facility provides a connection between I-210 and I-10 and the I-10 to SR 60.

Citrus Avenue – Citrus Avenue is a two- to four-lane roadway located in the City of Fontana that extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as a primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Etiwanda Avenue – Etiwanda Avenue is a four- to six-lane primary arterial located in the cities of Rancho Cucamonga, Ontario, Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Grove Avenue – This roadway is a four-lane secondary arterial that extends from Foothill Boulevard in the City of Upland south to the Chino Airport in the City of Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.

Haven Avenue – Haven Avenue is a four- to eight-lane primary arterial located in the City of Rancho Cucamonga and extending through the City of Ontario. This roadway provides direct access to I-210, I-10 and SR-60.

Monte Vista Avenue – Monte Vista Avenue is a four- to six-lane roadway that begins at SR-210 in Los Angeles County and travels south through the cities of Montclair and Chino. Between I-210 and I-10, this roadway is classified as a primary arterial.

Mountain Avenue – The northern terminus of this two- to six-lane roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and the cities of Upland and Ontario before ending at Edison Avenue in the City of Chino. This facility is classified as a primary arterial except for the segment between 19th Street and 16th Street, which is classified as a state highway (SR-30).

Sierra Avenue – Sierra Avenue is a two- to six-lane major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the extreme northern portion of the City of Fontana. It is a primary arterial and has interchanges with I-15, I-210 and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Public Transportation

The public transit agencies that serve the project area include Omnitrans, Foothill Transit Agency, Valley Transportation Service (which is specifically dedicated to improving mobility for senior, disabled, and low-income residents within San Bernardino Valley), and the Riverside Transit Authority bus system. These public transit agencies provide bus services with a wide variety of bus routes across the counties overlapping the Chino Basin, as well as into adjacent jurisdictions. In addition to the local transit agencies, Greyhound offers regional and nationwide bus service to San Bernardino County residents with seven stations located throughout San Bernardino County boundaries and offers connections to location such as Los Angeles, Las Vegas, and Phoenix. San Bernardino County Transportation Authority (SBCTA)⁸⁷ also operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Metrolink provides east-west passenger train service in the Valley Region, with both at-grade and grade-separated crossings of the tracks that are approximately midway between I-10 and I-210.

Bicycle and Pedestrian Transportation

The county's existing bicycle and pedestrian facilities are outlined in the Non-Motorized Transportation Plan (NMTP) prepared by SANBAG in 2015. The NMTP outlines the type of bicycle and pedestrian facilities that currently exist within the county, as well as includes planning efforts and recommendations for future facilities. In regards to bicycle facilities, the county includes three classes of bikeways: Class I (Shared Use Path or Bike Path), Class II (Designated Bike Lane), and Class III (Designated Bike Route). While there are numerous bikeways of all three classes across the county, the NMTP designates trails that bicyclists can utilize, which includes the Pacific Electric Trail, Santa Ana River Trail, Flood Control Channels, Power Line Corridors, Cajon Pass Connector – Route 66 Heritage Trail, and Orange Blossom Rail Trail. In regards to pedestrian facilities, there are many designated trails and sidewalk systems that can be utilized by pedestrians within the county.

Truck Routes

Cities often develop a truck route plan, which designates truck routes to provide contractors with the preferred travel roadways to and from connecting local roadways. For example, the cities of Upland, Rancho Cucamonga, Fontana, Montclair, Ontario and Chino have such plans.

Railroad Circulation System

The rail network within Chino Basin includes all rail lines or other facilities currently served by a railroad for passenger or freight movement, rail lines used for recreational service, rail lines not currently in use, and abandoned rail lines or facilities (either with or without track). Union Pacific Railroad serves most of Chino's manufacturing and distribution facilities with additional vacated rail lines and land set aside for activation as needed.

⁸⁷ In January 2017, the San Bernardino Associated Governments (SANBAG) split into the San Bernardino County Transportation Authority (SBCTA) and San Bernardino Council of Governments (SBCOG).

The Southern California Regional Rail Authority (SCCRA) is a regional Joint Powers Authority. Its purpose is to plan, design, construct, operate, and maintain regional commuter rail lines serving the counties of San Bernardino, Los Angeles, Orange, Riverside, and Ventura. The SCRRRA consists of the five county transportation agencies identified above, including SBCTA. SCRRRA operates on conventional railroad track and right-of-way (ROW), which are owned either by one of the County transportation agencies or by a private freight railroad company that has conveyed operating rights to SCRRRA. The design, operation, and maintenance of the SCRRRA system are governed by Federal Railroad Administration (FRA) regulations and California Public Utilities Commission (CPUC) General Orders (GOs).

Aviation Circulation System

Aviation facilities in the Chino Basin consist of Ontario International Airport (ONT) and the Chino Airport. ONT serves the western United States via transcontinental and international flights and is also the location of United Parcel Service's Southern California primary hub serving the entire western United States along with major shippers such as FedEx and DHL. Chino Airport is available for corporate flights and small cargo transport.

XVII.2 Regulatory Framework

State

California Transportation Plan

The California Transportation Plan is prepared by the California State Transportation Agency every five years to provide a long-range policy framework to meet the State's future mobility needs and reduce greenhouse gas emissions to goals set by the California Global Warming Solutions Act of 2006 (AB 32; discussed in Subchapter 4.8, Greenhouse Gas Emissions/Climate Change) and implementing legislation SB 375 (discussed below). The most recent California Transportation Plan was adopted in 2021. The California Transportation Plan defines goals, performance-based policies, and strategies to achieve the State's collective vision for a future statewide, integrated, multimodal transportation system by envisioning a sustainable system that improves mobility and enhances quality of life.

Senate Bill 743

SB 743 (2013) changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact. (See PRC § 21099(b)(2) ["automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA]"].)

Under SB 743, the Governor's Office of Planning and Research (OPR) established vehicle miles traveled (VMT) as the preferred metric for measuring transportation impacts of most projects in place of level of service (LOS) or related measures of congestion as the primary metric. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, as of July 1, 2020, is the required metric statewide.

The California Department of Transportation (Caltrans) has provided two guidance documents to address VMT impacts on the state highway system consistent with the requirements of SB 743 and the OPR Technical Advisory:

- The Transportation Analysis under CEQA provides information to support CEQA practitioners in making CEQA significance determinations for transportation impacts of projects on the state highway system.
- The Transportation Analysis Framework guides the preferred approach for analyzing the VMT attributable to proposed projects (induced travel) in various project settings.

CEQA Guidelines Section 15064.3

CEQA Guidelines Section 15064.3 implements SB 743 and establishes VMT as the most appropriate measure of transportation impacts. This marks a shift away from the traditional LOS analysis that evaluated

the impacts of a project on traffic conditions at nearby roadways and intersections. The primary components of Section 15064.3 include:

- Identifies VMT as the most appropriate measure of transportation impacts
- Declares that a project's effect on automobile delay shall not constitute a significant environmental impact (except for projects increasing roadway capacity)
- Creates a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT
- Allows a lead agency to qualitatively evaluate VMT if existing models are not available
- Gives lead agencies discretion to select a methodology to evaluate a project's VMT, but requires lead agencies to document that methodology in the environmental document prepared for the project

CEQA lead agencies were required to comply with CEQA Guidelines Section 15064.3 no later than July 1, 2020.

California Vehicle Code Division 15, Chapters 1-5

Caltrans is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards related to transportation safety, design, performance, and accessibility. Specifically, California Vehicle Code Sections 35000-35796 include regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Streets and Highway Code Sections 660-771

Caltrans has the discretionary authority to issue special permits for the use of State highways for other-than-normal transportation purposes and reviews requests from utility companies, developers, and others desiring to conduct activities within State highway rights-of-way. Caltrans encroachment regulations would apply to construction of the proposed project facilities within and immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area. Specifically, California Streets and Highway Code Sections 660-771 include regulations pertaining to transportation of oversized loads, certain materials, and construction-related roadway transportation disturbance.

Regional

2020-2045 SCAG Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the designated Metropolitan Planning Organization for San Bernardino, Riverside, Los Angeles, Orange, Imperial, and Ventura counties. On September 3, 2020, SCAG adopted its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS presents the transportation vision for the SCAG region through the year 2045 and provides a long-term investment framework for addressing the region's transportation and related challenges. The RTP/SCS focuses on maintaining and improving the transportation system through a balanced approach and considers economic, environmental, public health, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth. Specifically, the RTP/SCS vision is to locate housing, jobs, and transit closer together; increase investment in transit and complete streets; and increase mobility options to achieve a more sustainable growth pattern.

San Bernardino County Long Range Transit Plan

SANBAG is the council of governments and transportation planning agency for San Bernardino County. In January 2017, SANBAG split into the San Bernardino County Transportation Authority (SBCTA) and San Bernardino Council of Governments (SBCOG). SBCOG and SBCTA are responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide, respectively, and, thus, SBCTA supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, and long-term planning studies. The Long-Range Transit Plan (LRTP) addresses the county's current and future travel challenges and provides a system of transit facilities and services that can increase transit's role in the future. The recommended

L RTP began by developing and analyzing a wide range of alternatives designed to meet the needs of the county. Alternatives were developed based on the identification of major travel markets and their ability to generate potential ridership. The recommended L RTP for the county offers the best transit improvements to address growing travel demand anticipated through 2035.

Riverside County Transportation Commission

The Riverside County Transportation Commission (RCTC) offers transportation solutions that connect your life. RCTC fiscally-responsible steward of your Measure A sales tax dollars, which fund transportation improvements that Riverside County voters have approved by more than a two-thirds vote.

RCTC is governed by elected representatives: one from each city council and all five County Supervisors within Riverside County, plus a representative of Caltrans. RCTC is operated by a small team of public servants, who are charged with delivering on Measure A's promises to the taxpayers of Riverside County. RCTA harnesses the efficiency and innovation of the private sector to deliver many of the projects, plans and programs that you see on the road.

Los Angeles County Metropolitan Transportation Authority

Los Angeles County Metropolitan Transportation Authority (Metro) is unique among the nation's transportation agencies. Metro serves as transportation planner and coordinator, designer, builder, and operator for the country's largest, most populous county. More than 10 million people – nearly one-fourth of California's residents – live, work and play within Metro's 1,433-square-mile service area. Metro is governed by elected representatives.⁸⁸

County and City General Plans and Ordinances

Local regulations and ordinances vary widely in the Chino Basin. Transportation-related policies included in General Plans typically concern transportation resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions within their general plans that pertain to construction activities in or through their jurisdictional areas, such as assigning construction truck routes or requiring the development and implementation of construction transportation management plans.

Southern California Regional Rail Authority

The Southern California Regional Rail Authority (SCCRA) is a regional Joint Powers Authority. Its purpose is to plan, design, construct, operate, and maintain regional commuter rail lines serving the counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCRRA consists of the five county transportation agencies identified above, including the San Bernardino Associated Governments. SCRRA operates on conventional railroad track and right-of-way (ROW), which are owned either by one of the county transportation agencies or by a private freight railroad company that has conveyed operating rights to SCRRA. The design, operation, and maintenance of the SCRRA system are governed by Federal Railroad Administration (FRA) regulations and California Public Utilities Commission (CPUC) General Orders (GOs) (SCRRA, 2014).

County and City Land Use Regulations and Ordinances

Local regulations and ordinances vary widely in the Chino Basin. Traffic-related policies included in General Plans typically concern traffic resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions to their General Plans that pertain to construction activities in or through their jurisdictional areas, such as assigning truck traffic routes or requiring the development of Traffic Control Plans.

XVII.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this EIR and consistent with Appendix G of the *CEQA Guidelines*, the proposed project would have a significant impact on transportation if it would:

⁸⁸ Los Angeles County Metropolitan Transportation Authority, 2023About. <https://www.metro.net/about> (accessed 03/12/23)

- a) *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;*
- b) *Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);*
- c) *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or*
- d) *Result in inadequate emergency access.*

The following discussion of environmental impacts is limited to those potential impacts that could result in some level of potentially significant environmental change to the transportation/circulation system, as defined by CEQA. The project would not cause substantial long-term/on-going effects because project facilities, once constructed, would only require maintenance activities similar to those that occur under existing conditions and the increase in employees due to the implementation of the OBMPU is forecast to result in less than an estimated 40 new employees.

The duration of the potential significant impacts would be limited to the period of time needed to construct a project. Therefore, level-of-service standards and a congestion management program, which are intended to monitor and address long-term traffic impacts resulting from future development, do not apply to temporary impacts associated with construction activities. Implementation of the proposed master plan would not directly or indirectly eliminate existing or planned alternative transportation corridors or facilities (bicycle paths, lanes, bus turnouts, etc.), include changes in policies or programs that support alternative transportation, or construct permanent aboveground facilities in locations in which future alternative transportation facilities are planned. Therefore, no impact would occur under these three categories, and these categories are not discussed further within this section.

Methodology

This section assesses the transportation impacts that could result from the implementation of the OBMPU Program Elements over the next approximately 20 years (through 2040). Because of the geographic scale of the Chino Basin and the as-yet-undetermined locations of many facilities/projects, this impact assessment was conducted at a programmatic level. Assumptions regarding the types of equipment and vehicles, and the types of roads used for workers to commute to and from work sites and for trucks to haul materials were used to assess the overall significance of program impacts. It is assumed that supplemental project-level analysis of transportation-related impacts (e.g., traffic safety analysis of heavy vehicles travelling on, and turning onto and off of, local roads) would be likely required for site specific facilities prior to commencement of construction activity.

Impacts Discussion

- a. *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

The proposed program would construct and operate facilities identified in the OBMPU. Implementation of actions under this program would require the construction and maintenance of various facilities. Based on the typical sizing for such facilities, the proposed project may potentially introduce congestion and delays for traffic flow on area roadways. Increased traffic would be generated primarily by construction workers commuting to and from the facility work sites, and by trucks hauling materials and equipment to and from the sites. Construction equipment would be delivered to, and removed from, each site as needed; i.e., the movement of equipment would not occur on a daily basis. Note also that these project impacts to the area circulation system will occur sporadically over the 30-year period of OBMPU implementation.

The construction traffic impacts associated with each individual facility would be short-term in nature and limited to the period of time when construction activity is taking place for that particular facility. The primary off-site impacts resulting from the movement of construction trucks would include a short-term and intermittent reduction of roadway capacities due to the slower movements and larger turning radii of the trucks compared to passenger vehicles. Drivers could experience delays if they were travelling behind a heavy truck. The added traffic would be most apparent on local two-lane roadways. Although project-related traffic would be temporary, supplemental project-level analysis of potential site-specific impacts could

determine that addition of project-generated traffic would be considered substantial in relation to traffic flow conditions on local roadways. The potential impacts resulting from the implementation of the OBMPU projects are described below by project category and the combination of all four project categories.

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin, but with an emphasis on new well facilities north of State Highway 60 (SR 60). Also, all of the wells and support facilities will be installed outside of road rights-of-way (ROWs) so there would be minimal conflict between Category 1 facility construction activities and roadway operations, including bicycle paths and sidewalks.

The construction of the proposed well and ancillary facilities would require a maximum of 10 workers per day, generating about 15 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that a maximum of 2 haul trucks and 1 vendor truck would be needed each day, generating up to 3 one-way truck trips per day. The well drilling or ancillary facility construction workers associated with Project Category 1 activities are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that would provide access to the locations of the wells or ancillary facilities. For this program-level assessment, this impact is considered to be less than significant. This is because even when large truck trips are assigned a passenger car equivalent (PCE) of three trips, the total number of all trips per day would be less than 50 trips for Project Category 1 facilities.

Once installed, Project Category 1 facilities may require future maintenance visits (one trip per week estimated) or future repairs which would not normally require implementation of Mitigation Measure **TRAN-1** because Category 1 facilities will rarely encroach into ROWs. Project Category 1 facilities may involve the employment of 5 additional persons at Watermaster or Stakeholder Agencies. This would result in a nominal increase in area roadways, and thus, this operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin. It is assumed that most pipelines will be installed within existing, disturbed public rights-of-way (ROW) with support facilities in adjacent developed areas, including reservoirs.

Improvements to conveyance systems and ancillary facilities include but are not limited to: installation of new pipelines, rehabilitation of old pipelines, pump stations, lift stations, emergency generators, meters, electrical, system improvements, tanks, and discharge relocations. The proposed improvements to conveyance systems and ancillary facilities would be implemented throughout the entire Chino Basin.

The construction of the proposed conveyance systems and ancillary facilities would require a maximum of 140 workers per day, generating about 280 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that up to 3 haul trucks and 23 vendor trucks would be needed each day, generating up to 52 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors.

In addition to the increased traffic on area roadways, the installation of new pipelines and rehabilitation of old pipelines would temporarily reduce the capacity of roadways along the pipeline alignment(s) due to open-trenching within existing roadway ROWs and the resulting temporary lane closures on the affected roadways. The impact of the lane closures would vary based on the number of lanes needed to be closed (a function of pipeline diameter and trench width) and the width (number of lanes) of the affected roads. Multi-lane roads (four or more lanes) would be better able to accommodate two-way traffic than two-lane roadways. Two-lane roads would likely require active traffic control (flaggers) to allow alternate one-way traffic flow on the available road width, and could possibly require full road closure (with detour routing around the construction work zone). For this program-level assessment, this impact is considered potentially significant.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5,8-9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

The storage basins, recharge facilities, storage bands, flood MAR facilities and most of the MS4 facilities will be located on land outside of road ROWs. Some MS4 facilities may be installed in roadways (such as drainage inlets on roadways that require treatment systems), but these MS4 facilities offer little potential to support surface water recharge. Similar to Project Category 1 such facilities have little potential to directly impact roadways and related traffic. However, indirectly the construction of Category 3 facilities (particularly the storage basins) may generate sufficient traffic during construction to affect local roadways, such as Central Avenue, El Prado Road or Kimball Avenue that could provide access to a CIM storage basin site.

The construction of new storage basins or expansion of existing storage basins, construction of new recharge basins may require a maximum of 46 workers, generating about 92 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that up to 200 haul trucks would be needed each day, with an additional 6 truck trips per day for the modifications to existing basins. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalter; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

These improvements would be installed at facilities throughout the Chino Basin. All improvements and support facilities will be installed outside of road rights-of-way (ROWs) on existing sites, or in the case of a new advanced water treatment facility at a new location, but still out of public roadway alignments. Thus, there would be minimal conflict between Project Category 4 facility construction activities and roadway operations, including bicycle paths and sidewalks.

The construction of the proposed improvements and new advanced water facility would require a maximum of 60 workers per day, generating about 120 one-way vehicle trips (assuming each worker commuted in their own private vehicle). It is estimated that up to 80 trucks would be needed each day, generating up to 160 one-way truck trips per day. The construction workers are expected to arrive at and depart from each day's work sites during a one-hour period at the start and end of the work day, respectively, while truck trips

would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the pipeline corridors.

Once construction is completed, Project Category 4 facilities will either continue modified operations, or in the case of a new advanced water treatment or new regional or site-specific groundwater treatment facilities, will require a new employee base. Project Category 4 facilities may involve the employment of 35 additional persons at Watermaster or Stakeholder Agencies. Overall changes in traffic due to these OBMPU facilities would not make any major changes in traffic during operations. This potential operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation. This would result in a nominal increase in area roadways, and thus, this operational impact is considered a less than significant impact to traffic flow or the circulation system without mitigation.

Combined Project Categories Impact

The implementation of improvements proposed in Project Categories 1 through 4 could occur concurrently. Based on a conservative assumption that the maximum trips by project category occur concurrently, there would be a maximum of several hundred one-way vehicle trips per day by construction workers and a maximum of several hundred one-way truck trips per day. As stated above, the construction workers are expected to arrive at and depart from the work sites during a one-hour period at the start and end of the work day, respectively, while truck trips would be spread over the course of the work day. Both the worker trips and truck trips would be spread over different roads that provide access to the locations of the treatment facilities. For this program-level assessment, this combined impact is considered potentially significant.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measure **TRAN-1** is required to achieve a less than significant impact.*

The following mitigation measure has been adapted from the 2000 OBMP PEIR (measures 4.7-2, 4.7-3, 4.7-4, and 4.7-5). The modified measure proposed below is more broad than 2000 OBMP PEIR Mitigation Measure **4.7-2, 4.7-3, 4.7-4, and 4.7-5**, which more generally require maintaining adequate traffic management, and minimization of traffic hazards. As such, the following mitigation measure represents an adapted version of 2000 OBMP PEIR Mitigation Measure **4.7-2, 4.7-3, 4.7-4, and 4.7-5**.

TRAN-1: Prepare and Implement Construction Transportation Management Plan

A construction Transportation Management Plan (TMP) shall be developed and implemented by the implementing agency in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of OBMPU facilities that generate greater than 50 construction (passenger car equivalent [PCE]) or operational trips per day, or where the facility would encroach within road rights-of-way. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.

Damage Repair: The TMP shall include the following requirements to minimize damage to the existing roadway network:

- *A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water conveyance pipelines.*
- *The roadway network along the proposed water distribution alignment(s) shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.*
- *Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the Implementing Agency or its contractors shall repair all damage.*

Coordination with Emergency Services: *The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public rights-of-way if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.*

Coordination with Active Transportation Facilities: *The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.*

Coordination with SBCTA: *If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with SBCTA and Metrolink.*

Coordination with Caltrans: *If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.*

Coordination with Nearby Construction Sites: *The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:*

- *All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures*
- *All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips*
- *The Implementing Agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.*

Transportation Control and Safety: *The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.*

Plan Approval: *The TMP shall be submitted to SBCTA and the respective city community development departments for review and approval.*

Mitigation Measure **TRAN-1** would require, for projects that would potentially impact circulation (construction of OBMPU facilities that generate greater than 50 construction [PCE] or operational trips per

day, or where the facility would encroach within road rights-of-way) implementation of designated construction roadway vehicle routes, damage repair procedures, and transportation control measures to minimize potential impacts to the movement and circulation of vehicles, public transit, bicycles, and/or pedestrians within the project area due to construction roadway vehicle volumes and lane and/or road closures during project construction. In addition, Mitigation Measure **TRAN-1** would require coordination with SBCTA and designation of alternative bicycle and pedestrian routes during project construction to compensate for impacts to transit stops and bicycle and pedestrian facilities. As a result, implementation of Mitigation Measure **TRAN-1** would reduce construction transportation circulation system impacts to a less-than-significant level.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the Chino Basin continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the project area. This substantial increase from cumulative development is expected to result in significant cumulative impacts on the existing transportation systems. Because the construction activities associated with the OBMPU projects would increase construction traffic on the area roadways and potentially cause significant impacts, the OBMPU projects' contribution to cumulative impacts on roadways would be cumulatively considerable and a potential significant cumulative impact would occur.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **TRAN-1** would reduce cumulative impacts.*

However, the implementation of Mitigation Measure **TRAN-1** would reduce the project's contribution to potential construction traffic impacts to less than significant. The above measure would require all construction activities to be conducted in accordance with an approved construction TMP, which would serve to reduce the construction-related traffic impacts to the maximum extent feasible. Thus, the proposed OBMPU would not contribute cumulatively considerable contributions to cumulative transportation circulation system impacts.

Level of Significance After Mitigation: Less than Significant

b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Construction

Vehicle miles traveled (VMT) in support of infrastructure construction and operation over the next 20 years will be responsive to the need for travel during both construction and operations. Unlike a development project, traffic in support of OBMPU facilities will be sporadic (construction and operations) and based on demand, not discretionary travel associated with a residence. Increases in VMT from construction would be short-term, minimal, and temporary. The duration of the potential significant impacts would be limited to the period of time needed to construct individual projects. As such, VMT standards, which are intended to monitor and address long-term transportation impacts resulting from future development, do not apply to temporary impacts associated with construction activities. Therefore, no construction impact associated with VMT per CEQA Guidelines Section 15064.3 would occur.

Operation

The proposed project would not cause substantial long-term/ongoing transportation effects, because proposed project facilities, once constructed, would only require maintenance activities similar to those that occur under existing conditions and the increase in employees due to the implementation of the proposed project is forecast to result in less than an estimated 40 new employees over the OBMPU implementation horizon (through 2040). It is anticipated that these maintenance trips, including monthly visits to the monitoring equipment (flow meters, transducer data loggers, flow and stage measuring equipment, extensometers, monitoring wells, etc.) would not total more than about 100 trips in a given day. During

project operation, project-related roadway vehicle trips would include daily employee trips to and from the proposed new up to 9,000 afy AWPf, groundwater treatment facilities at or near well sites, and groundwater treatment facilities at regionally located sites. The Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (2018) states, "Projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant VMT impact." As discussed under Response (a), scheduled maintenance visits would also occur in the future with one trip per maintenance event, as would monitoring visits to the proposed monitoring devices, with occasional trips also occurring when unforeseen circumstances arise that would require maintenance or repair of certain facilities. As such, as discussed above, the proposed project would generate less than 110 trips per day, which is the recommended screening threshold. Therefore, the proposed project would not result in a substantial addition of VMT per service population or induce additional roadway vehicle travel by increasing physical roadway capacity or adding new roadways to the network. Therefore, no operational impact associated with VMT per CEQA Guidelines Section 15064.3 would occur.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures:

While no mitigation is required to minimize VMT impacts from OBMPU project implementation, the 2000 OBMP PEIR identified mitigation measures that would reduce demand for roadway capacity, which would contribute to further reducing OBMPU VMT. This measure has been abstracted from the 2000 OBMP PEIR (measure 4.7-6):

4.7-6 *Emphasize transportation demand management or non-motorized transportation alternatives for OBMP project related employees, where feasible, to reduce demand for roadway capacity.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the Chino Basin continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the project area. This substantial increase from cumulative development is expected to result in significant cumulative vehicle miles travelled.

Level of Significance Before Mitigation: Less than Significant

Cumulative Measures: 2000 OBMP Mitigation Measure 4.7-6 is required to minimize cumulative impacts.

As described above, the OBMPU project's contribution to cumulative vehicle miles travelled would be less cumulatively considerable considering the proposed operation of the OBMPU screens out of the designated VMT threshold, and furthermore would implement 2000 OBMP PEIR Mitigation Measure **4.7-6**, which would reduce demand for roadway capacity thereby further reducing OBMPU VMT and therefore a less than significant cumulative impact would occur.

Level of Significance After Mitigation: Less than Significant

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Note that no operational traffic or circulation system impacts due to any design features have been identified for the four project categories evaluated under the OBMPU.

Construction

Construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. Lane and/or road detours or closures may be required where specific facilities would be installed within public rights-of-way. Construction equipment and materials may be staged temporarily within the public rights-of-way. Lane detours or closures have the potential to increase conflicts between vehicles, bicyclists, and pedestrians; however, implementation of existing regulations and policies for road closures and lane detours within the cities of Chino Hills, Chino, Claremont, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, and San Bernardino County, Riverside County, or along Caltrans facilities would reduce the potential for project construction to increase hazards in the project area. Although construction of the wells and monitoring devices could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when project construction is completed. The potential conflicts between construction trucks and automobiles on local roadways are considered a less than significant impact through implementation of Mitigation Measure **TRAN-1**.

Operation

Operation would not include alterations to existing roadway alignments or intersections in the project area, and therefore, would not include sharp curves or unsafe designs that would increase transportation-related hazards. The proposed facilities may include new driveway access points; however, design of such driveways would be required to comply with local codes and standards for ingress and egress for the cities of Chino Hills, Chino, Claremont, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, Riverside and San Bernardino County. As such, the proposed project would not create a hazardous condition that currently does not exist for motorists, transit riders, pedestrians, or bicyclists nor would it include incompatible uses for the project area. Therefore, operational impacts from the proposed OBMPU facilities related to transportation and circulation hazards would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measures **TRAN-1** is required to achieve a less than significant impact.*

Mitigation Measure **TRAN-1** would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of Mitigation Measure **TRAN-1** would reduce construction impacts related to emergency access to a less than significant level.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. This increase in cumulative traffic volumes could result in significant hazard impacts. Because the proposed construction activities associated with the OBMPU projects could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, potential conflicts between construction trucks and automobiles could result in significant traffic hazard impacts.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measures **TRAN-1** is required to achieve a less than significant impact.*

The implementation of MM **TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. Thus, the proposed OBMPU would not contribute cumulatively considerable contributions to cumulative traffic related hazards and incompatible use impacts.

Level of Significance After Mitigation: Less than Significant

d. Result in inadequate emergency access?

Please refer to the discussion under emergency evacuation routes under Section IX, Hazards and Hazardous Materials for a discussion of potential impacts to emergency access issues.

Construction

Construction would not alter the physical configuration of the existing roadway network serving the area, and would not introduce unsafe design features. However, construction activities would have temporary effects on roadway vehicle flow and lane configurations at specific intersections and roadways due to potential lane and/or road closures, which would potentially impact emergency access and response times in the project area. Construction activities could also temporarily block access to some roadways and driveways that are currently used by emergency response vehicles or in emergency evacuations. Although construction of the wells and monitoring devices could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when project construction is completed.

Operation

Operation of the proposed facilities would not block roadways or driveways, and emergency access to the proposed facilities would be provided in accordance with applicable regulations, such as the California Fire Code, and submitted for review to the applicable local agency/agencies. As such, the proposed project would provide at least two separate apparatus access roads for proposed facilities requiring regular employee presence with the fire apparatus access roads having a minimum width of 20 feet. Therefore, operational impacts related to emergency access would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measures **TRAN-1** and **WF-1** is required to achieve a less than significant impact. Mitigation Measure **WF-1** can be found in full under Subsection XX, Wildfire, of this Initial Study.*

Mitigation Measures **TRAN-1** and **WF-1** would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of Mitigation Measures **TRAN-1** and **WF-1** would reduce construction impacts related to emergency access to a less than significant level.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. Cumulative construction activities are expected to increase construction vehicles travelling on the roadways. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Cumulative

construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access.

The implementation of some of the cumulative projects within the Chino Basin could result in lane closures during construction activities. Lane closures due to cumulative construction activities could result in potential access impacts on emergency vehicles. As such, implementation of Mitigation Measure **TRAN-1** would reduce the project's cumulative contribution to potential construction impacts on emergency access to a less than significant impact. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

XVII.3 2000 OBMP PEIR Mitigation Measures

Some of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Transportation), and have been listed under the impact analysis provided under **XVII.2, Impact Discussion**, above. These are: **4.7-2** through **4.7-7**. 2000 OBMP PEIR Mitigation Measure **4.11-6** is incorporated as originally identified in the 2000 OBMP PEIR. 2000 OBMP PEIR Mitigation Measures **4.7-2** through **4.7-5**, and **4.7-7** have been modified to better address the minimization of potential impacts associated with the OBMPU. 2000 OBMP PEIR Mitigation Measure **4.7-1** has been omitted from this analysis, which is discussed in more detail below.

The following mitigation measure has been adapted from the 2000 OBMP PEIR (measures **4.7-2**, **4.7-3**, **4.7-4**, and **4.7-5**). The modified measure proposed below is more broad than 2000 OBMP PEIR Mitigation Measure **4.7-2**, **4.7-3**, **4.7-4**, and **4.7-5**, which more generally require maintaining adequate traffic management, and minimization of traffic hazards. As such, the following mitigation measure represents an adapted version of 2000 OBMP PEIR Mitigation Measure **4.7-2**, **4.7-3**, **4.7-4**, and **4.7-5**, and these measures are therefore no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.7-1** requires a traffic study to be prepared for each project that would increase traffic generation. As discussed above, the operational impacts of OBMPU facility traffic generation over the long term was determined to be less than significant based on the minor number of trips that would be generated by the overall program over the 20-year OBMPU project horizon. As operational impacts would be less than significant, 2000 OBMP PEIR Mitigation Measure **4.7-1** is not necessary to minimize impacts, and is therefore no longer applicable.

2000 OBMP PEIR Mitigation Measures **4.7-7** requires ingress and egress to be reviewed by the agency with jurisdiction over the applicable roadway. As discussed above, the design of such driveways would be required to comply with local codes and standards for ingress and egress for the cities of Chino Hills, Chino, Claremont, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, Riverside and San Bernardino County. Therefore, no mitigation is necessary to enforce this requirement, and as such, 2000 OBMP PEIR Mitigation Measure **4.7-7** is not necessary to minimize impacts, and is therefore no longer applicable.

Thus, 2000 OBMP PEIR Mitigation Measures **4.7-1** through **4.7-5** and **4.7-7** are no longer applicable for the purposes of the OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a-b. *Potentially Significant Impact* – Cumulatively, the facilities proposed by the OBMPU may result in impacts to tribal cultural resources. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this topic will be further evaluated in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION:

XIX.1 Environmental Setting

Of the issues covered under the Utilities topic, water supply and extension of infrastructure will be carried over to the RDSEIR because these topics may be significant. As such, these topics will not be discussed as part of the Environmental Setting in this Initial Study.

Wastewater and Water Treatment Facilities

There are several wastewater providers within the Chino Basin, though the provider with the largest service area is the Inland Empire Utilities Agency (IEUA), which has constructed a Regional Sewerage System within its service area to collect, treat and dispose of wastewater delivered by local sewage collection agencies. As a regional wastewater treatment agency, IEUA provides sewage utility services to seven sewage collection agencies currently by ordinance: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and the Cucamonga Valley Water District. The local sewage collection agencies are responsible for wastewater collection within their individual service areas. A system of regional trunk and interceptor sewers that convey sewage to regional wastewater treatment plants are owned and operated by IEUA. IEUA's wastewater collection system is divided into two major service areas: the Northern Service Area and the Southern Service Area.

IEUA receives approximately 50 MGD of wastewater annually at four wastewater treatment and water recycling plants: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5) and Carbon Canyon Water Recycling Facility (CCWRF). Regional Water Recycling Plant No. 2 (RP-2) no longer operates its liquid treatment sections as of 2002, and only treats solid waste. Recycled water from the plants is treated to Title 22 regulations set forth by the California Department of Health Services and distributed throughout the service area. IEUA

currently delivers approximately 30,000 acre-feet per year (AFY) of recycled water for such uses as agriculture, irrigation, industrial uses, and groundwater replenishment. In addition to its water recycling plants, IEUA operates the Chino I Desalter, a water desalter treatment plant in Chino. The Chino Basin Desalter Authority (CDA) oversees management of the Chino I Desalter, along with the Chino II Desalter located in Jurupa Valley.

In addition to IEUA, there are several other wastewater treatment providers in Chino Basin. For instance, the City of Riverside, Inland Empire Brine Line owned by the Orange County Sanitation District, and the Western Riverside County Regional Wastewater Authority (WRCRWA) each treat a portion of the wastewater generated within the Jurupa Community Services District (JCSD). Finally, the Sanitation Districts of Los Angeles County operates a treatment plant that collects wastewater from the City of Pomona, and collects wastewater from La Verne, Pomona, and Claremont. The respective operational treatment plants are described below.

IEUA Wastewater Treatment Plants

RP-1 is located at 2662 East Walnut Street in the City of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 million gallons per day. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, Upland, and solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 28 million gallons per day. RP-1 includes both liquid and solid treatment processes.

RP-2 is located at 16400 El Prado Road in Chino and has been in operation since 1960. The plant operated both liquids and solids treatment sections until 2002, when RP-5 was constructed to handle the liquids treatment section portion of RP-2. Accordingly, solids are now removed from CCWRF and RP-5 and treated at RP-2. The solids treatment section begins with thickening the solids removed from the RP-5 and CCWRF primary and secondary clarification processes. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility (IERCF) in the City of Rancho Cucamonga for further treatment to produce Class A compost. Note that this treatment activity will end when the new, expanded RP-5 facilities becomes operational. Because RP-2 is below the 100-year flood hazard area behind Prado Dam, almost all operational will be terminated when RP-5 becomes fully operational.

RP-4 is located at 12811 6th Street in the City of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic wastewater treatment capacity to 14 MGD. The plant serves areas of Fontana, Rancho Cucamonga, and unincorporated San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD.

RP-5 is located at 6063 Kimball Avenue, Building C in the City of Chino and has been in operation since 2004. The design hydraulic domestic wastewater treatment capacity is 16.3 million gallons per day, which includes 1.3 million gallons per day of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 9 MGD.

CCWRF is located at 14950 Telephone Avenue in the City of Chino and has been in operation since 1992. The design hydraulic domestic wastewater treatment capacity is 11.4 million gallons per day. The plant serves areas of Chino, Chino Hills, Montclair and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD.

Non-Reclaimable Wastewater System (NRWS) is operated by IEUA. It is infrastructure for disposal of high-salinity wastewater (brine) and other non-reclaimable high-strength wastewater. The NRWS is comprised of three pipelines shown on Figure 3: the NRWS pipeline, the Etiwanda Wastewater Line (EWL), and the Inland Empire Brine Line (IEBL). The NRWS is split into two service areas within IEUA's jurisdiction. The North NRWS is comprised of the NRWS pipeline and EWL, while the South NRWS is comprised of the IEBL. The NRWS pipeline and the EWL ultimately convey flow to the Sanitation Districts of Los Angeles

County (LACSD) through the Joint Outfall System (JOS). The IEBL directly conveys flow to the Orange County Sanitation District (OCSD) by gravity.

Chino Desalter Authority (CDA)

Chino I Desalter plant is located at 6905 Kimball Avenue in the City of Chino and commenced operation in 2001. The plant was expanded in 2005 from an 8.4 MGD facility to a 14 MGD facility. Groundwater is pumped from supply wells throughout the Chino Basin area to the Chino I Desalter. The treatment processes include reverse osmosis and ion-exchange for removal of nitrate and total dissolved solids. Approximately 2 MGD of brine, a byproduct of the reverse osmosis and ion exchange processes is transported by the Santa Ana River Inceptor (SARI line) to Orange County and is subsequently discharged to the ocean. The high-quality water is then pumped into the municipal water supply systems for the cities of Chino and Chino Hills, and into the Jurupa Community Services District water system (IEUA, 2016).

Chino II Desalter plant is located at 11202 Harrell Street in the City of Mira Loma and was initiated by the Chino Desalter Authority to provide water deliveries to the cities of Norco, Ontario, Jurupa Community Services District and Santa Ana River Water Company. The treatment processes include reverse osmosis and ion-exchange. The Chino II Desalter became operational in 2006 and was expanded in 2010. It produced an average of 10.6 MGD of drinking water in 2012 and a little more than 1 MGD of brine that is transported by the SARI line to Orange County and subsequently discharged to the ocean (IEUA, 2016).

Water Facilities Authority

WFA Agua de Lejos Treatment Plant is located at 1775 N Benson Ave, Upland, CA 91784. The Water Facilities Authority (WFA) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, Monte Vista Water District, Ontario, and Upland. Its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The WFA owns and operates a surface water treatment plant called Agua de Lejos Treatment Plant, which began operations in 1988 and is located in the City of Upland. This treatment plant treats and disinfects imported water supplies, primarily state project water, purchased from Metropolitan Water District to supplement local groundwater supplies. Through its members, the WFA indirectly serves more than 450,000 people in the west-end of San Bernardino County.⁸⁹ Agua de Lejos Treatment Plant receives imported surface water supplies from the State Water Project (SWP) from Metropolitan Water District through Inland Empire Utilities Agency.⁹⁰ The treatment plant, located on sixteen acres in North Upland, has the capacity to treat and disinfect 81 mgd (million gallons per day). However, recent historical flows through the treatment plant are normally 40–50 mgd during the peak summer months and can be as low as 9-12 mgd during the slower winter months.⁹¹

City of Riverside

Riverside Water Quality Control Plant (RWQCP) is located at 5950 Acorn Street Riverside, CA 92504. The RWQCP is being expanded, however, it currently consists of two separate treatment plants and one common tertiary filtration plant. These provide preliminary, primary, secondary and tertiary treatment for a rated capacity of 40 million gallons per day (MGD).⁹² The Jurupa Community Services District (JCSD) discharges wastewater to three different treatment plants from three independent sewer systems. The first utilizes the District's Regional Lift Station to pump wastewater to the City of Riverside Treatment Plant.⁹³

Western Riverside County Regional Wastewater Authority

Western Riverside County Regional Wastewater Authority Plant has the capacity to treat 14 million gallons per day (MGD) of wastewater.⁹⁴ The Eastvale area (within the JCSD) discharges to the River Road

⁸⁹ WFA, 2023. Agua de Lejos Joint Powers Authority. <http://www.wfajpa.org/> (accessed 03/16/23)

⁹⁰ The SWP includes 29 storage facilities, 18 pumping plants, 4 pumping-generating plants, 5 hydroelectric power plants and approximately 660 miles of canals and pipelines—spanning two-thirds of the length of California.

⁹¹ WFA, 2023. Agua de Lejos Joint Powers Authority. <http://www.wfajpa.org/#Facilities> (accessed 03/16/23)

⁹² City of Riverside, 2023. Riverside Water Quality Control Plant. <https://www.riversideca.gov/publicworks/sewer/wqcp.asp> (accessed 03/16/23)

⁹³ Jurupa Community Services District, 2023. Sewer & Wastewater. <https://www.jcsd.us/customers/sewer-wastewater> (accessed 03/16/23)

⁹⁴ Western Riverside County Regional Wastewater Authority, 2023. Solid Waste Information System (SWIS), 2023. <https://www.wrcrwa.org/152/Treatment-Plant-Overview> (accessed 03/16/23)

Lift Station, which pumps the wastewater to another regional treatment plant, operated by a joint powers authority known as the Western Riverside County Regional Wastewater Authority (WRCRWA). The JCSD proactively operates and maintains its sewer system to convey the wastewater to the treatment plants in a reliable and cost-effective manner in accordance with the recently adopted Sewer Management Plan.

Sanitation Districts of Los Angeles County

Pomona Water Reclamation Plant is located at 295 Humane Way in the City of Pomona and is managed by the Sanitation Districts of Los Angeles County. The plant occupies 14 acres northeast of the intersection of State Route (SR)-60 and SR-57. The Pomona Water Reclamation Plant (WRP) provides primary, secondary, and tertiary treatment for 15 MGD of wastewater. The plant serves a population of approximately 130,000 people. Approximately 8 MGD of the recycled water is used at over 190 different sites. Reuse applications include landscape irrigation of parks, schools, golf courses, greenbelts, etc.; irrigation and dust control at the Spadra Landfill; and industrial use by local manufacturers. The remainder of the recycled water is discharged into the San Jose Creek, where it is allowed to percolate into the groundwater in the unlined portions of the San Gabriel River before flowing into the ocean.

Storm Water

Each of the cities within the Chino Basin maintain storm water drainage infrastructure within their respective city limits. San Bernardino County and Riverside County each manage the storm drain system within their respective unincorporated areas of the Chino Basin and the regional stormwater runoff conveyance infrastructure.

Solid Waste Management

The California Department of Resources Recycling and Recovery (CalRecycle) maintains a Solid Waste Information System (SWIS) that lists disposal sites in San Bernardino County by disposal facility activity, regulatory status, and operational status. According to SWIS, there are two active Class III landfills⁹⁵ within a 20-mile radius of the Chino Basin that conduct solid waste disposal activities and accept construction and demolition material. These landfills are the El Sobrante and Mid-Valley Sanitary Landfills. **Table XIX-1** lists the closure dates, daily permitted capacities, and remaining permitted capacities of the local Class III solid waste landfills.

Waste Management of Inland Empire is the local division of Waste Management, Inc. that provides collection, disposal, recycling, and environmental services to the Inland Empire. It serves over 220,000 residents and disposes over 17,000 tons of waste weekly in the Inland Empire. It operates the El Sobrante Landfill in Corona, which processes about 43 percent of the San Bernardino County's annual waste and can currently receive up to 70,000 tons of waste per week.⁹⁶ The County of San Bernardino operates the Mid-Valley Sanitary Landfill in Rialto.

In addition to Waste Management Inc., Burrtec Waste Management Services provides solid waste disposal sites and other services such as: trash and recycling facilities; retail waste disposal containers; construction waste facilities including portable restrooms for wastewater; and other private facilities for customized services. Burrtec facilities in proximity to the Chino Basin may be utilized during project construction and operation in addition to the Mid-Valley and El Sobrante landfills; these include: the Agua Mansa Materials Recovery Facility (MRF)/Transfer Station; the West Valley MRF/Transfer Stations; and the East Valley Transfer Recycling Facility, all located within 10 miles of the Chino Basin area.

⁹⁵ Class III landfills are only permitted to accept nonhazardous solid waste

⁹⁶ Waste Management, 2023. Inland Empire. <https://www.wm.com/location/california/inland-empire/areas.jsp> (accessed 03/16/23)

**Table XIX-1
LANDFILLS IN PROXIMITY TO THE CHINO BASIN**

Facility Name	Address	Closure Date	Daily Permitted Capacity (tons/day)	Remaining Permitted Capacity (cubic yards)
Mid-Valley Sanitary Landfill	2390 Alder Ave, Rialto, CA 92377	04/01/2045	7,500	61,219,377 as of 6/30/2019
El Sobrante Landfill	10910 Dawson Canyon Rd, Corona, CA 92883	01/01/2051	16,054	143,977,170 As of 4/1/2018
SOURCE: California Department of Resources Recycling and Recovery, <i>Solid Waste Information System (SWIS)</i> , 2023 https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1880?siteID=2662 (accessed 03/16/23) https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402 (accessed 03/16/23)				

Telecommunication

The Chino Basin area is served by several telecommunication providers including Verizon, California Telecom, AT&T, Frontier, Spectrum, and others.

XIX.2 Impact Discussion

- a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

WATER

Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the OBMPU and associated facilities may be significant. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the RDSEIR.

WASTEWATER

A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the RDSEIR.

STORMWATER DRAINAGE

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Implementation of proposed wells and extensometers within wells would be housed aboveground, while the flow meters would be installed within surface flows. The proposed wells would be developed within sites that are anticipated to be less than one half acre in size. Well development would result in the addition of impervious surfaces that would increase stormwater quantity. This increase could affect onsite drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. As such, prior to issuance of permits for construction of project facilities, the Implementing Agency shall, in accordance with MS4 requirements, prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the aboveground facility sites (consistent with MS4 requirements) so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of

stormwater for treatment within the treatment plant, and/or detention facilities. This is a regulatory requirement, and therefore adherence to MS4 requirements is mandatory, and adherence thereof would ensure that impacts related to stormwater drainage facilities are minimized below significance thresholds.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Proposed pipelines would be underground and would not permanently alter existing site drainage patterns. The pipelines would not require the construction of new or expanded stormwater drainage facilities. Because there would be no requirement for the construction of new or expanded drainage facilities to serve the proposed project, there would be no construction impacts associated with the provision of these facilities to serve the proposed pipelines.

Development of proposed ancillary facilities would have the same impacts as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded stormwater facilities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Stormwater construction/relocation impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Cumulative stormwater and drainage infrastructure development in the region may be significant as the region continues to be developed with uses that require such facilities. The cumulative impact of the stormwater infrastructure required to implement the proposed OBMPU would not be cumulatively considerable given that compliance with MS4 requirements would ensure that the OBMPU facilities would implement proper drainage to reduce downstream flows. This would minimize the program's demand for extension of such infrastructure to a less than cumulatively considerable level through implementation of mitigation. Thus, the contribution of the OBMPU to future stormwater infrastructure would not be cumulatively considerable, thus preventing a cumulatively considerable contribution to significant cumulative stormwater infrastructure.

ELECTRIC POWER

Cumulatively, the energy required for construction and operational activities associated with the facilities proposed by the OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the RDSEIR under the topics of both "Energy" and "Utilities and Service Systems."

NATURAL GAS

Cumulatively, the natural gas required for construction and operational activities associated with the facilities proposed by the OBMPU may result in significant impacts under this category. A deeper analysis of this topic is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the RDSEIR under the topics of both "Energy" and "Utilities and Service Systems."

TELECOMMUNICATIONS

The types of facilities proposed as part of the OBMPU typically would not require extension of telecommunication services. However, given that the facilities proposed as part the OBMPU have not been designed, there is a potential for certain facilities (such as regional groundwater treatment facilities, and any other facilities proposed that would require full-time personnel onsite) to require extension of telecommunication infrastructure as part of operation. As such, for the proposed OBMPU projects that would require extension of telecommunication services would be required to prepare project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to telecommunication connections. This is a requirement in accordance with CEQA, and thereby, impacts related to the extension of telecommunications infrastructure would be less than significant.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

Because it is not known where future OBMPU facilities will be installed, there may be locations in which telecommunication services are not available within the immediate vicinity of a given OBMPU site. As such, A subsequent CEQA documentation would be required to be prepared in accordance with CEQA for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated.

Cumulative Impact Analysis

Cumulative telecommunication infrastructure development in the region may be significant as the region continues to be developed with uses that require such connections.

Level of Significance Before Mitigation: Than Significant

Mitigation Measures: None required.

The cumulative impact of the connection to telecommunication required to implement the proposed OBMPU would be less than significant given that mitigation would ensure that the program's demand for extension of such infrastructure would be minimized to less than cumulatively considerable because proposed OBMPU projects that would require extension of telecommunication services would be required to prepare project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to telecommunication connections in accordance with CEQA. The contribution of the OBMPU to future telecommunication infrastructure is considered a benefit to the overall Chino Basin as it may enable expanded supply for other uses surrounding future OBMPU facilities.

Level of Significance After Mitigation: Less Than Significant

- b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Cumulatively, given that the proposed project involves the management of the Chino Groundwater Basin, the hydrology and water quality impacts related to the implementation of the OBMPU and associated facilities may be significant. A deeper analysis of this issue is required to determine the impacts that may result from each of the types of facilities proposed as part of the OBMPU. As a result, this issue will be further evaluated in the RDSEIR.

- c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

The proposed OBMPU includes construction of wells and installation of monitoring devices. As stated under the response to issue XIX(a) above, construction workers would temporarily require use of portable sanitary units during construction of the proposed wells and potentially during the installation of the proposed monitoring devices. Wastewater generated during construction of the proposed OBMPU facilities would be minimal, consisting of portable toilet waste generated by construction workers and therefore would not substantially impact wastewater treatment capacity. All conveyance systems, groundwater recharge, storage basins, wells, monitoring devices, and ancillary facilities would not generate wastewater during their operation. Therefore, impacts related to available wastewater treatment capacity would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with

various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the impacts related to wastewater treatment capacities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities.

As stated above, upgrades to IEUA's existing treatment plants were discussed in IEUA's 2017 FMP PEIR; as such though the upgrades at these facilities would constitute expansion of wastewater treatment capacity impacts thereof were analyzed previously and will not be analyzed further within the OBMPU.

The improvements to the Agua de Lejos Treatment Plant and upgrades to the Chino Desalters would expand the treatment capacity at each of these facilities. As with the impacts outlined above under Project Category 1, the construction of these upgrades and improvements are not anticipated to generate additional demand for capacity from the wastewater treatment provider due to the limited wastewater this would generate. Given that the proposed OBMPU is not anticipated to generate additional demand for these existing facilities, the programs proposed to be implemented as part of the OBMPU and associated facilities therefore are not anticipated to require substantial additional capacity from the applicable area wastewater treatment provider beyond the provider's existing commitments. Impacts are less than significant.

Upgrades to the Chino Desalters, the proposed AWP new groundwater treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would create a new sources of brine waste generated by water treatment that would require treatment by the applicable wastewater treatment provider. It is anticipated that such facilities would require connection to the Inland Empire Brine Line, NRWS, or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Ocean. Note that, as outlined in the Project Description, the NRWS has a current flow of 20,000 gpd. The NRWS capacity is 4.6 MGD, with the various projects proposed in the region, it is anticipated that only about 2/3 of the capacity of the NRWS is available, leaving about 3 MGD available for additional brine flow to the NRWS. The IEBL has a current flow of 22,000 gpd, with an available capacity of about 1.9 MGD for use by entities in the region for OBMPU and other projects requiring brine disposal.

Should the additional capacity of the brine disposal facilities beyond that which is presently available, it would not be possible to determine whether these facilities would require OCSD (or another agency responsible for treating brine waste) to expand the capacity of its treatment plant to accommodate the additional brine waste generated by the OBMPU facilities. Thus, should the agencies operating the brine disposal systems determine that the capacity requested on behalf of OBMPU operations is greater than that which can be accommodated with existing treatment capacities, subsequent CEQA documentation addressing the required facility expansions would be required to be prepared in accordance with CEQA. As this is a mandatory requirement, compliance thereof would minimize potential impacts below significance thresholds.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Future cumulative development within the Chino Basin is expected to demand additional capacity from the available wastewater treatment providers. In general, IEUA and other area wastewater collection agencies have available capacity to accommodate the anticipated population growth and subsequent demand for their services in the future, or these agencies have developed long-term plans that address growth through the expansion of their facilities. Regardless, this cumulative increase could result in inadequate capacity of the wastewater treatment plant(s) to serve the additional demand. However, the 2017 IEUA Facilities Master Plan EIR (FMP EIR) addressed long term projection of growth and capacity needs within the IEUA service area and models capacity utilization of the four Regional Water Recycling Plants (RWRPs). The projects proposed within the FMP would ensure that IEUA would have adequate capacity to treat wastewater for the region. Furthermore, other area wastewater agencies review capacities in long-range planning documents, such as that which was analyzed as part of the WRCWRA Recycled Water Program EIR, LACSD Sewer System Master Plan, City of Riverside Integrated Master Plan for Wastewater Collection and Treatment Facilities EIR, etc.; therefore, the cumulative contribution to wastewater treatment from area growth has been previously analyzed, and would be less than cumulatively considerable.

As discussed in the previous analysis, the proposed OBMPU would require a large brine disposal capacity to accommodate the proposed AWPf, regional groundwater treatment facilities, and groundwater treatment facilities at well sites. Both the IEBL and NRWS have capacity to accommodate greater than three quarters of the total capacity for these brine disposal systems. As such, given that the proposed OBMPU would utilize mitigation that would ensure subsequent CEQA documentation to address expanded brine disposal capacities, should they be required, the OBMPU would reduce the overall impacts to less than cumulatively considerable. This is because the OBMPU would ensure that, if required subsequent CEQA documentation is required, it would address the need for additional brine disposal capacities, thus ensure that capacity is available for existing and future cumulative development. Thus, the project's contribution to cumulative impacts is not considered cumulatively considerable, and therefore, would not contribute to a significant cumulative impact on the availability of wastewater treatment.

Level of Significance Before Mitigation: Less Than Significant

Cumulative Measures: None required.

Level of Significance After Mitigation: Less Than Significant

- d. *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Construction of wells and monitoring devices would not require a large area of construction. Construction of each well may require demolition of existing facilities, grading, soil import/export, etc. at a specific site. Given that the proposed wells would be located within sites no more than one half acre in size, it is not forecast that construction thereof would generate substantial solid waste. Furthermore, it is not anticipated that each of the proposed wells would be installed concurrently, as such the generation of solid waste from each well would not have a potential to exceed the daily capacity of the local landfills. Each of the OBMPU facilities would include the preparation of a construction and demolition solid waste management plan as required by San Bernardino County, Riverside County, or Los Angeles County for all new construction projects. Information provided in this waste management plan would include how the waste will be

managed, hauler identification, and anticipated material wastes. Each plan would demonstrate a minimum of 50 percent diversion of construction building materials and demolition debris from landfills through reuse or recycling, which is required by Assembly Bill 939. As such, development of wells and installation of monitoring devices is not anticipated to generate solid waste in excess of the capacity of local infrastructure.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Similar to the development of wells and monitoring devices, construction of pipelines and ancillary facilities is not anticipated to result in generation of solid waste in excess of the capacities of local infrastructure. However, given that pipelines will require demolition of sections of roadway in order to install conveyance facilities belowground and within rights-of-way, mitigation is required to ensure that all materials that can feasibly be recycled are salvaged.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Similar to the development of wells and monitoring devices, and pipelines and ancillary facilities, construction of storage basins, flood MAR facilities, and new MS4-compliance facilities is not anticipated to result in generation of solid waste in excess of the capacities of local infrastructure. However, given that development of storage basins may require substantial earthmoving activities that may result in substantial soil export, as such, mitigation is required to ensure that, in the event substantial soil export is required, soils of a usable quality are recycled for reuse.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to result in impacts to solid waste capacities.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Solid waste impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3—mitigation is required to address potential impacts to solid waste capacities.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-1: ***Construction and Demolition Recycling.*** *The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given OBMPU project shall submit a recycling plan to the Implementing Agency for review and approval prior to issuance of permits for the construction of demolition/construction activities.*

UTIL-2: ***Construction Soils Recycling.*** *The contract with demolition and construction contractors for a given OBMPU project shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused onsite to balance soil import/export.*

Implementation of Mitigation Measure **UTIL-1** will ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities. Similarly, Mitigation Measure **UTIL-2** will ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. This too will minimize the potential for OBMPU projects to generate waste in excess of local landfill capacities.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impacts

Future cumulative development within the Chino Basin area would cumulatively contribute to the generation of solid waste and disposal of solid waste at the El Sobrante and Mid-Valley Landfill landfills. Based on growth projections, these two landfills have approximately 25 to 30 more years of capacity. Future cumulative development could eventually exceed the capacities of these landfills. Therefore, cumulative development could result in significant impacts to landfills.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Mitigation Measures **UTIL-1** and **UTIL-2** are necessary to minimize cumulative impacts.*

Because the proposed OBMPU would not substantially increase the generation of solid waste, particularly with the implementation of MMs **UTIL-1** and **UTIL-2**, the project's contribution to cumulative effects on landfills would be less than cumulatively considerable, and therefore, would result in a less than significant contribution to cumulative impacts.

Level of Significance After Mitigation: Less Than Significant

e. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of 66 ASR wells, 10 injection wells, 9 extraction wells, 20 new pumping wells, 102 monitoring wells (groundwater level monitoring and groundwater quality wells), associated well housing, as well as monitoring devices (up to 300 flow meters, up to 100 transducer data loggers, and 3 extensometers installed in existing private wells). This Project Category also contemplates reconstruction and/or modification of up to 5 wells, and destruction and replacement of 5 wells. The proposed wells and monitoring devices will be installed throughout the Chino Basin.

Implementation of proposed wells and monitoring devices would comply with all city and county construction and demolition requirements during construction of the proposed facilities as described above in the

regulatory setting. All excavated soil would be hauled offsite by truck to an appropriately permitted solid waste facility. The daily amount of soil to be disposed per day would not exceed the maximum permitted throughput for each waste type (i.e., non-hazardous and hazardous). Any hazardous materials collected on a given OBMPU project site during either construction or operation will be transported and disposed of by a permitted and licensed hazardous materials service provider. As stated above under issue XIX(d), OBMPU projects would be required, through the implementation of Mitigation Measure **UTIL-1** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. Further, the proposed project will be required to ultimately divert up to 75 percent of solid waste from landfills as a result of AB 341. Furthermore, Mitigation Measure **UTIL-2** would require further diversion through the recycling of soils where possible for future OBMPU projects. The proposed projects—development of wells and monitoring devices—would comply all federal, State, and local statutes related to solid waste disposal. Therefore, the proposed OBMPU would result in less than significant construction impacts.

The cities and counties in which a given project would be located are required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. Facilities proposed as part of the OBMPU would be required to recycle as part of the projects' operational activities. Additionally, any hazardous materials collected on the project site during either construction or operation of future development within the OBMPU would be transported and disposed of by a permitted and licensed hazardous materials service provider. This is a mandatory requirement; compliance does not require mitigation. As such, the proposed OBMPU facilities would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts are less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

This category includes the construction of up to 620,600 LF of new pipelines, up to 18 booster pump stations with capacities of up to 10,000 gpm, up to 14 water storage reservoirs with an average storage capacity of 5 MG and minor appurtenances whose number, locations and capacities are presently unknown. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin.

Impacts are the same as those identified under Project Category 1.

Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands (PEs 2, 4-5, 8/9)

This Project Category includes the construction of 310 acres of new storage basins—several locations for which are within existing facilities, improvements to existing storage basin(s), 200 acres of flood MAR facilities, new MS4-compliance facilities, and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin to between 700,000 af and 900,000 af going forward with various impacts that may result for each 100,000 af between this range of storage. The specific locations of the storage basins are described in the Project Description above; however, the locations of the flood MAR facilities and MS4 compliant projects are presently unknown.

Impacts are the same as those identified under Project Categories 1 and 2.

The proposed expansion of the safe storage capacity to between 700,000 af and 900,000 af going forward would not result in any visible aboveground impacts beyond those facilities associated with the OBMPU designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to violate federal, state, and local management and reduction statutes and regulations related to solid waste.

Project Category 4: Desalters and Water Treatment Facilities (PEs 2, 4-9)

The projects proposed under this category are: upgrades at IEUA's existing Treatment Plants (discussed in IEUA's 2017 FMP PEIR); a new, up to 9,000 afy, advanced water purification facility; improvements to the WFA Agua de Lejos Treatment Plant; upgrades to the Chino Desalters; 20 new groundwater treatment facilities at or near well sites; 4 new groundwater treatment facilities at regionally located sites; and improvements to existing groundwater treatment facilities. Solid waste impacts related to the facilities thoroughly analyzed as part of the IEUA's 2017 FMP PEIR will not be analyzed further as part of this Initial Study.

Impacts are the same as those identified under Project Categories 1, 2, and 3.

Combined Project Facilities

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **UTIL-1** and **UTIL-2** outlined under issue XIX(a) above are required.*

As stated under issue XIX(d) above, implementation of mitigation measures **UTIL-1** and **UTIL-2** will ensure that recyclable waste streams are diverted from the local landfill, thereby ensuring compliance with the required 50 percent waste diversion mandated by the State.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impacts

Potential cumulative impacts related to solid waste facilities and solid waste disposal would occur if projects within the Chino Basin would be served by a facility without sufficient permitted capacity to accommodate solid waste disposal needs, or if cumulative projects do not comply with federal, State, and local statutes and regulations related to solid waste. Specifically, projects producing solid waste during project implementation, including cleanup, residential and commercial projects, could produce a waste stream that could together not be accommodated by current solid waste facilities within regional solid waste disposal areas, resulting in a cumulatively considerable impact to solid waste facilities.

The proposed OBMPU projects would comply with all federal, State, and local statutes and regulations related to solid waste and would not result in potential significant impacts. When added to cumulative projects, the effects of the proposed OBMPU projects would contribute incrementally to the cumulative impacts on solid waste facilities.

Cumulative projects would generally be served by the local municipal solid waste disposal facilities and hazardous waste disposal facilities, resulting in potential cumulative impacts to solid waste facilities. However, new cumulative development projects would participate in local programs designed to divert 50 and eventually 75 percent of waste from landfills. In addition, all cumulative projects implemented in the area would also be required to comply with federal, State, and local solid waste regulations and statutes.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Mitigation Measure **UTIL-1** and **UTIL-2** are necessary to minimize cumulative impacts.*

Therefore, when considered in addition to the anticipated impacts of other cumulative projects, and when considering that MMs **UTIL-1** and **UTIL-2** would minimize the OBMPU's individual potential to contribute to cumulative violations of solid waste regulations, the proposed project's incremental contribution to solid waste facility capacity impacts would not be cumulatively considerable, and therefore, would result in a less than significant contribution to cumulative impacts.

Level of Significance After Mitigation: Less Than Significant

XIX.3 2000 OBMP PEIR Mitigation Measures

None of the 2000 OBMP PEIR Mitigation Measures are applicable to the analysis under this issue (Utilities and Service Systems, specifically extension of stormwater and telecommunication infrastructure, wastewater provider capacity, and solid waste); Note that the issues of water supply, and extension of water, wastewater, electricity, and natural gas infrastructure are discussed in details in Subchapter 4.9, Utilities and Service Systems in the RDSEIR.

2000 OBMP PEIR Mitigation Measure **4.13-7** requires wastewater treatment projects to precede or be concurrent with growth generating projects. Pursuant to the analysis prepared in Chapter 6, Topical Issues, of the RDSEIR, the OBMPU is not growth inducing. Therefore, 2000 OBMP PEIR Mitigation Measure **4.13-7** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.13-9** requires industrial and commercial users to reduce load strength of sewage. With no industrial or commercial projects proposed, 2000 OBMP PEIR Mitigation Measure **4.13-9** is no longer applicable.

2000 OBMP PEIR Mitigation Measure **4.13-10** requires review of all development and redevelopment projects to be reviewed for solid waste generation, and available landfill capacity. With no traditional development and redevelopment projects proposed, 2000 OBMP PEIR Mitigation Measure **4.13-10** is no longer applicable. Furthermore, the analysis herein determined that the OBMPU would not generate solid waste in excess of the capacities of area landfills through the implementation of Mitigation Measures **UTIL-1** and **UTIL-2**.

Thus, 2000 OBMP PEIR Mitigation Measures **4.13-7**, **4.13-9**, and **4.13-10** are no longer applicable for the purposes of the OBMPU.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

This Section evaluates the environmental impacts under the new environmental issue of “Wildfire.” The rationale for inclusion of this topic is not just the recent spate of severe wildfires, but to elevate the risk of wildfire to that of other major hazards, such as an active fault line or a flood hazard and the risk that society and future residents attracted to such areas incur from allowing humans to occupy areas with “high” risk. The “Wildfire” issue is also discussed under the Hazards and Hazardous Materials Section, Section IX, of this Initial Study.

XX.1 Existing Conditions

In general, various communities in the mountain and foothill areas in San Bernardino County are at a high risk for wildfire. According to the California Department of Forestry and Fire Protection (CAL FIRE) Wildfire Activity Statistics Redbooks (Redbooks) from the years 2014 to 2021⁹⁷, in San Bernardino and Riverside Counties there were 1,340 fires totaling 27,711 acres caused a number of injuries, and resulted in an estimated \$109,361,223 in damages to property, crops, public facilities and infrastructure (averaging about \$13,670,153 per year, with the greatest costs generally corresponding to the years with the greatest burn acreage). This is primarily due to location, vegetation, weather, seasonal Santa Ana Winds, and prolonged drought.

In urban areas, urban fires include fires within individual commercial, industrial, and residential structures, vehicles, and vacant lots. The effectiveness of responding to urban fires is generally based on the age of the structures, proximity of the nearest fire station, efficiency of circulation routes, and water availability to fight fires.

Wildland-urban interface fires occur in areas where urban/suburban development meets wildland areas. Wind-driven wildland-urban interface fires pose a significant threat to lives and have increased potential to cause significant damage to structures. In wildland and wildland-urban interface areas, cities and counties require the use of fire-resistant building materials, implementation of fuel modification zones, and

⁹⁷ California Department of Forestry and Fire Protection (CAL FIRE), 2023. Wildfire Activity Statistics Redbooks (Redbooks). <https://www.fire.ca.gov/our-impact/statistics> (accessed 03/16/23)

maintenance of vegetation clearance around structures to protect development from wildland fires, thereby reducing the potential loss of life and property.

CAL FIRE maps the FHSZ for the cities within the Chino Basin. The FHSZ are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history. The Chino Basin contains moderate, high, and very high FHSZ. These zones are shown on

The highly urbanized portion of the Chino Basin and the Prado Wetlands have been designated by the CAL FIRE as less than high or very high fire hazard severity zones. This is shown on the attached wildland fire Fire Hazard Severity Zone maps. **Figure IX-1** show the fire hazard zones in the relevant portions of San Bernardino and Riverside Counties that encompass the Chino Basin. Almost all “high” or “very high” wildland fire hazard areas are located on the edges of the Chino Basin, or adjacent to isolated hills (Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below, both the unmanned infrastructure proposed by the OBMPU and the location of this infrastructure occur in areas with at most moderated wildland fire hazards.

Evacuation Routes

Major evacuation routes within the San Bernardino Valley are shown on **Figure XX-1**, which depicts the San Bernardino Countywide Plan Evacuation Route Map in the vicinity of the project area. Evacuation routes in the Chino Basin include, but are not limited to, Interstates 10, 15 and 215; State Routes 30, 31, 60, 66, 71, 83, and 91; and numerous major and secondary highways and roadways.

XX.2 Impact Analysis

The following issues are required to be analyzed if a project is located in or near a state responsibility area or lands classified as very high fire hazard severity zone. As noted above the location of OBMPU facilities would likely not be located in such an area but since many of the proposed OBMPU facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. The following describes the potential impacts if an implementing agency selects such a site.

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

The highly urbanized portion of the Chino Basin has been designated by the CAL FIRE as outside of the very high FHSZ. **Figure IX-1** shows the FHSZs in the relevant portions of San Bernardino, Los Angeles, and Riverside Counties that encompass the Chino Basin. Almost all “high” or “very high” wildland FHSZs are located on the edges of the Chino Basin, or adjacent to isolated hills that are undeveloped, such as the Jurupa Hills that outcrop within the slope of the Chino Basin alluvial fan.

The project area and the sites where proposed facilities would be installed are either flat or have shallow slopes, and, would generally be located south of SR 210 and located outside of the Jurupa Hills. Facilities set in these locations would be entirely outside of very high and high FHSZs. However, given that the precise location of future OBMPU facilities is unknown, it is possible that some OBMPU facilities, such as water storage reservoirs, which are sometimes set in area hillsides to establish gravity flow, would be located within the high and very high FHSZs shown on **Figure IX-1**.

With the exception of conveyance facilities (pipelines), all proposed project facilities would be contained within the boundaries of their specific sites which would not include any roadways. Project-related vehicles would not block existing street access or use. Therefore, with the exception of conveyance facilities (pipelines), no impacts related to emergency evacuation plans would occur from installation and operation of proposed OBMPU facilities. Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts related to an adopted emergency plan would be considered less than significant during project operation.

Installation of pipelines would include construction of an estimated 620,600 LF of new pipelines, and most of this construction effort would occur within existing road ROW within the planning area. The construction of the pipelines would require construction along or in public roadways and could interfere with adopted

emergency response plans or emergency evacuation plans. With minor exceptions, all proposed pipelines would be constructed within public ROW. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles for short periods. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. Impacts could be potentially significant. Mitigation Measure **WF-1**, which requires consistency with the San Bernardino County Operational Area Emergency Response Plan, County of Riverside Emergency Operations Plan, and Los Angeles County Operational Area Emergency Response Plan as well as review and approval by the local agency with authority over construction within the public ROW, would be required to reduce these potential temporary significant impacts to a less than significant level. The San Bernardino County Operational Area Emergency Response Plan, County of Riverside Emergency Operations Plan, and Los Angeles County Operational Area Emergency Response Plan provide wildfire mitigation efforts that include the goal of continuing to reduce fire hazards in the region, and generally coordinates evacuation in the event of an area emergency, which includes area wildfires.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways, or significantly impact implementation of emergency response plans and/or emergency evacuation plans. Impacts related to adopted emergency plans and emergency evacuation plans would be considered less than significant during operation for the project-related conveyance facilities.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

WF-1: Construction Traffic Control to Enable Emergency Access. Prior to initiating construction of proposed facilities within public rights-of-way (ROW), the implementing agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The implementing agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, County of Riverside Emergency Operations Plan, or Los Angeles County Operational Area Emergency Response Plan and are reviewed and approved by the local agency with authority over construction within the public ROW.

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan by constructing facilities within public ROW. Since the proposed OBMPU pipelines would be constructed within public ROW, the proposed project's contribution to the cumulative impact would be considerable.

Level of Significance Before Mitigation: Potentially Significant

Cumulative Measures: Implementation of 2000 OBMPU PEIR Mitigation Measures 4.10-6 and 4.10-7 and Mitigation Measure TRAN-1 are necessary to minimize cumulative impacts.

Impacts would require implementation of 2000 OBMPU PEIR Mitigation Measures 4.10-6 and 4.10-7 and Mitigation Measure TRAN-1 to reduce the project's contribution to this significant cumulative impact. The implementation of 2000 OBMPU PEIR Mitigation Measures 4.10-6 and 4.10-7 and Mitigation Measure TRAN-1 would ensure that the proposed project's contribution to cumulative emergency access and evacuation impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific Traffic Control Plan with comprehensive strategies to reduce/control disruption to emergency access and evacuation plans.

Level of Significance After Mitigation: Less than Significant

- b. *Due to slope, prevailing winds, and other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?*

The project area and the sites where proposed facilities would be installed are either flat or have shallow slopes, and, would generally be located south of SR 210 and located outside of the Jurupa Hills. Facilities set in these locations would be entirely outside of very high and high FHSZs. However, given that the precise location of future OBMPU facilities is unknown, it is possible that some OBMPU facilities, such as water storage reservoirs, which are sometimes set in area hillsides to establish gravity flow, would be located within the high and very high FHSZs shown on **Figure IX-1**. Overall, implementation of the proposed project would not substantially exacerbate wildfire risks, particularly when mitigation is implemented.

Santa Ana winds are common in the San Bernardino region. The project would result in the installation of a wells, monitoring devices, pipeline alignments, booster pump stations, water storage reservoirs, an increase in SSC, new storage basins, flood MAR and MS4-compliance facilities, upgrades to existing facilities, such as the WFA Agua de Lejos Treatment Plant, Chino Desalters, and other existing groundwater treatment facilities, a new AWPf, regional and site-specific groundwater treatment facilities. Many of these proposed facilities would be not permanently occupied with staff, however the AWPf, regional groundwater treatment facilities, and other groundwater treatment facilities, may support onsite employees. Smoke from wildfires that may occur in the severe wildland fire hazard areas to the north (foothills and mountains) may generally impact air quality throughout the OBMPU region during a fire. Santa Ana winds are generally from the north and northeast, and the employees in the project area could be exposed to the plume of smoke from a wildfire in the San Bernardino Mountains. However, the proposed project would not result in a significant increase in human exposure and exposure would be short-term. The same Santa Ana winds that could blow the plume towards the valley floor, including within the project area, can disperse the plume during and immediately after the wildfire is controlled. Due to the short-term exposure of the project area to a wildfire plume, no significant adverse exposure is forecast to occur for future employees that would support the proposed OBMPU infrastructure.

Finally, due to the character of the facilities (low potential to cause ignition of a wildland fire and their locations well outside of the high and very high FHSZ), the proposed OBMPU would not contribute substantially to the uncontrolled spread of a wildfire.

The facilities that could be north of SR 210 or within the Jurupa Hills could experience fire risk during construction. As such, because some project components may be installed in locations designated as high FHSZ, construction may exacerbate fire risk temporarily as a result of accidental sparks generated by spark-producing equipment.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Implementation of Mitigation Measure HAZ-6 is required.

The implementation of Mitigation Measure **HAZ-6** would require the preparation of a fire management plan/fuel modification plan with comprehensive strategies to reduce the potential to exacerbate wildfire risks or cause a wildfire to occur, and thereby expose project occupants (there would be minimal occupants of proposed facilities) to pollutant concentrations from a wildfire or contribute to the uncontrolled spread of wildfire. Therefore, potential significant impacts to the spread of wildfires would be reduced to a less than significant level.

Level of Significance: Less Than Significant with Mitigation Implementation

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could expose future residents to pollutant concentrations from a wildfire or contribute to the uncontrolled spread of wildfire resulting in a significant cumulative impact.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-6** is required to minimize cumulative impacts.*

The proposed OBMPU infrastructure would primarily be constructed within urban areas outside of high and very high FHSZs, or, if a facility must be located within a very high or high FHSZ, Mitigation Measure **HAZ-6** would be implemented, reducing the project specific impacts to below significance thresholds. As such, while exposure to pollutant concentrations from wildfires in the Chino Basin area may occur as a result of cumulative development within very high FHSZs, with the implementation of Mitigation Measure **HAZ-6**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences. The implementation of Mitigation Measure **HAZ-6** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would be reduced to less than cumulatively considerable impact by requiring the preparation and implementation of a project specific fire management plans with comprehensive strategies to reduce/control contribution to the spread of wildfire. The Implementing Agency would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

Level of Significance After Mitigation: Less than Significant

- c. *Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. At this time no specific OBMPU infrastructure is proposed for areas designated as high or very high wildland fire hazard areas on the Fire Hazard Severity Zone map provided as **Figure IX-1**. However, it is possible that OBMPU facilities could be implemented in the future in the Chino Hills area, the Jurupa Hills, and on the alluvial slopes immediately south of the San Gabriel Mountains. Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. As noted in the preceding discussion, no specific OBMPU infrastructure is proposed for areas designated as high or very high wildland fire hazard areas on the Fire Hazard Severity Zone map provided as **Figure IX-1**. Thus, the potential that such facilities can exacerbate fire risk or cause short- or long-term impacts to the environment related to this hazard is minimal. Nonetheless, it is possible that proposed OBMPU facilities could be implemented in the future on the alluvial slopes immediately south of the San Gabriel Mountains or Jurupa Hills, an area with a Very High FHSZ designation. Installation of those facilities in these locations could exacerbate fire risk in these areas as a result of spark-producing equipment use during operations and construction, and could therefore result in both temporary and ongoing impacts on the environment.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measure **HAZ-6** is required.*

The implementation of Mitigation Measure **HAZ-6** would require the preparation of a fire management plan/fuel modification plan for future OBMPU facilities proposed within very high FHSZs, and it would identify comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential significant impacts due to installation of future OBMPU facilities would be reduced to less than significant level.

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could exacerbate fire risk or may result in temporary or ongoing impacts to the environment as a result of development located within very high FHSZs.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-6** is required.*

Since the future OBMPU facilities would primarily be constructed within urban areas or outside of high and very high FHSZs or, if a facility must be located within a FHSZ, Mitigation Measure **HAZ-6** would be implemented, proposed project impacts would not be cumulatively considerable. As such, while installation or maintenance of the proposed project may exacerbate fire risk in the region as a result of cumulative development within very high FHSZs, with the implementation of Mitigation Measure **HAZ-6**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences. The implementation of Mitigation Measure **HAZ-6** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific fire management plan with comprehensive strategies to reduce/control contribution to the spread of wildfire. Implementing Agencies would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

Level of Significance After Mitigation: Less than Significant

- d. *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

Please refer to the discussion under Emergency Plans under Section IX(f) and Section XVII, Transportation. As noted in the preceding discussion, no specific OBMPU infrastructure is proposed for areas designated as high or very high wildland fire hazard areas on the Fire Hazard Severity Zone map provided as **Figure IX-1**. As noted in the preceding discussion, no specific OBMPU infrastructure is proposed for areas designated as high or very high FHSZs as mapped on **Figure IX-1**. The facilities most likely to be installed within very high FHSZs are pipelines and pump stations that may be installed at the northern edge of the Chino Basin on the alluvial fans of the San Gabriel Mountains. Pipelines have a small surface footprint that can be constructed to minimize potential fire hazards (as required by Mitigation Measure **HAZ-6**) and would not cause significant damage downstream from their location. Thus, based on this evaluation, construction and operation of future OBMPU facilities can be accomplished without causing potentially significant impacts through the implementation of Mitigation Measure **HAZ-6**.

The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, due to future OBMPU facility locations outside of very high FHSZs in LRAs, i.e., urban areas. Additionally, no construction, other than potentially pipeline crossing improvements, may occur across any of the north-south oriented stream channels that flow out of the San Gabriel Mountains. Thus, no significant drainage changes would occur within the project area that may be exposed to indirect impacts from wildfire.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measure **HAZ-6** is required.*

Mitigation Measure **HAZ-6** would require the preparation of a fire management plan/fuel modification plan with comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential impacts due to exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be less than significant.

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could exacerbate fire risk or may result in temporary or ongoing impacts to the environment resulting in a significant cumulative impact.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-6** is required.*

Since the proposed OBMPU facilities would primarily be constructed within urban areas or outside of very high FHSZs, if a future OBMPU facility must be located within a severe wildfire hazard area, Mitigation Measure **HAZ-6** would be implemented. As such, while exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes may be exacerbated by cumulative development in within very high FHSZs, with the implementation of Mitigation Measure **HAZ-6**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences. The implementation of Mitigation Measure **HAZ-6** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific fire hazard mitigation plan with comprehensive strategies to reduce/control exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The Implementing Agency would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

Level of Significance After Mitigation: Less than Significant

XX.3 2000 OBMP PEIR Mitigation Measures

No 2000 OBMP PEIR Mitigation Measures were identified to minimize Wildfire impacts.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

This Initial Study has been used to evaluate environmental issues to determine whether an issue has a potential to cause a potentially significant adverse impact, which would require the issue to be evaluated in an environmental impact report. Based on the preliminary findings regarding biological resources and cultural resources, these two issues do have a potential to experience a significant adverse environmental impact and the biological resource and cultural resource issues (including tribal cultural resources) will be evaluated as issues of focus in the RDSEIR for the OBMPU.

- b. *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Many, but not all, environmental issues have a cumulative quality that reflects the effects of past projects and collective projects proposed in the same time period for a specific environmental issue. The following issues are considered to have cumulative characteristics: agriculture, air quality, biology, cultural resources, energy, greenhouse gases, hydrology and water quality, mineral resources, noise, population and housing, public services, recreation, traffic, utilities and service systems, and wildfire. Of these environmental issues the following were found to have a less than significant impact on the environment, most often with mitigation: agriculture, mineral resources, noise, population and housing, public services, recreation, traffic, some of the utilities and service systems, and wildfire. The following environmental issues have been identified as having the potential to contribute to cumulatively considerable (significant) impacts on the natural and man-made environment: air quality, biology, cultural resources, energy, greenhouse gases,

hydrology and water quality, and some of the utilities and service issues. These issues will all be evaluated in the RDSEIR that has been prepared to determine whether these issues may cause a cumulatively considerable adverse impact on the environment.

c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Certain environmental effects include elements or characteristics that can have a direct or indirect substantial adverse impact on the human population of the Chino Basin. Simple examples include flood hazards and earthquake hazards. The following issues are considered to have the potential to cause substantial adverse environmental effects on human beings: aesthetics, air quality, geology and soils, greenhouse gases, hazards and hazardous materials, hydrology and water quality, land uses, noise, public services, utilities and service systems, and wildfire. Of these environmental issues, the following were found to have a less than significant impact on the environment, most often with mitigation: aesthetics, geology and soils, hazards and hazardous materials, land uses, noise, public services, some of the utilities and service systems, and wildfire. The following environmental issues have been identified as having the potential to have significant adverse effects on humans: air quality, greenhouse gases, hydrology and water quality, and some of the utilities and service issues. These issues will all be evaluated in the RDSEIR that will be prepared to determine whether these issues may cause substantial adverse effects on humans.

Conclusion

Based on the findings in this Initial Study, IEUA will distribute this OBMPU RDSEIR for public review and comment. A public scoping meeting was held on February 27, 2020 at IEUA Headquarters. IEUA prepared a Draft SEIR for the OBMPU that was circulated for public review from March 27, 2020 to May 11, 2020. The SEIR was finalized, and responses to comments were sent to agencies and entities that commented on the project. However, the project was removed from the IEUA Board of Directors' July 15, 2020 Agenda, and ultimately was not certified. Since the time of circulation, the project description has been further refined in conjunction with the Watermaster and with input from Watermaster member agencies/Stakeholders. This mode of action was pursued, in part, as a result of comments received both during the initial public review period (March 27, 2020 to May 11, 2020) and the day of the IEUA Board of Directors monthly Board Meeting. Thus, this RDSEIR has been prepared, and will address the following environmental issues: **air quality, biology resources, cultural resources, energy, greenhouse gases, hydrology and water quality, tribal cultural resources, and certain water issues under the utilities and service system topic.**

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Aesthetics

- AES-1: Design Standards. Proposed facilities shall be designed in accordance with local design standards and all applicable sections for the California Building Standards Code (CCR, Title 24). These design standards will be complied with and facilities designed to be integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.
- AES-2: Mills Wetland Landscaping Standards. The Mills Wetland Storage Basin Project shall be designed to include landscaping commensurate with the existing pastoral⁹⁸ setting that exists at this site at present. The existing pastoral setting that currently exists includes tall grasses, riparian vegetation, and native vegetation suitable for riparian/wetland habitat. The Implementing Agency⁹⁹ shall utilize existing photos of the Mills Wetlands prior to construction to develop a landscape plan, that shall demonstrate that the Storage Basin is shielded using tall grasses, riparian vegetation, and native vegetation suitable for riparian/wetland habitat, that the Implementing Agency and/or Watermaster deem acceptable as "commensurate with the existing pastoral setting," as demonstrated by Photos AES-2-A and AES-2-b, which depict the existing setting of Mills Wetlands.



Photo AES-2-A: Mills Wetlands Existing Setting

⁹⁸ Pastoral is defined here as: of or relating to the countryside (not urban)

⁹⁹ "Implementing Agency" as used throughout this Mitigation Monitoring and Reporting Program refers to the lead agency implementing a project under the Optimum Basin Management Program Update (e.g., the Inland Empire Utilities Agency (IEUA), Chino Basin Watermaster (Watermaster), or Watermaster Stakeholders).



Photo AES-2-B: Mills Wetlands Existing Setting

- AES-3: Scenic Vista Avoidance. Future regional groundwater treatment facilities, the proposed AWPf, and other proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.
- AES-4: Tree Removal Compliance. Should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by an International Society of Arboriculture (ISA) Certified arborist, (1) the implementing agency shall replace all trees removed at a 1:1 ratio, and (2) The specific location selected for a well shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a subsequent CEQA evaluation shall be completed.
- AES-5: Scenic Resource Avoidance. Future proposed facilities defined within the OBMPU at unknown locations shall either (1) Be located within sites that avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G, or (2) Undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.
- AES-6: Local Jurisdiction Design Conformance. OBMPU facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not

limited to the applicable zoning code, to the maximum extent feasible, except where such compliance is not possible, due to design requirements, and site constraints (examples include: installation of a reservoir at a height that exceeds the maximum allowed height by the applicable zoning code, where conformance is not required due to California Government Code Section 53091; and, installation of a well, booster pump station, or other infrastructure facility that does not meet the setbacks established in the applicable zoning code, etc.).

- AES-7: Lighting Standards. Future OBMPU projects shall use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights.
- 4.15-1 All surface areas disturbed by OBMP construction activities, except those area used structures or hardscapes) shall be revegetated, either with native vegetation in natural landscapes or in accordance with a landscape plan in man-made landscape areas (note that native vegetation is also eminently suited to man-made landscapes and requires less maintenance). Once construction is completed, revegetation shall begin immediately and, where a formal landscape plan is being implemented, it shall be coordinated with the local agency and the local design guidelines for consistency.
- 4.15-2 Where facilities are proposed to be located adjacent to scenic highways, corridors or other scenic features identified in local agency planning documents, OBMP facility implementation will conform with design requirements established in these planning documents.
- 4.15-3 Where facilities will disrupt views from occupied areas with significant scenic vistas, a visual simulation analysis shall be performed of the facility's impact on the important view. If the analysis identifies a significant impact on a scenic vista, the facility shall be relocated, redesigned to reduce the impact to a non-significant level, or a subsequent environmental evaluation shall be prepared.
- 4.15-4: When OBMP above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility.
- 4.15-5 All utilities for OBMP facilities shall be placed underground unless such undergrounding is not technically feasible.
- 4.15-6 Future project review and implementation shall implement the following:
- Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare.
 - Height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.
 - Directing light and shielding shall be used to minimize off-site illumination.
 - No light shall be allowed to intrude into sensitive light receptor areas.

Agriculture and Forestry Resources

- AGF-1 Farmland Avoidance or LESA Evaluation. For all proposed facilities in the southern portion of the Chino Basin (south of SR 60), the California Department of Conservation: California Important Farmland Finder shall be consulted to determine whether a project would be installed within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance). If designated important farmland cannot be avoided, the agency implementing the project shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, the implementing agency shall either (1) relocate and avoid the site, or alternatively the

implementing agency shall (2) where relocation is not possible, undergo subsequent CEQA documentation.

- AGF-2 Forest Land Avoidance or Evaluation. For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SR 60), the potential for impacts to riparian woodland/forest land shall be determined prior to final site election via an Initial Study. If important riparian woodland/forest land cannot be avoided, the agency implementing the project shall relocate and avoid the site, or alternatively the agency shall conduct an evaluation to determine if it qualifies with the CDFW definition of "riparian woodland" and/or State definition of "forest land." If the evaluation determines the permanent loss of important riparian woodland/forestland will occur, the agency shall provide compensatory mitigation in the form of comparable riparian woodland/forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, the agency may carry out a riparian woodland/forest land creation program at a 1:1 ratio for comparable riparian woodland/forest land . The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented with the Chino Basin Watermaster.

Geology and Soils

- GEO-1: Small Site Erosion Control. For each well development or other OBMPU projects that is less than one acre in size requiring ground disturbing activities such as grading, the Implementing Agency shall identify best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.
- 4.4-6 If a conjunctive use program might be implemented that would bring water levels up to a level that significantly increases the risk of liquefaction, a more detailed monitoring and geologic study focused on this issue will be conducted to determine whether or not liquefaction poses a hazard to surface structures and to human safety. If such a study finds the impacts to be significant, the volume of water permitted to be stored in the Basin will be decreased sufficiently until a water level is achieved that does not pose any significant hazard to surface structures or people.
- 4.4-8 Require each site within identified Liquefaction Hazard Zones to be evaluated by a licensed engineer prior to design or land disturbance/construction.
- 4.4-10 Prohibit critical, essential, and high-risk land uses near earthquake special studies areas shown on the Hazard Overlay Maps developed by the County of San Bernardino and Riverside.
- 4.4-11 Require stability analysis for Landslide Hazard areas designated "Generally Susceptible" and "Mostly Susceptible" on the Hazards Overlay Maps.
- 4.4-12 Institute restrictions on construction in high landslide potential and steep-slope areas to ensure safe development.
- 4.4-15 To ensure that pumping impacts in the vicinity of the desalter well field do not have an adverse impact on water levels and subsidence issues, the follow performance standards shall be used to evaluate the desalters:
- a. Water level declines in areas surrounding the desalter pumping locations will not be allowed to decline to the extent that pumping capabilities for surrounding wells are impacted. If surrounding wells and producers are impacted by declines in water levels, alternative access to equivalent quantity and quality of water will be provided to affected

surrounding parties. This water may be provided through distribution of funding to affected parties for the deepening of existing wells, or may be provided through the delivery (paid for by the implementing agency) of comparable or improved quality and quantity of water from other sources.

- b. If desalter well fields are demonstrated to cause or exacerbate impacts to subsidence areas measurable by a decline of over six inches in ground level at a ¼ mile radius, or at the radius of the nearest non-OBMP-participating structure, then pumping patterns for the desalters shall be modified to reduce impacts to cause no more than six inches of decline in ground level at the smallest of the two radii.

- 4.4-16 Require site-specific geotechnical investigations of proposed development to include an assessment of potential impacts and mitigation measures related to expansive and reactive soils and liquefaction. Under the OBMP, Watermaster will continue to monitor the areas with potential liquefaction hazards and will work with local jurisdictions to ensure that any future structures are constructed with the appropriate foundations to address increased liquefaction potentials apropos to the specific area. This mitigation measure will reduce impacts to a less than significant level.
- 4.4-19 When determined necessary by the affected jurisdictions, geotechnical and soils engineering reports shall be prepared in conjunction with the preparation of preliminary design layouts and grading plans for all new development projects implemented within the proposed Project Area. These studies will verify the presence or absence of hazardous soil conditions. If necessary, these reports will provide specific mitigation measures for the treatment of potential geologic and soils hazards.

Hazards and Hazardous Materials

- HAZ-1: Vector Management Plan. Vector management plans shall be prepared and use of pesticides shall be reviewed and coordinated with the West Valley Mosquito and Vector Control District for approval prior to implementing vector control at any of the new or expanded storage basins. All pesticides shall be applied in accordance with State and label requirements to minimize potential for residual concentrations that may be considered adverse to public health and water quality.
- HAZ-2: Future Phase I ESA Requirement. Prior to final site selection for future OBMPU facilities, the implementing agency shall obtain an ASTM E1527-21-compliant Phase I Environmental Site Assessment (ESA) for the selected site. If a site contains contamination the agency shall either avoid the site by selecting an alternative location or shall remove any contamination (remediate) at the site to a level of concentration that eliminates hazard to employees working at the site and meets the levels established by the applicable California Human Health Screening Levels and EPA-developed Regional Screening Levels, and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law.
- HAZ-3: Unknown Contamination Procedure. Should an unknown contaminated site be encountered during construction of OBMPU facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local Certified Unified Program Agency or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the Certified Unified Program Agency or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.

- HAZ-4: Airport Compatibility. Prior to finalizing site selection of an OBMPU facility within an airport safety zone, input from the affected airport management entity shall be solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use compatibility plan. If a potential conflict with an airport land use compatibility plan is identified, the Implementing Agency shall relocate the facility outside the area of conflict, or if the site is deemed essential, the Implementing Agency shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.
- HAZ-5: High Fire Hazard Severity Zone Hazard Reduction Plan. Prior to construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (FHSZs) by CAL FIRE, fire hazard reduction measures shall be incorporated into a fire management/fuel modification plan for the proposed facility, and shall be implemented during construction and over the long-term for protection of the site. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site shall have access to functional fire extinguishers and related fire prevention equipment (such as emergency sand bags, etc.) at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by the Implementing Agency and CAL FIRE for review and comment, where appropriate, and approved prior to construction within high and very high FHSZs and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high FHSZ to minimize fire damage to a level acceptable to the Implementing Agency over the long term.
- 4.10-1 For OBMP facilities that handle hazardous materials or generate hazardous waste the Business Plan prepared and submitted to the county or local city shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes.
- 4.10-2 The business plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material. Adequate funding shall be provided to acquire the necessary equipment, train personnel in responses and to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.
- 4.10-3 For the storage of any acutely hazardous material at an OBMP facility, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.
- 4.10-5 Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.
- 4.10-6 During construction activities within existing road rights-of-way or other easements where continuous access is required, a road operation management plan shall be prepared and implemented. At a minimum this plan shall define how to minimize the amount of time spent on construction activities; how to minimize disruption of vehicle and alternative modes of traffic at all times, but particularly during periods of high traffic volumes; adequate signage and other

controls, including flagpersons, to ensure that traffic can flow adequately during construction; the identification of alternative routes that can meet the traffic flow requirements of a specific area, including communication (signs, webpages, etc.) with drivers and neighborhoods where construction activities will occur; and at the end of each construction day roadways shall be prepared for continued utilization without any significant roadway hazards remaining.

- 4.10-7 To the extent feasible, installation of pipelines or other construction activities in support of the OBMP shall not be located on major evacuation or emergency response routes within any communities in the Chino Basin. Where construction on such routes is necessary, local emergency response providers shall be contacted and emergency access and evacuation requirements shall be maintained at a level sufficient to meet their needs.

Land Use and Planning

- LU-1: Land Use Consistency. Following selection of sites for future OBMPU facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.

Mineral Resources

- MR-1: Mineral Resource Avoidance. The Implementing Agency shall locate each facility proposed under the OBMPU outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, subsequent CEQA documentation shall be prepared.

Noise

- NOI-1: Construction Noise Minimization. The Implementing Agency shall implement the following measures during construction:
- Include design measures to reduce the construction noise levels if necessary to comply with local noise ordinances, or seek a variance from local noise ordinance if otherwise not feasible to comply. These measures may include, but are not limited to, the erection of noise barriers/curtains, use of advanced or state-of-the-art mufflers on construction equipment, and/or reduction in the amount of equipment that would operate concurrently at the construction site.
 - Place noise and groundborne vibration-generating construction activities whose specific location on a construction site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) as far as possible from the nearest noise- and vibration-sensitive land uses such as residences, schools, and hospitals.
 - Minimize the effects of equipment with the greatest peak noise generation potential via shrouding or shielding to the extent feasible. Examples include the use of drills, pavement breakers, and jackhammers.
 - Provide noise shielding and muffling devices on construction equipment per the manufacturer's specifications.
 - If construction is to occur near a school, the construction contractor shall coordinate the with school administration in order to limit disturbance to the campus. Efforts to limit construction activities to non-school days shall be encouraged.

- For major construction projects, identify a liaison for surrounding residents and property owners to contact with concerns regarding construction noise and vibration. The liaison's telephone number(s) shall be prominently displayed at construction locations.
- For major construction projects, notify in writing all landowners and occupants of properties adjacent to the construction area of the anticipated construction schedule at least two weeks prior to groundbreaking.
- Construction activities shall occur within the hours considered to be acceptable for construction by the applicable jurisdiction within which an individual project is constructed, except for activities, such as well drilling which are continuous, and for emergencies. Where no such restrictions are in place that limit hours of construction, construction shall be limited to the hours of 7 AM and 6 PM on weekdays, 8 AM and 5 PM on Saturdays, and at no time shall construction activities occur on Sundays or holidays, unless a declared emergency exists.

NOI-2: Non-Standard Construction Hours Procedure. Prior to authorizing construction activities during non-standard working hours, or hours that are not exempt from compliance with applicable City or County noise ordinances (e.g., 24-hour well drilling), the Implementing Agency will secure a noise waiver from the appropriate jurisdiction.

NOI-3: Well Drilling Noise Minimization. Injection and extraction wells shall be located as far from sensitive receptors as feasible. If new wells are to be constructed in the immediate vicinity of sensitive receptors, construction specification requirements shall include installation and maintenance of a temporary noise barrier (e.g., engineered sound wall or noise blanket) during 24-hour construction activities if necessary to comply with local noise ordinances. Specifications shall include use of appropriate materials that shall be installed to a height that intercepts the line of sight between the construction site and sensitive receptors in order to achieve maximum attenuation in an attempt to decrease construction area noise to as close as ambient noise levels as possible. Furthermore, where new wells are located adjacent to sensitive receptors, wells and any other associated noise generating facilities (i.e., associated treatment facilities, pumps, generators, etc.) shall be enclosed within a structure to attenuate noise to comply with the applicable noise threshold at the nearest sensitive receptor.

NOI-4: Operational Stationary Noise Minimization. The Implementing Agency shall require that all OBMPU-related aboveground facilities that include stationary noise generating equipment (such as emergency generators, blowers, pumps, motors, etc.) minimize their audible noise levels by locating equipment away from noise-sensitive receptor areas, installing proper acoustical shielding for the equipment, and incorporating the use of parapets into building design to meet the applicable City or County noise level requirements at neighboring property lines.

NOI-5: Construction Vibration Minimization. The Implementing Agency shall require the construction contractor(s) to implement the following measures:

- Ensure that the operation of construction equipment that generates high levels of vibration including, but not limited to, large bulldozers, loaded trucks, pile-drivers, vibratory compactors, and drilling rigs, is minimized to below the local jurisdiction's acceptable level of vibration, or where no level has been established, 72 vibration decibels (VdB), within 45 feet of existing residential structures and 35 feet of institutional structures (e.g., schools) during construction of the various OBMPU projects. Use of small rubber-tired bulldozers shall be enforced within these areas during grading operations to reduce vibration effects.
- The construction contractor for any individual OBMPU project shall provide signs along the roadway identifying a phone number for adjacent property owners to contact with any complaint. During future construction activities for any individual OBMPU project with heavy equipment within 300 feet of occupied residences, vibration field tests shall be conducted at the property line near the nearest occupied residences. If vibrations exceed 72 VdB, the construction activities shall be revised to reduce vibration below this threshold. These measures may include, but are not limited to the following: use different construction

methods, slow down construction activity, or other mitigating measures to reduce vibration at the property from where the complaint was received.

NOI-6: Historic Building Vibration Protections. Where an OBMPU project would be constructed adjacent to an existing or potential historic building, the Implementing Agency shall require, through contract specifications, a certified structural engineer to be retained to submit a report documenting evidence that the operation of vibration-generating equipment associated with the construction activities would not result in any structural damage to the adjacent historic building prior to the commencement of any construction activities. Contract specifications shall be included in the construction documents for the applicable OBMPU project development.

4.11-2 All construction vehicles and fixed or mobile equipment shall be equipped with properly operating and maintained mufflers.

4.11-3 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided with adequate hearing protection devices to ensure no hearing damage will result from construction activities.

4.11-4 If equipment is being used that can cause hearing damage at adjacent noise receptor locations (distance attenuation shall be taken into account), portable noise barriers shall be installed that are demonstrated to be adequate to reduce noise levels at receptor locations below hearing damage thresholds.

4.11-6 Project design will include measures which assure adequate interior noise levels as required by Title 25 (California Noise Insulation Standards).

Public Services

PS-1: Parkland Disturbance Avoidance or Supplementation. OBMPU facilities proposed to be located within vacant parkland or OBMPU facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) Relocated to avoid significant impacts to parkland or (2) Shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the OBMPU facility.

4.12-1 OBMP facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites or recharge sites.

Transportation

TRAN-1: Prepare and Implement Construction Transportation Management Plan
A construction Transportation Management Plan (TMP) shall be developed and implemented by the implementing agency in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of OBMPU facilities that generate greater than 50 construction (passenger car equivalent [PCE]) or operational trips per day, or where the facility would encroach within road rights-of-way. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction

vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.

Damage Repair: The TMP shall include the following requirements to minimize damage to the existing roadway network:

- A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water conveyance pipelines.
- The roadway network along the proposed water distribution alignment(s) shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.
- Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and the Implementing Agency or its contractors shall repair all damage.

Coordination with Emergency Services: The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public rights-of-way if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.

Coordination with Active Transportation Facilities: The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.

Coordination with SBCTA: If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with SBCTA and Metrolink.

Coordination with Caltrans: If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.

Coordination with Nearby Construction Sites: The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:

- All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures
- All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips
- The Implementing Agency, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.

Transportation Control and Safety: The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.

Plan Approval: The TMP shall be submitted to SBCTA and the respective city community development departments for review and approval.

- 4.7-6 Emphasize transportation demand management or non-motorized transportation alternatives for OBMP project related employees, where feasible, to reduce demand for roadway capacity.

Utilities and Service Systems

- UTIL-1: Construction and Demolition Recycling. The contract with demolition and construction contractors for a given OBMPU Project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given OBMPU project shall submit a recycling plan to the Implementing Agency for review and approval prior to issuance of permits for the construction of demolition/construction activities..
- UTIL-2: Construction Soils Recycling. The contract with demolition and construction contractors for a given OBMPU project shall include the requirement that all soils that are planned to be exported from the site that can feasibly be recycled shall be recycled for re-use; alternatively, soils shall be reused onsite to balance soil import/export.

Wildfire

- WF-1: Construction Traffic Control to Enable Emergency Access. Prior to initiating construction of proposed facilities within public rights-of-way (ROW), the implementing agency shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. The implementing agency shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, County of Riverside Emergency Operations Plan, or Los Angeles County Operational Area Emergency Response Plan and are reviewed and approved by the local agency with authority over construction within the public ROW.

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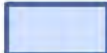
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EXHIBITS AND FIGURES

Exhibit 1



 Chino Basin Adjudicated Boundary

 Major SAWPA Member Agencies

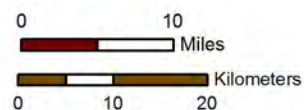
 Santa Ana River Watershed



Produced by:



Author: GAR
Date: 12/16/2019
Name: 1.) Chino in SAR Watershed



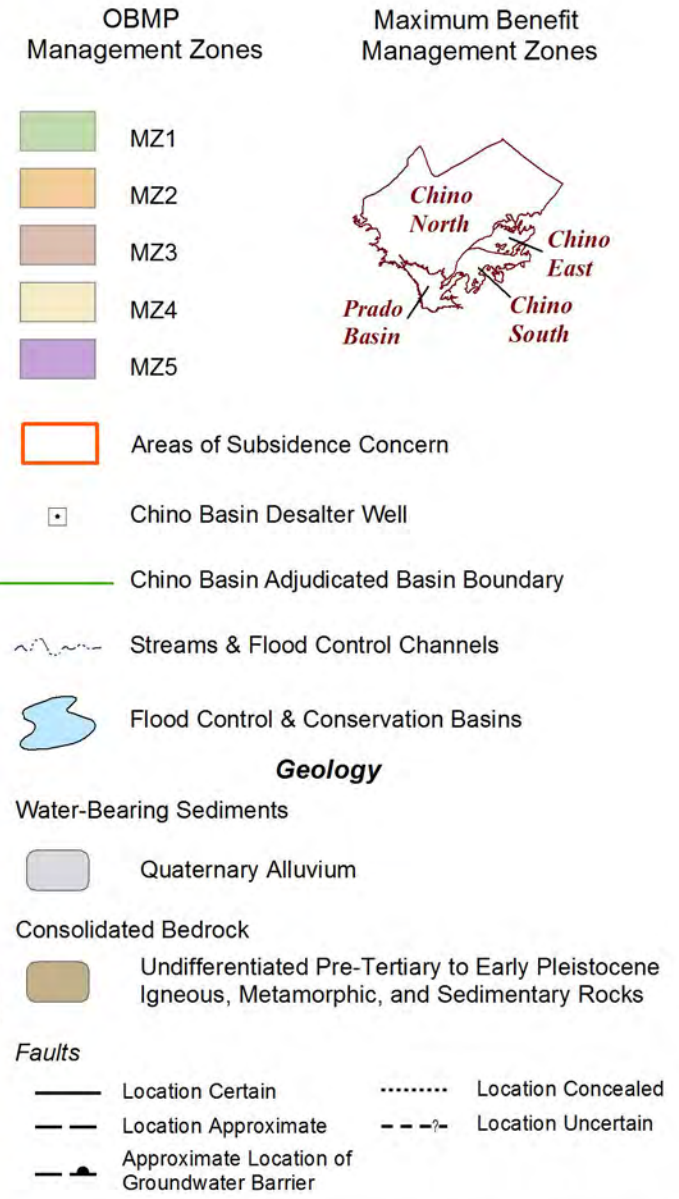
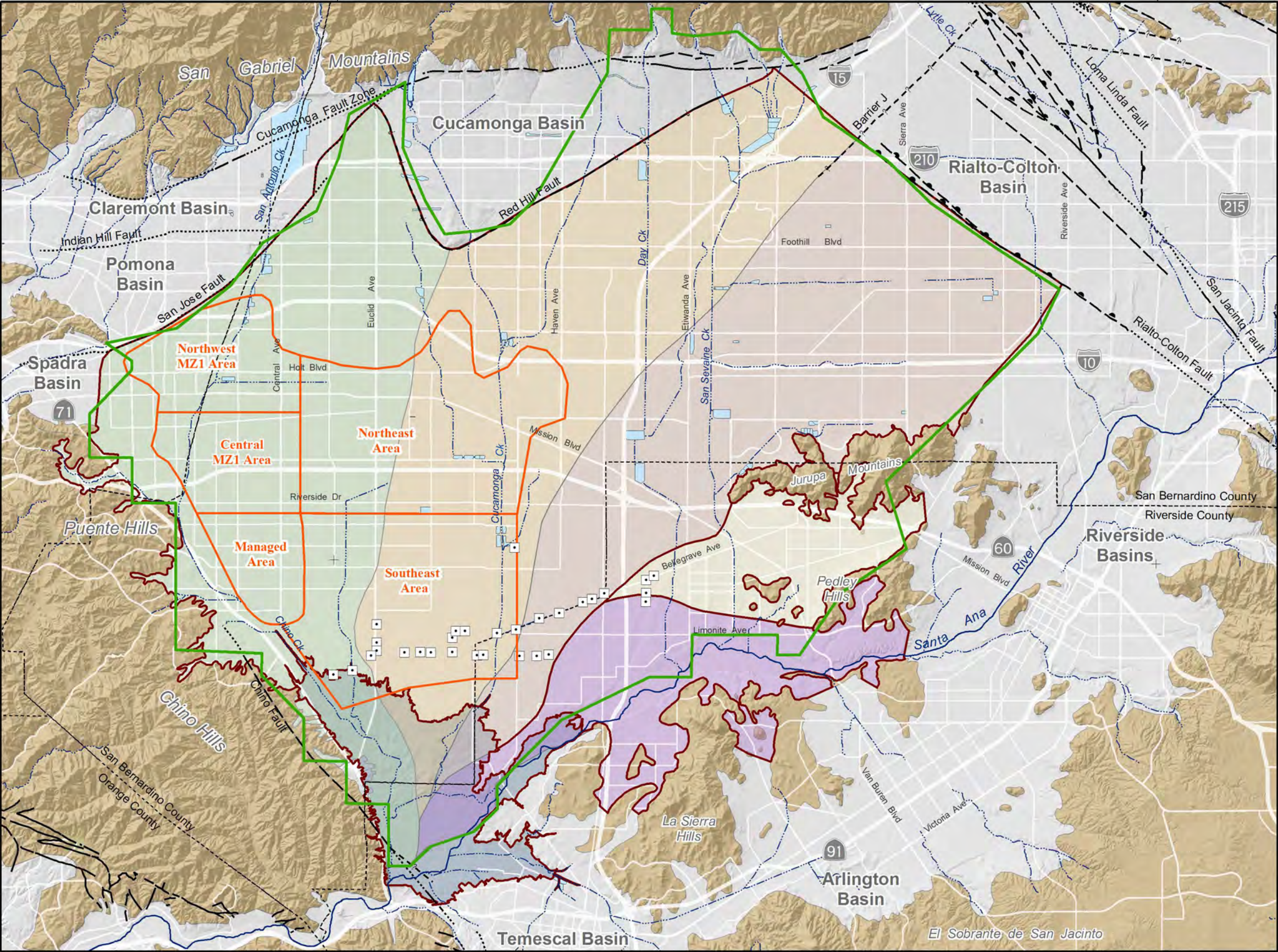
Prepared for:
OBMP 2020 Update
Project Description



Location of the Chino Basin and the Santa Ana River Watershed

Figure 1-1

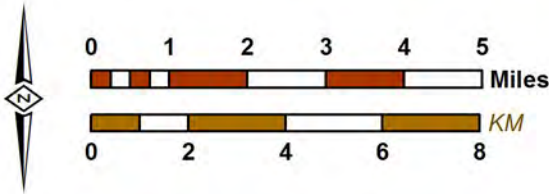
Exhibit 2



Prepared by:



Author: LG
Date: 12/19/2019
Document Name: 2.) Project Location + Bulletin 118

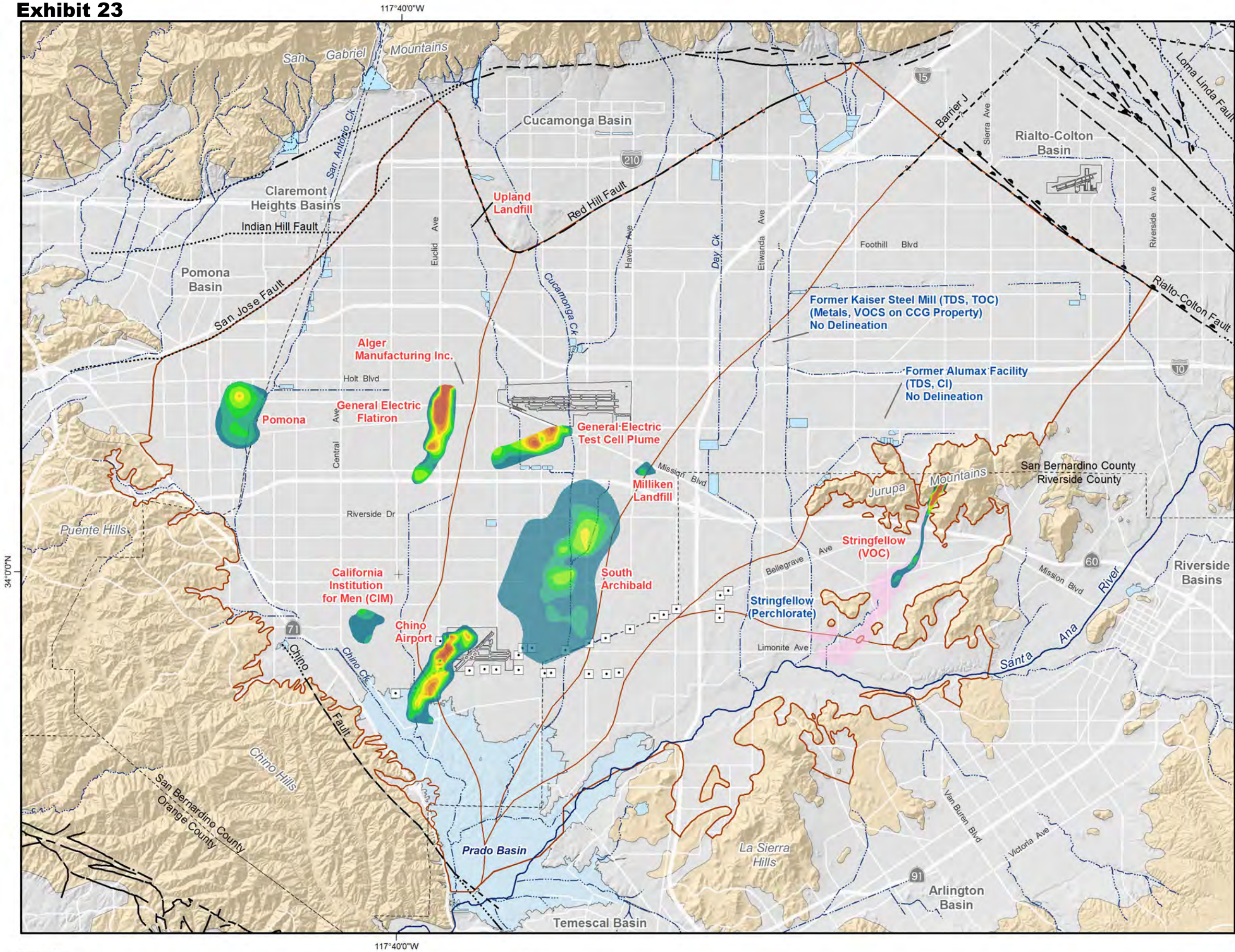


Prepared for:
OBMP 2020 Update
Project Description



Chino Basin
OBMP Management Zones, Maximum Benefit Management Zones and Areas of Subsidence Concern

Figure 1-1



VOC Concentration (µg/l)

> 0 to ≤ 5
> 5 to ≤ 10
> 10 to ≤ 20
> 20 to ≤ 50
> 50 to ≤ 100
> 100 to ≤ 200
> 200 to ≤ 500
> 500

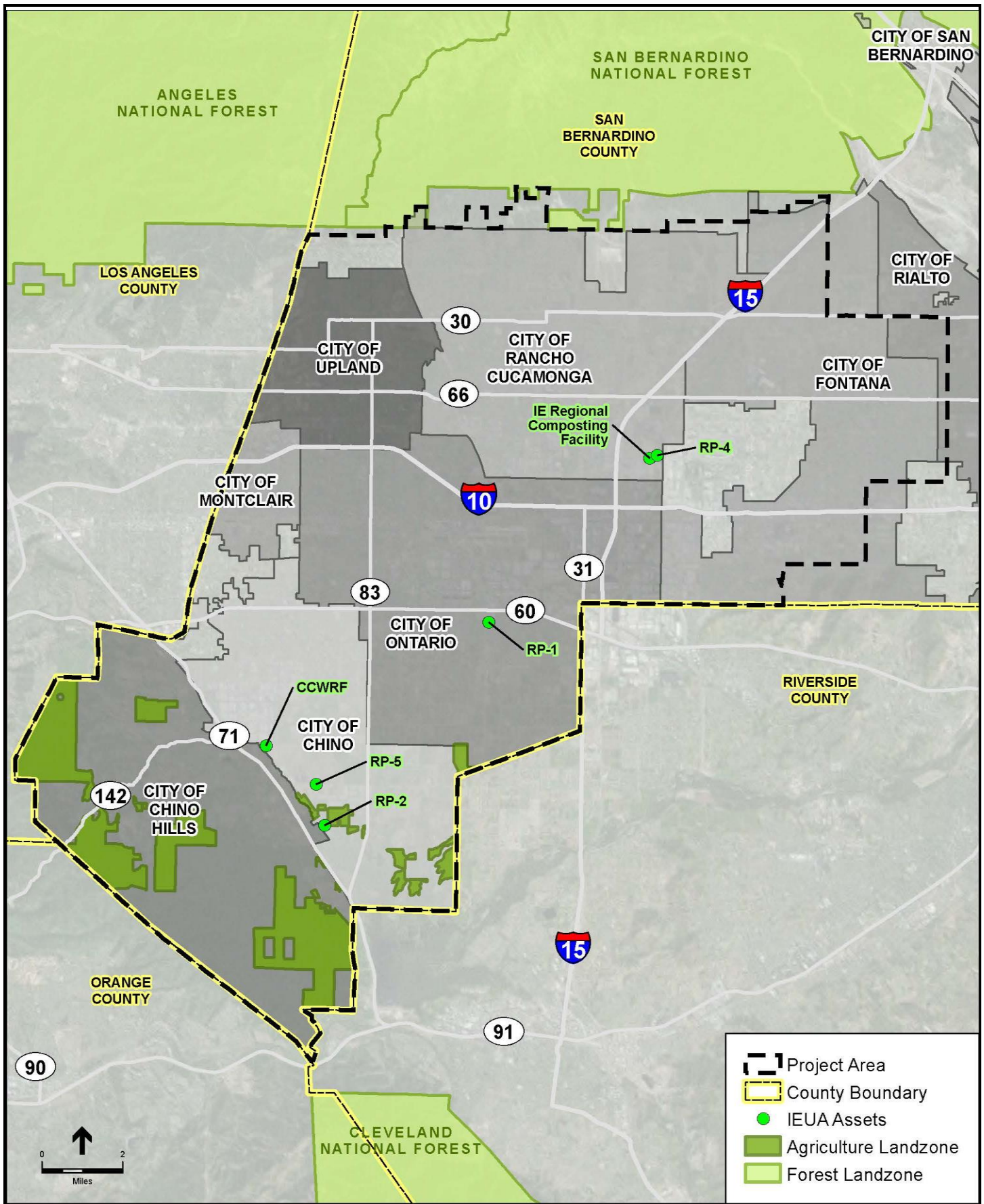
The VOC plumes shown on this map are generalized illustrations of the estimated spatial extent of TCE or PCE, based on the maximum concentration measured at wells over the five-year period of July 2013 to June 2018. The VOC plume illustrations were created with the grid function in Golden Software's Surfer 16 using an ordinary kriging interpolation model with model input parameter estimation and optimization performed by semivariogram analysis in Golden Software's Surfer 16. Interpretations of the plume extent and boundary delineation were made based on measured concentrations and local groundwater flow patterns as predicted by the Chino Basin groundwater flow model.

VOC Plumes Labeled in Red by Name

Other Plumes - Labeled in Blue by Name and Dominant Contaminant

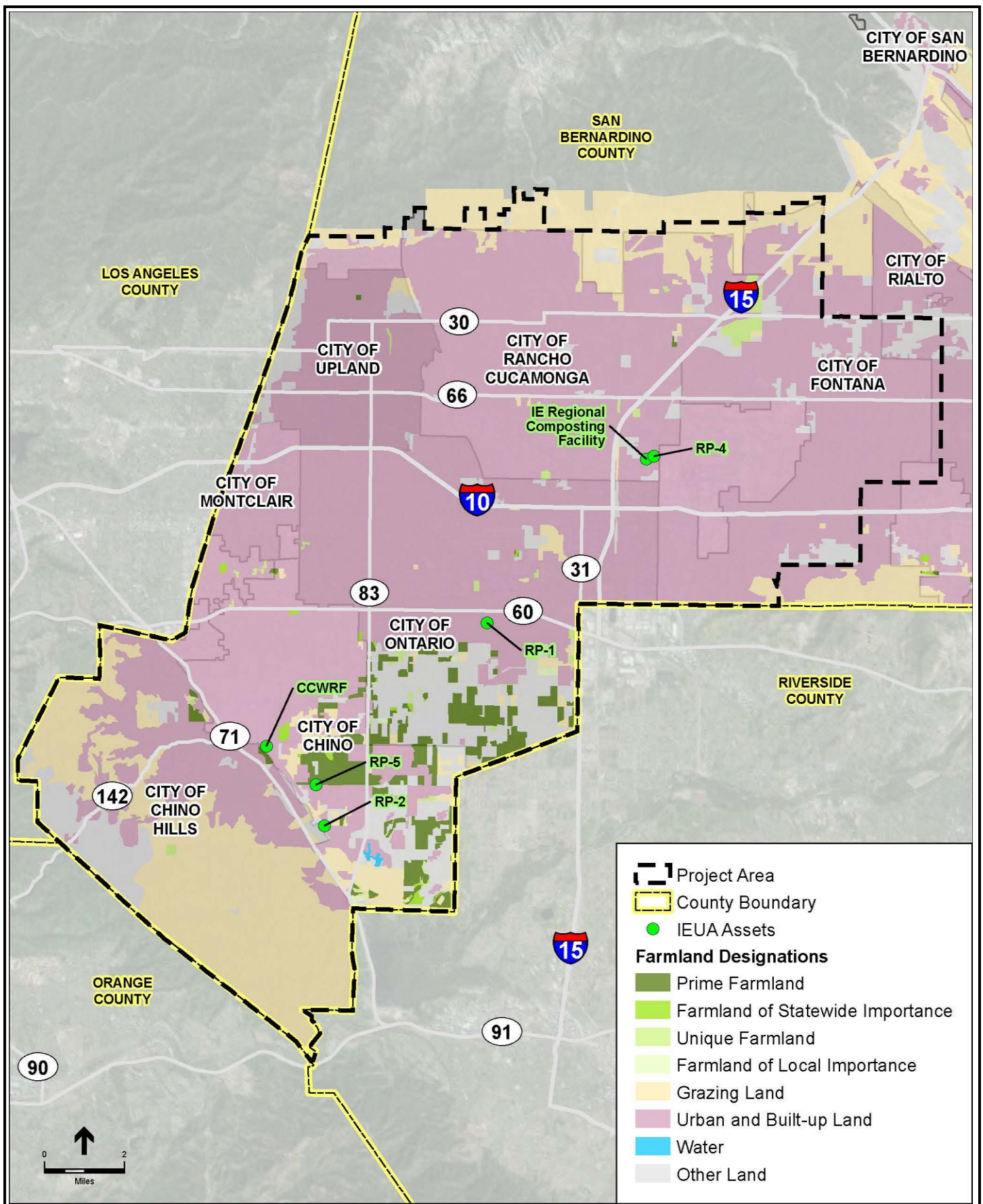
The plumes characterized by color ramp represent Watermaster's most recent characterization of the primary contaminant of concern. The spatial extent of the VOC contamination was delineated by Watermaster based on the five-year maximum concentrations of the primary contaminant of concern for the period of July 2013 to June 2018. The primary VOC contaminant of concern in all of the plumes is TCE with the exception of the CIM plume, which is PCE. The VOC plumes associated with the Upland Landfill and the Alger Manufacturing Facility are of limited geographical extent at the scale of this map, so only their general locations are identified.

Other point-source contamination plumes in the Chino Basin include the former Kaiser Steel Mill, the former Alumax Facility, and the Stringfellow NPL Site, which are labeled by name and the primary contaminants associated with the sites. The former Kaiser Steel Mill TDS and total organic carbon (TOC) plume has not been delineated since 2008 (WEI, 2008b), and there are no plume delineations for the contamination associated with the former Kaiser Steel Mill CCG Property for metals and VOCs or the former Alumax Facility for TDS and chloride (Cl). The Stringfellow perchlorate plume shown here was delineated in the most recent remediation evaluation report for the site (Kleinfelder, 2018).



SOURCE: IEUA Facilities Master Plan PEIR, December 2016

FIGURE II-1



SOURCE: IEUA Facilities Master Plan PEIR, December 2016

FIGURE II-2

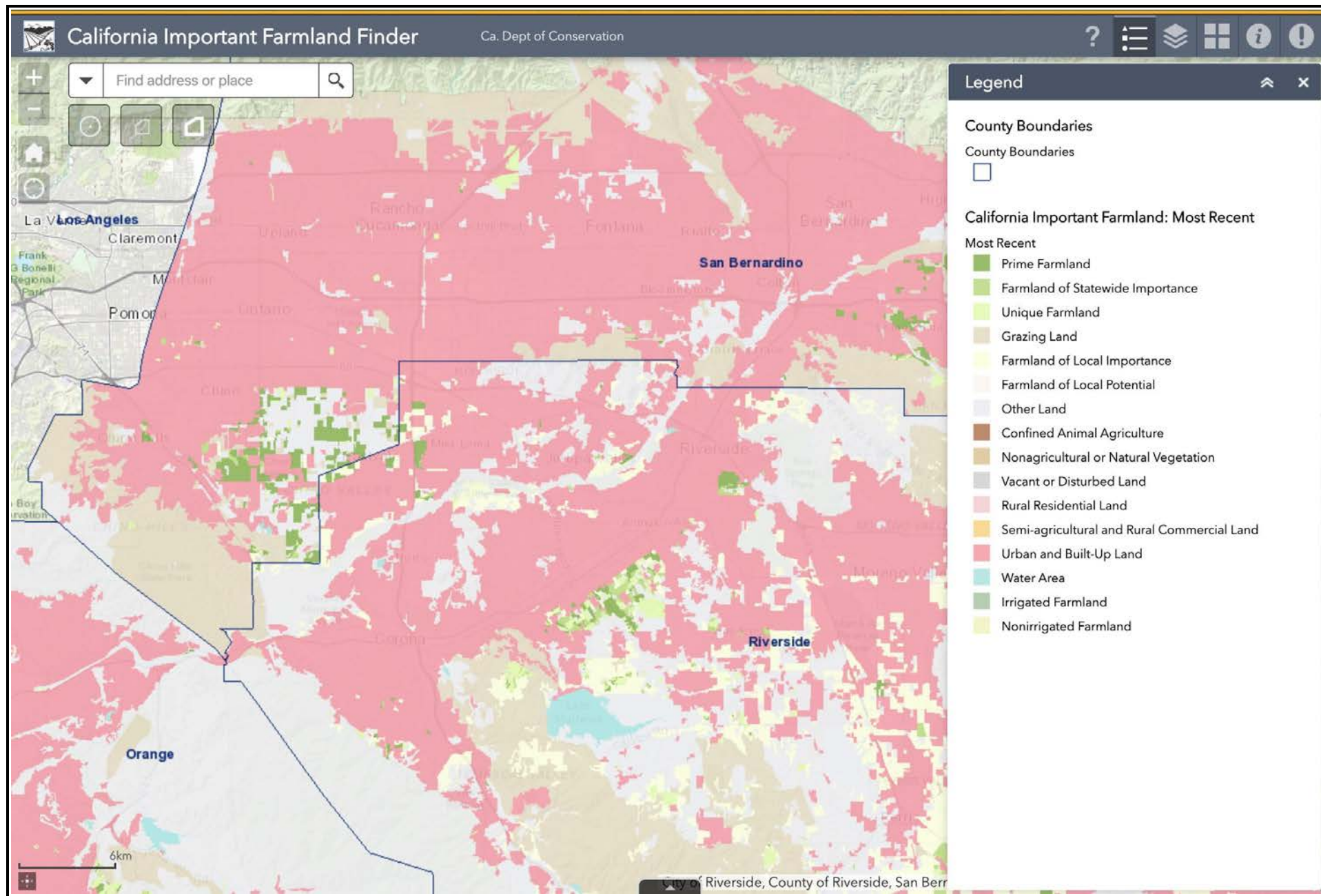


FIGURE II-3

AGRICULTURE & FORESTRY RESOURCES

Figure 5.2-2

Williamson Act Land

-  Ontario City Boundary
-  County Boundary
- Parcels with Williamson Act Contract
- Expires
 -  Active
 -  2022
 -  2027
 -  2028

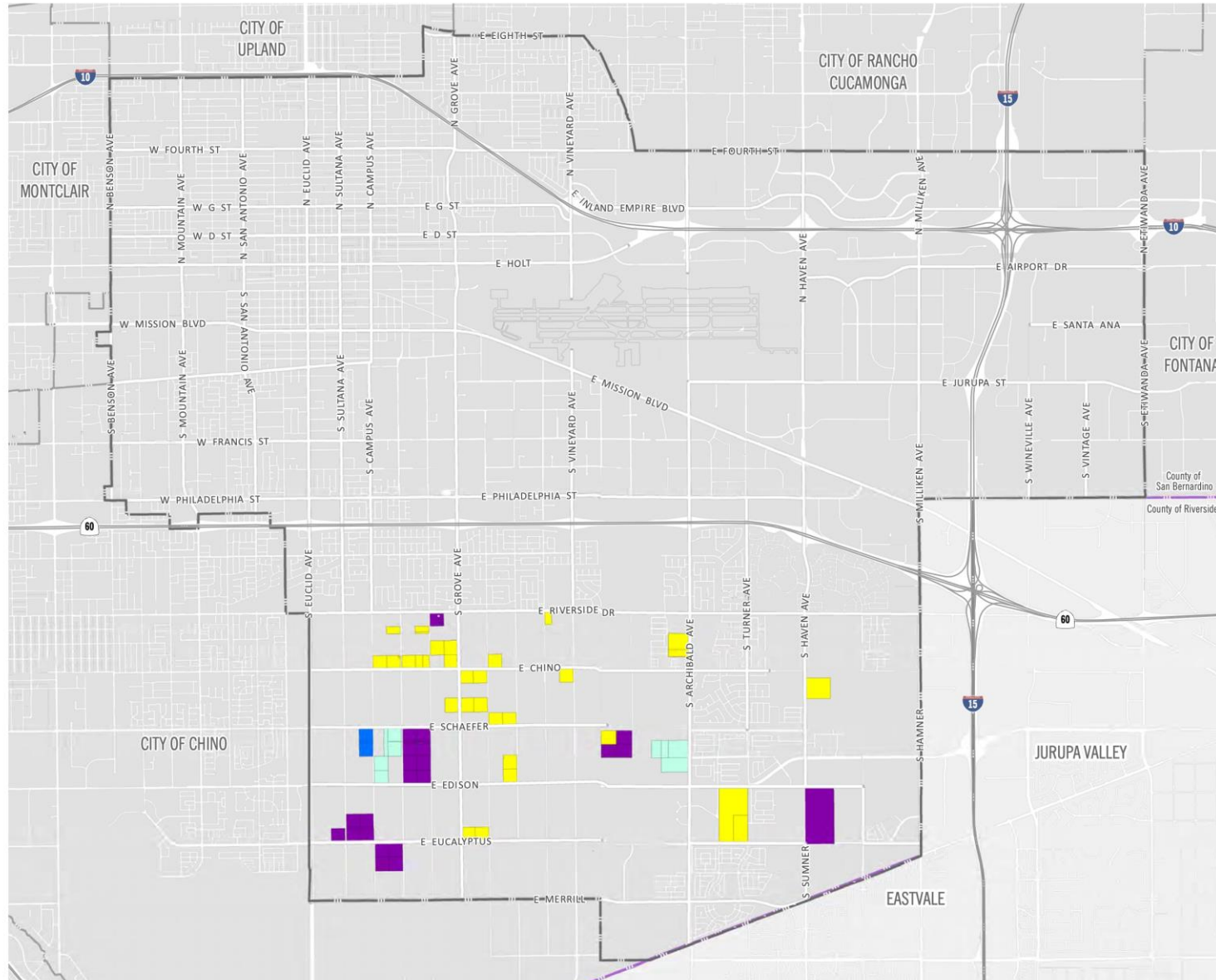
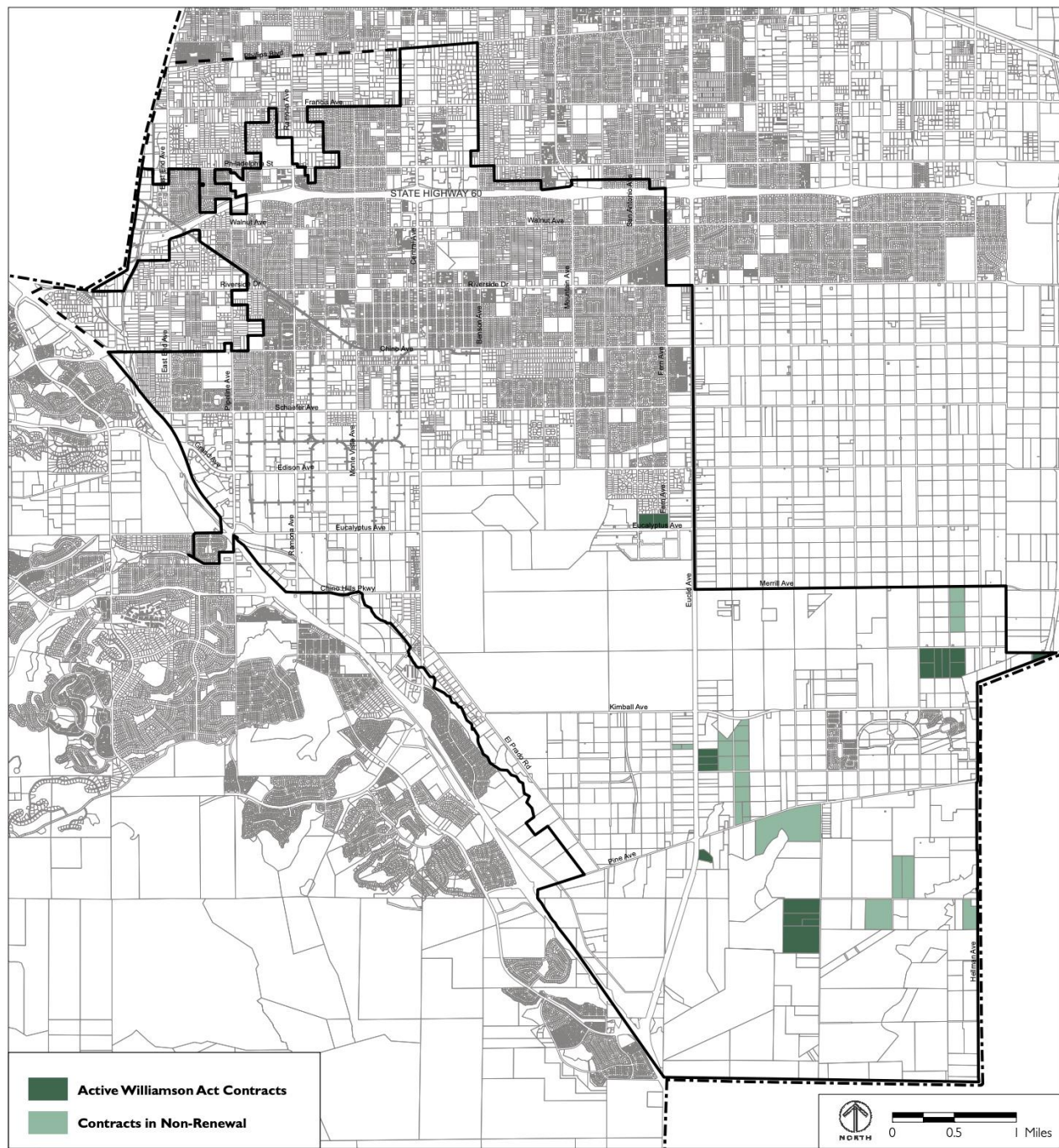


FIGURE II-4



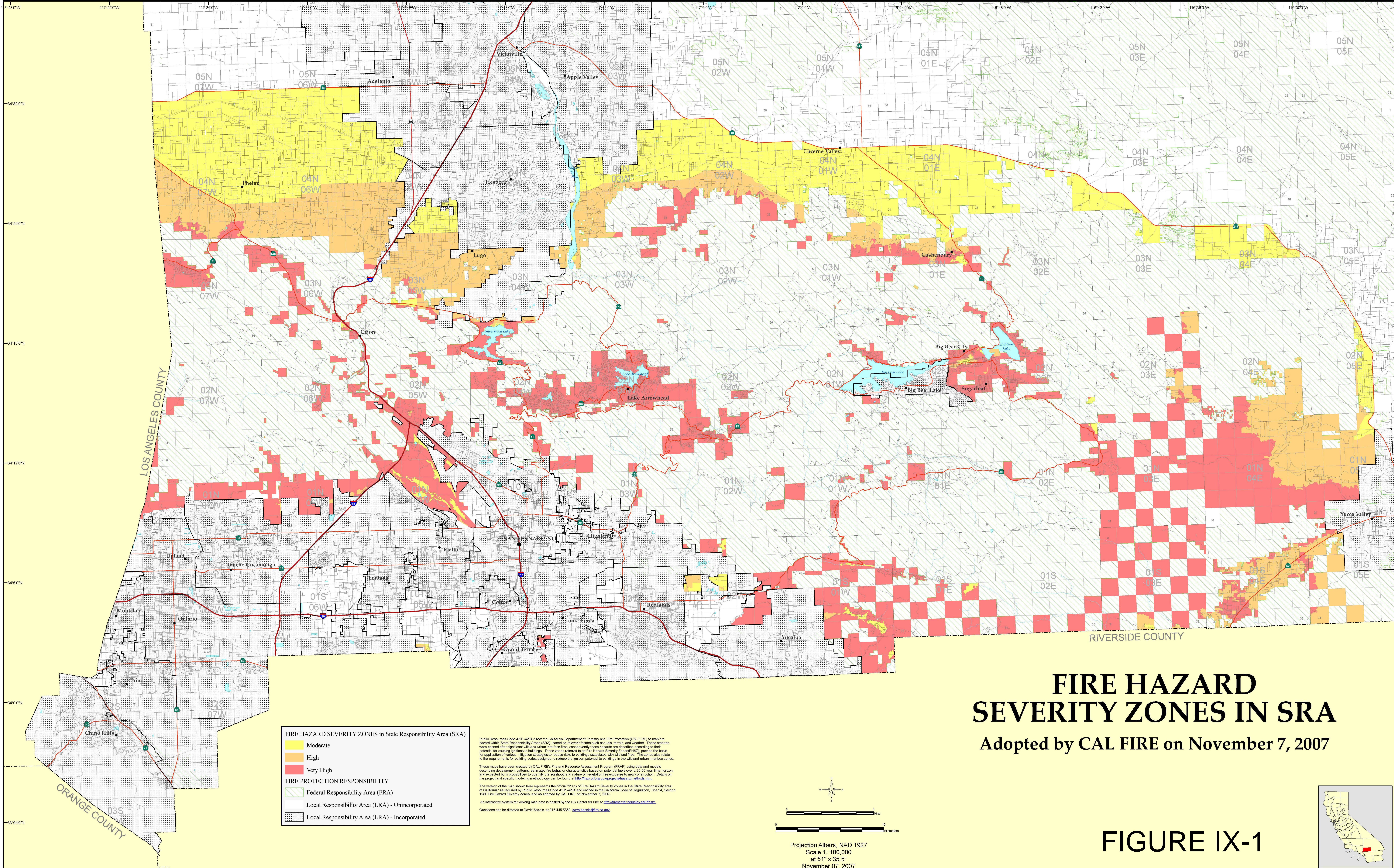
Source: City of Chino, 2008.

FIGURE 4.2-2
WILLIAMSON ACT CONTRACTS

FIGURE II-5



SW SAN BERNARDINO COUNTY



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Obtain FRAP maps, data, metadata and publications on the Internet at <http://frap.cdf.ca.gov>.
For more information, contact CAL FIRE-FRAP, PO Box 944246, Sacramento, CA 94244-2460, (916) 327-3939.

Arnold Schwarzenegger, Governor,
State of California
Mike Chrisman, Secretary for Resources,
The Resources Agency
Ruben Grijalva, Director,
Department of Forestry and Fire Protection

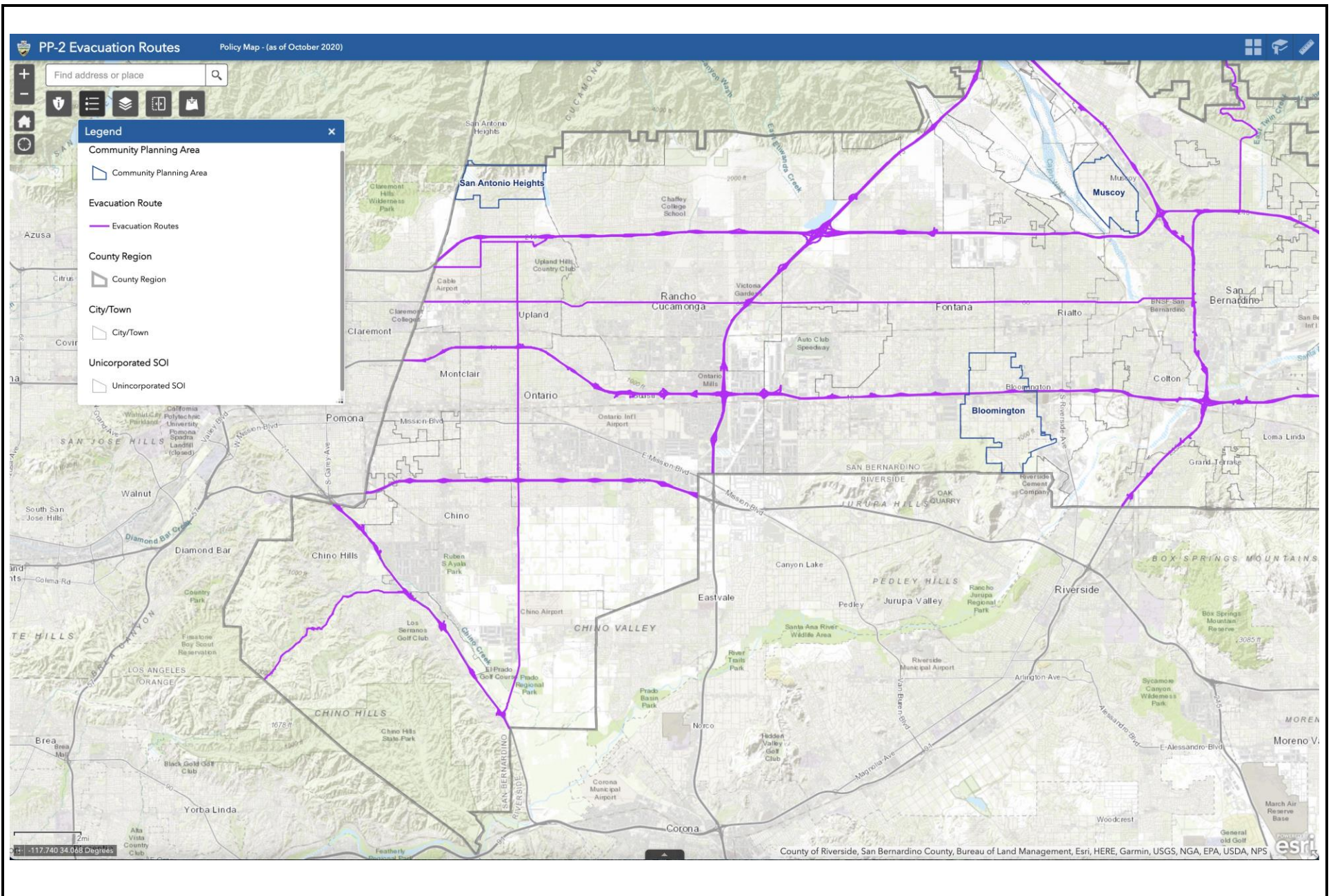
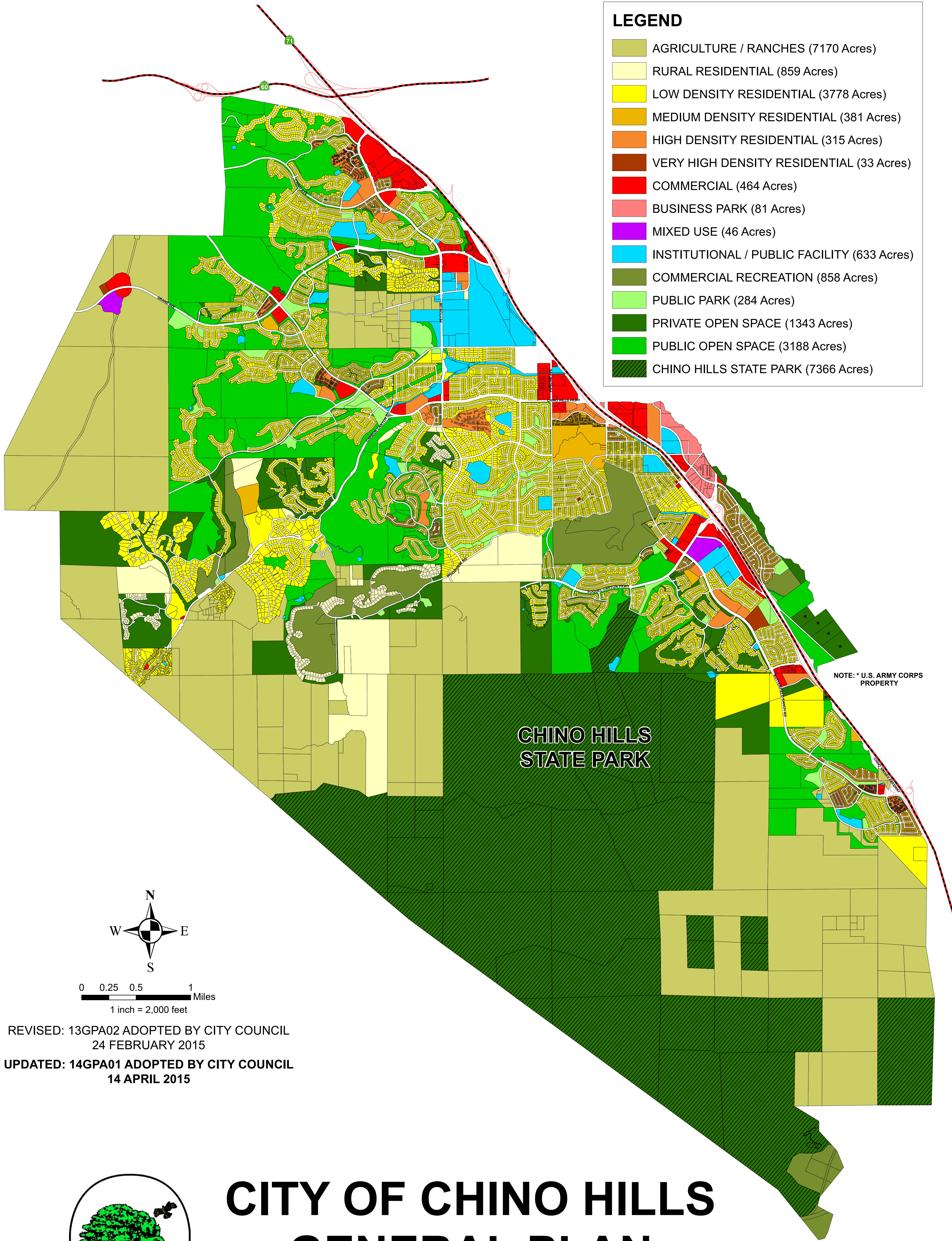


FIGURE XX-1

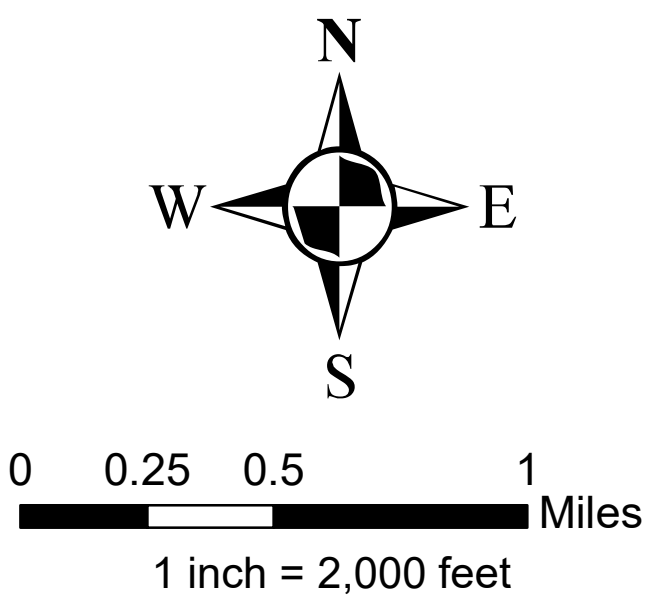
ATTACHMENT 1

GENERAL PLAN MAPS



LEGEND	
	AGRICULTURE / RANCHES (7170 Acres)
	RURAL RESIDENTIAL (859 Acres)
	LOW DENSITY RESIDENTIAL (3778 Acres)
	MEDIUM DENSITY RESIDENTIAL (381 Acres)
	HIGH DENSITY RESIDENTIAL (315 Acres)
	VERY HIGH DENSITY RESIDENTIAL (33 Acres)
	COMMERCIAL (464 Acres)
	BUSINESS PARK (81 Acres)
	MIXED USE (46 Acres)
	INSTITUTIONAL / PUBLIC FACILITY (633 Acres)
	COMMERCIAL RECREATION (858 Acres)
	PUBLIC PARK (284 Acres)
	PRIVATE OPEN SPACE (1343 Acres)
	PUBLIC OPEN SPACE (3188 Acres)
	CHINO HILLS STATE PARK (7366 Acres)

NOTE: * U.S. ARMY CORPS PROPERTY



REVISED: 13GPA02 ADOPTED BY CITY COUNCIL
24 FEBRUARY 2015
UPDATED: 14GPA01 ADOPTED BY CITY COUNCIL
14 APRIL 2015

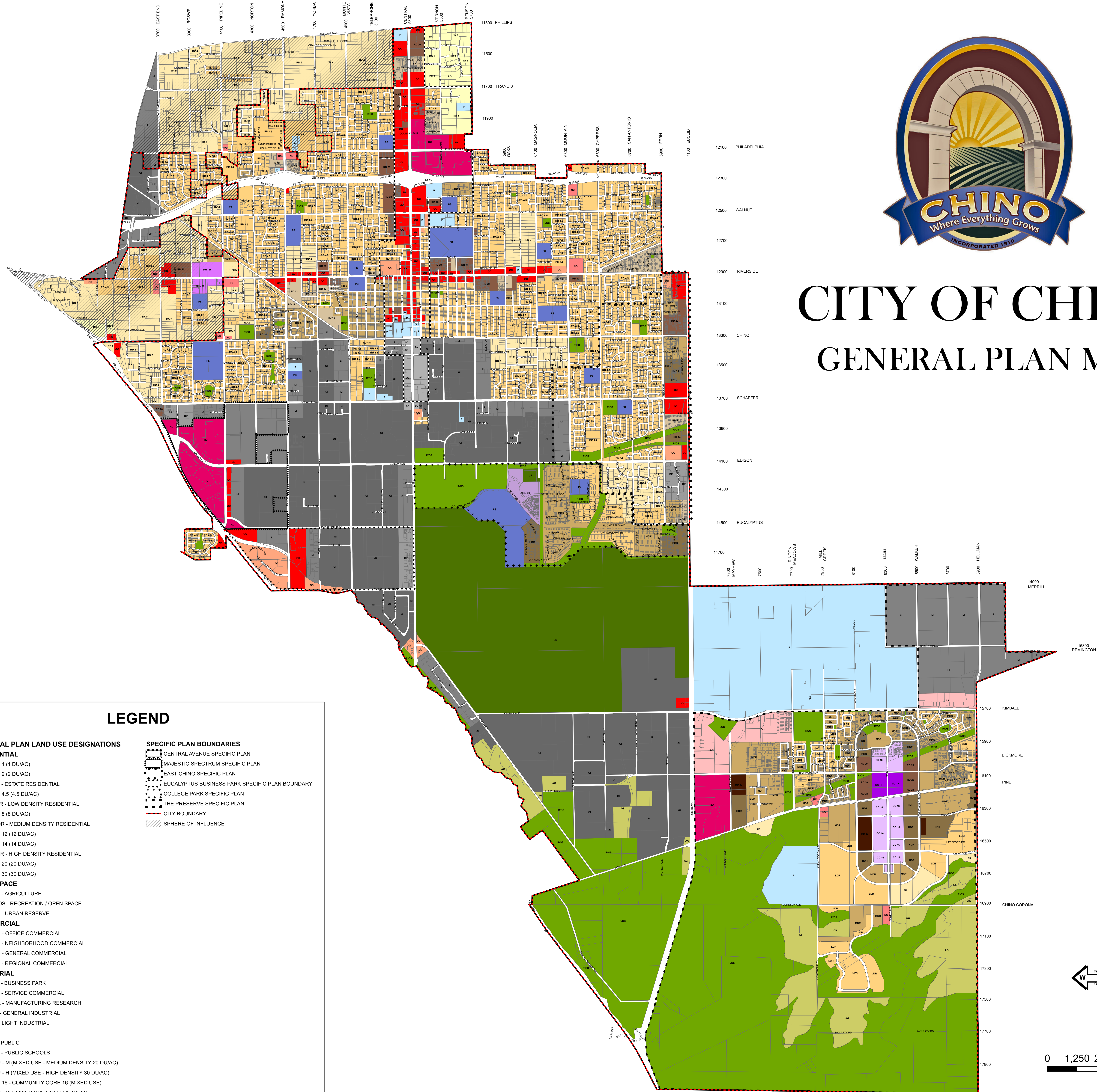


CITY OF CHINO HILLS GENERAL PLAN LAND USE

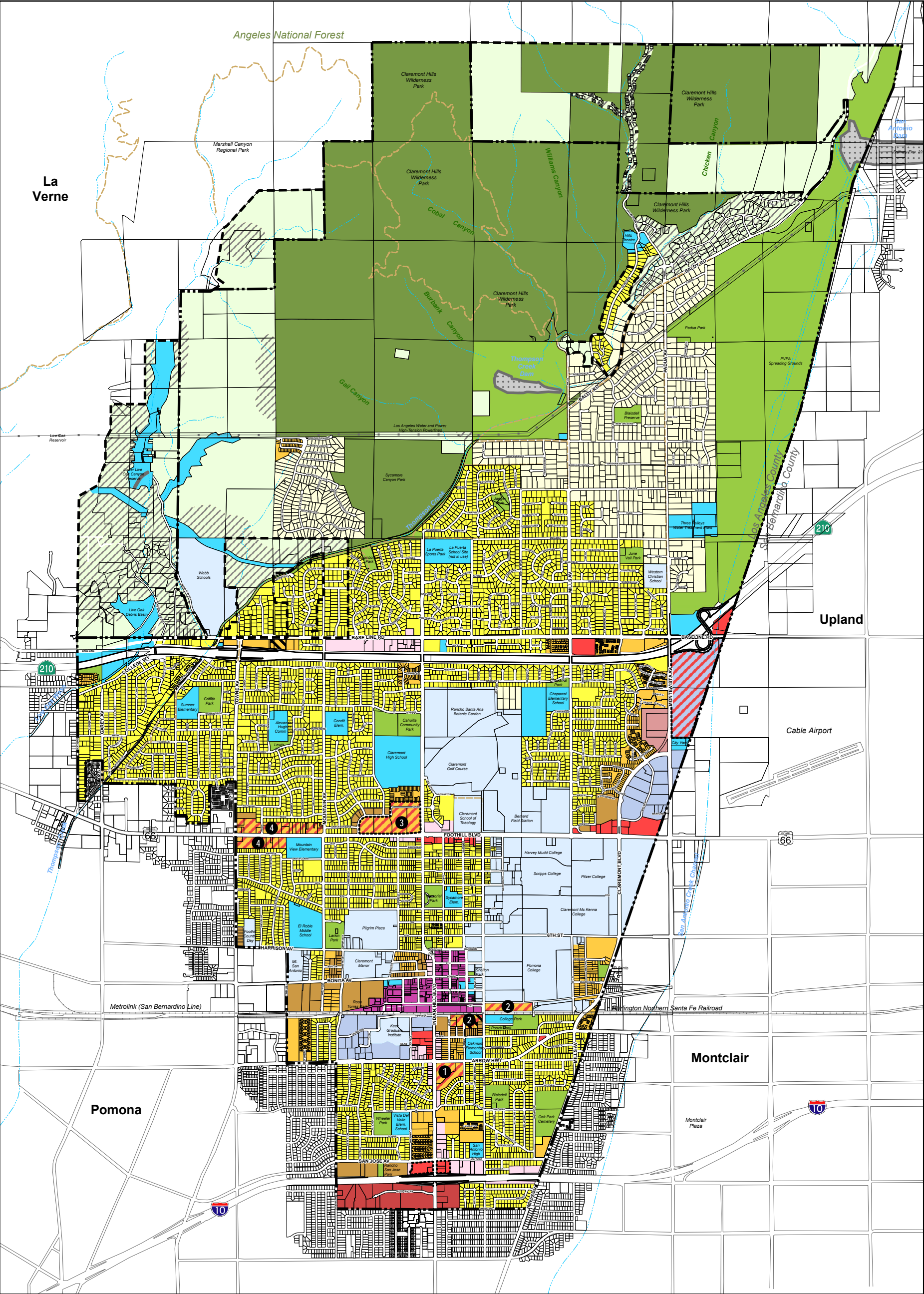


CITY OF CHINO

GENERAL PLAN MAP



Adopted by the Chino City Council on July 6, 2010
Map Revised July 21, 2022



Land Use Designation Categories

- | | |
|------------------------|---|
| Residential 2 | Commercial |
| Residential 6 | Claremont Village |
| Residential 15 | Freeway Commercial |
| Residential 22 | Office/Professional |
| Mixed Use | Commercial Recreation |
| Residential 30 Overlay | Business Park |
| City Boundary | Mixture of Commercial and Business Park |
| Sphere of Influence | |
| Specific Plan Overlay | |

- | |
|--------------------------------|
| Public |
| Institutional |
| Park and Resource Conservation |
| Wilderness Park |
| Hillside |
| Hillside Residential Overlay |

Mixed Use Areas

- 1 Peppertree Square Mixed Use
- 2 Transportation Oriented Development
- 3 Old School House/Hotel/Office Mixed Use
- 4 Foothill Boulevard Corridor Mixed Use



Last Updated: February 11, 2014

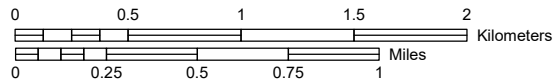


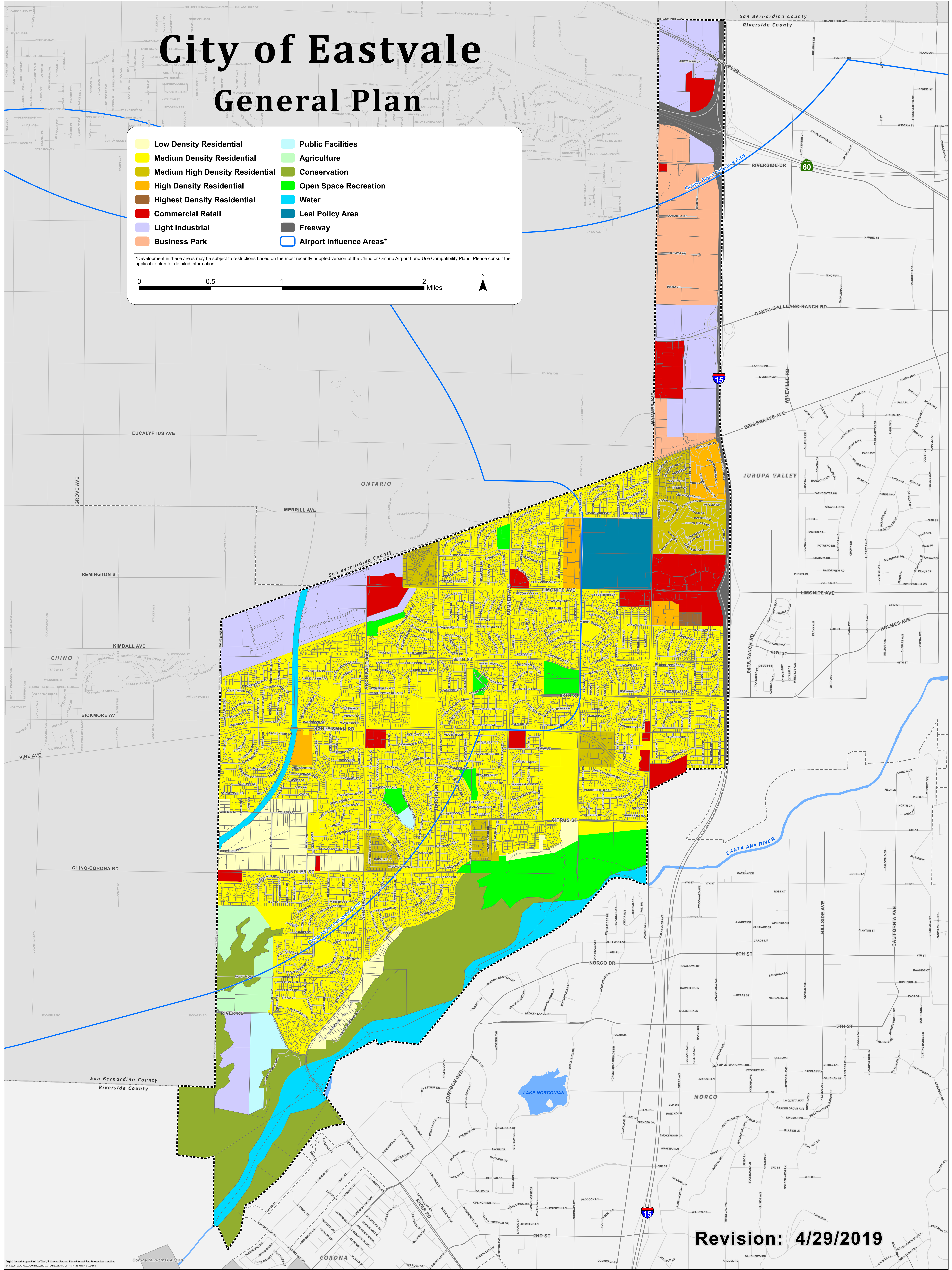
Figure 2-3
Land Use Plan

City of Eastvale General Plan

- | | |
|---------------------------------|--------------------------|
| Low Density Residential | Public Facilities |
| Medium Density Residential | Agriculture |
| Medium High Density Residential | Conservation |
| High Density Residential | Open Space Recreation |
| Highest Density Residential | Water |
| Commercial Retail | Leal Policy Area |
| Light Industrial | Freeway |
| Business Park | Airport Influence Areas* |

*Development in these areas may be subject to restrictions based on the most recently adopted version of the Chino or Ontario Airport Land Use Compatibility Plans. Please consult the applicable plan for detailed information.

0 0.5 1 2 Miles



Revision: 4/29/2019

GENERAL PLAN LAND USE MAP

4/20/2022

GENERAL PLAN LAND USE LEGEND

RESIDENTIAL DESIGNATIONS

- R-E Residential Estates (2 du/ac)
- R-PC Residential Planned Community (3.0-6.4 du/ac)
- R-SF Single Family Residential (2.1-5 du/ac)
- R-M Medium Density Residential (5.1-12 du/ac)
- R-MF Multi Family Residential (12.1-24 du/ac)
- R-MFMH Multi Family Medium/High Residential (24.1-39 du/ac)
- R-MFH Multi Family High Residential (39.1-50 du/ac)
- R-T Residential Trucking (2 du/ac)

WALKABLE MIXED USE DESIGNATIONS

- WMXU-1 Walkable Mixed Use Corridor & Downtown (0.2-2 FAR, 3-39 du/ac)
- WMXU-2 Walkable Mixed Use Urban Village (0.2-1 FAR, 2.1-24 du/ac)

COMMERCIAL DESIGNATIONS

- C-C Community Commercial (0.1-1.0 FAR)
- C-G General Commercial (0.1-1.0 FAR)
- RMU Regional Mixed Use (0.1-1 FAR 12-24 du/ac)

INDUSTRIAL DESIGNATIONS

- I-L Light Industrial (0.1-0.6 FAR)
- I-G General Industrial (0.1-0.6 FAR)

PUBLIC DESIGNATIONS

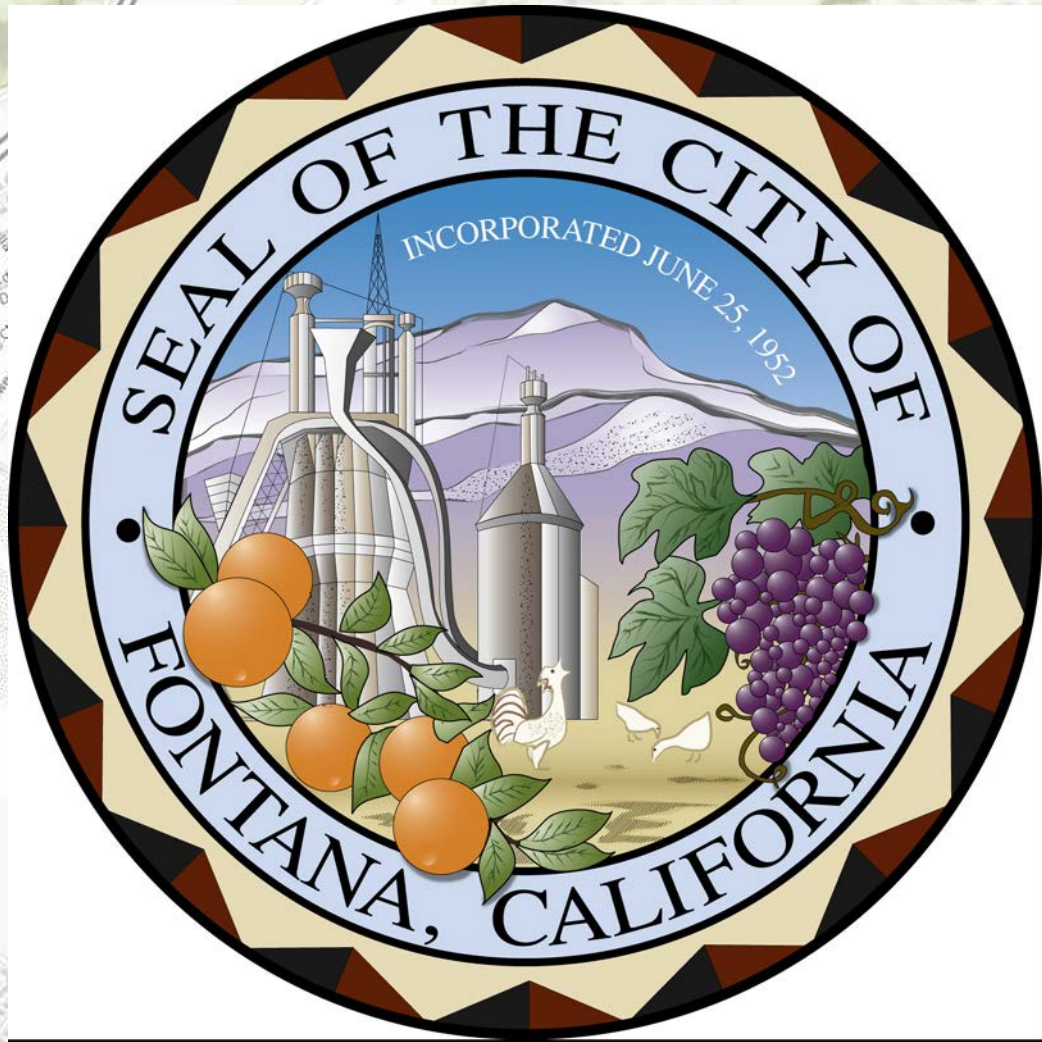
- P-PF Public Facilities
- P-R Recreational Facilities
- P-UC Public Utility

PUBLIC DESIGNATIONS

- OS Open Space

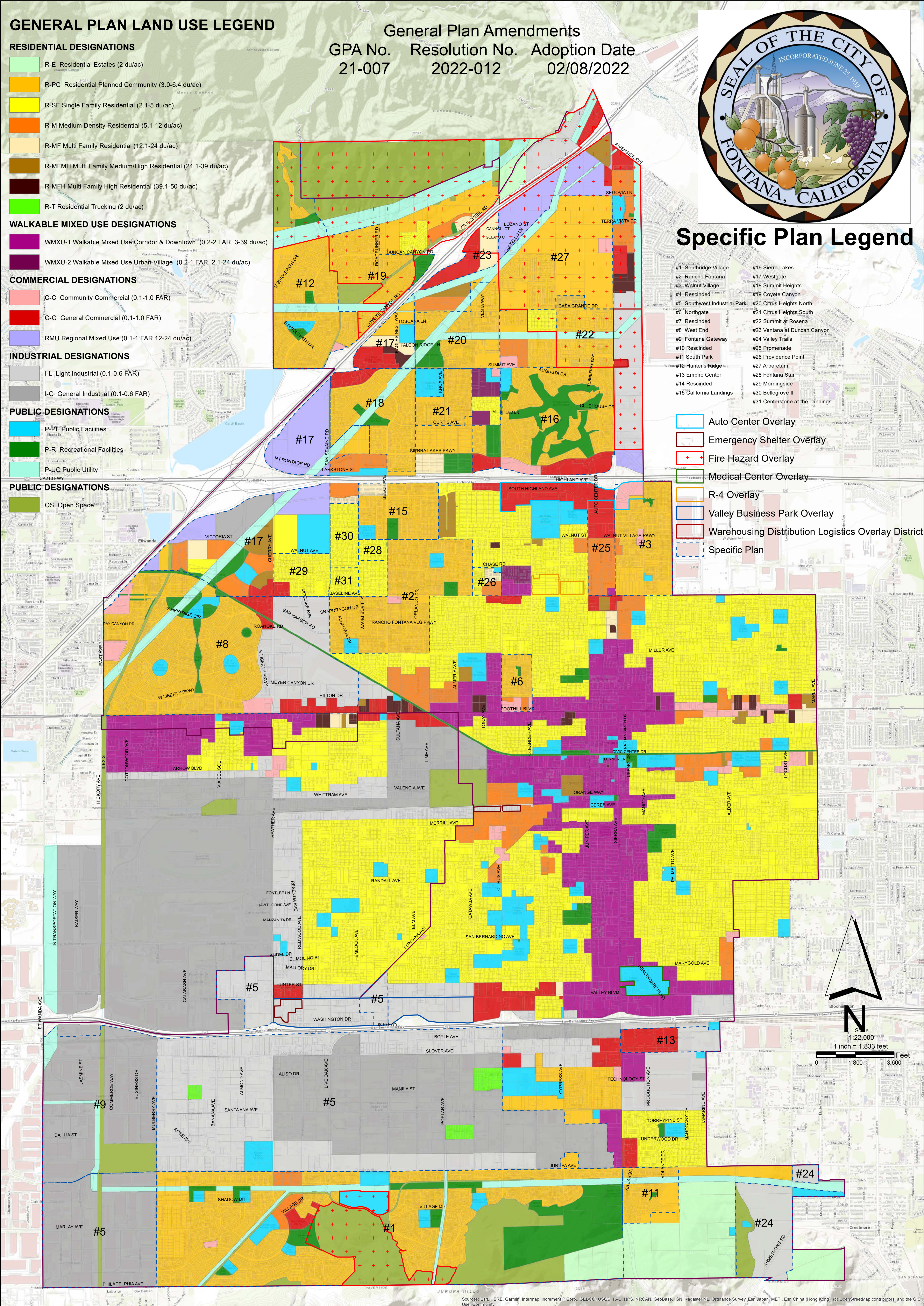
General Plan Amendments

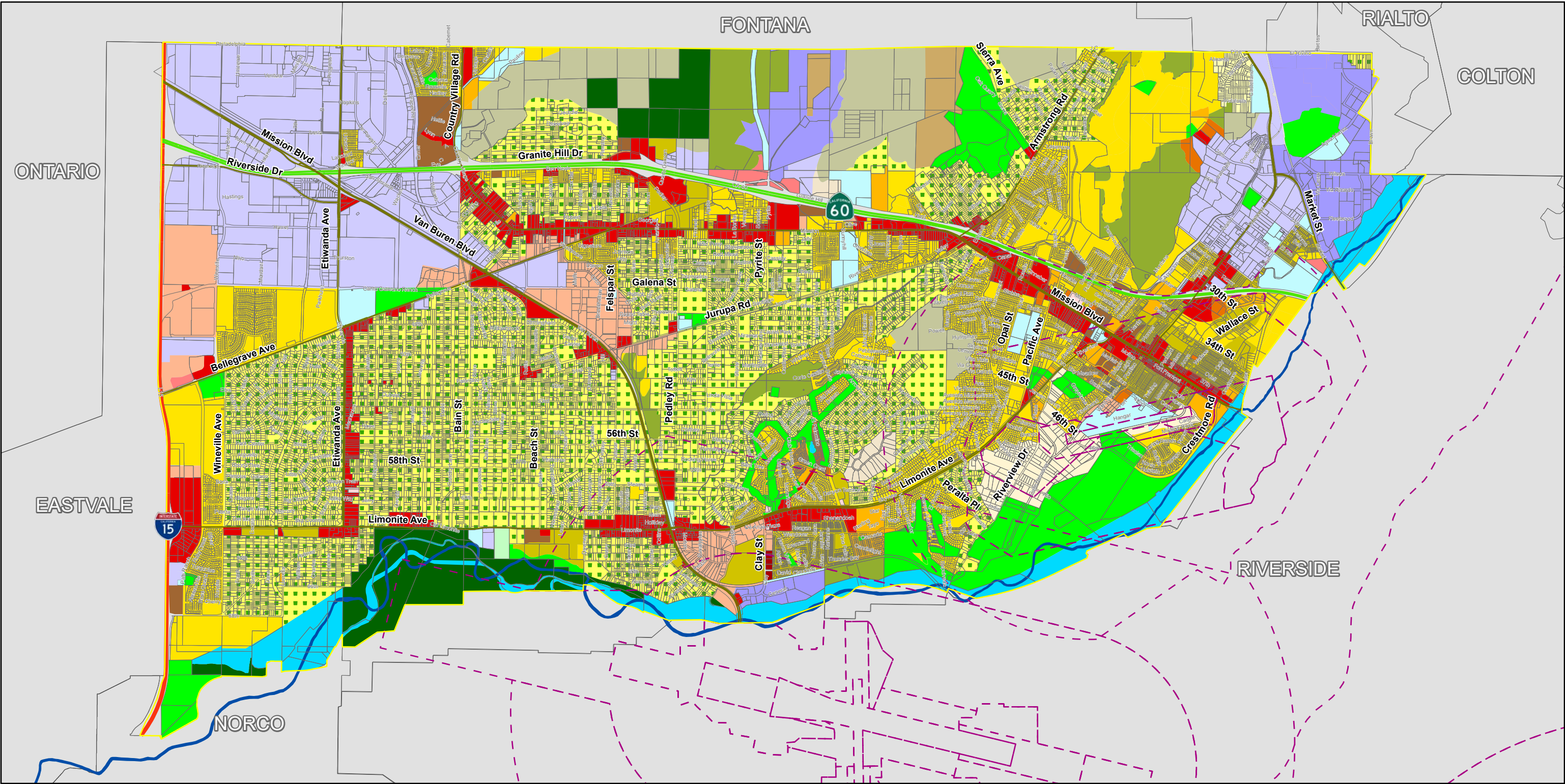
GPA No. 21-007 Resolution No. 2022-012 Adoption Date 02/08/2022



Specific Plan Legend

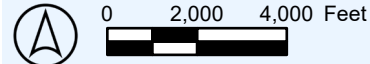
- #1 Southridge Village
 - #2 Rancho Fontana
 - #3 Walnut Village
 - #4 Rescinded
 - #5 Southwest Industrial Park
 - #6 Northgate
 - #7 Rescinded
 - #8 West End
 - #9 Fontana Gateway
 - #10 Rescinded
 - #11 South Park
 - #12 Hunter's Ridge
 - #13 Empire Center
 - #14 Rescinded
 - #15 California Landings
 - #16 Sierra Lakes
 - #17 Westgate
 - #18 Summit Heights
 - #19 Coyote Canyon
 - #20 Citrus Heights North
 - #21 Citrus Heights South
 - #22 Summit at Rosena
 - #23 Ventana at Duncan Canyon
 - #24 Valley Trails
 - #25 Promenade
 - #26 Providence Point
 - #27 Arboretum
 - #28 Fontana Star
 - #29 Morningside
 - #30 Belle Grove II
 - #31 Centerstone at the Landings
- Auto Center Overlay
 - Emergency Shelter Overlay
 - Fire Hazard Overlay
 - Medical Center Overlay
 - R-4 Overlay
 - Valley Business Park Overlay
 - Warehousing Distribution Logistics Overlay District
 - Specific Plan





Jurupa Valley Community Development Department

- | | | | | | |
|------------------------|--|--------------------------------------|------------------------------|--|--|
| Airport Influence Area | EDR - Ranch | HDR - High Density Residential | CO - Commercial Office | BPO - Business Park | OS-R - Open Space, Recreation |
| Freeway | VLDR - Rural Neighborhood | VHDR - Very High Density Residential | CN - Commercial Neighborhood | PF - Public Facilities/Institutional | OS-MIN - Open Space, Mineral Resources |
| Highway | LDR - Country Neighborhood | HHDR - Highest Density Residential | LI - Light Industrial | AG - Agriculture | OS-RUR - Open Space, Rural |
| Major Arterial | MDR - Medium Density Residential | CR - Commercial Retail | HI - Heavy Industrial | OS-C - Conservation | OS-W - Open Space, Water |
| RR - Small Farm | MHDR - Medium High Density Residential | CT - Commercial Tourist | BP - Business Park | OS-CH - Open Space, Conservation Habitat | |



*Community Development Overlay does not apply to corner parcels along Etiwanda Avenue or Mission Boulevard.
** LU-18: Areas subject to jurisdictional review are to be planned for resource protection.

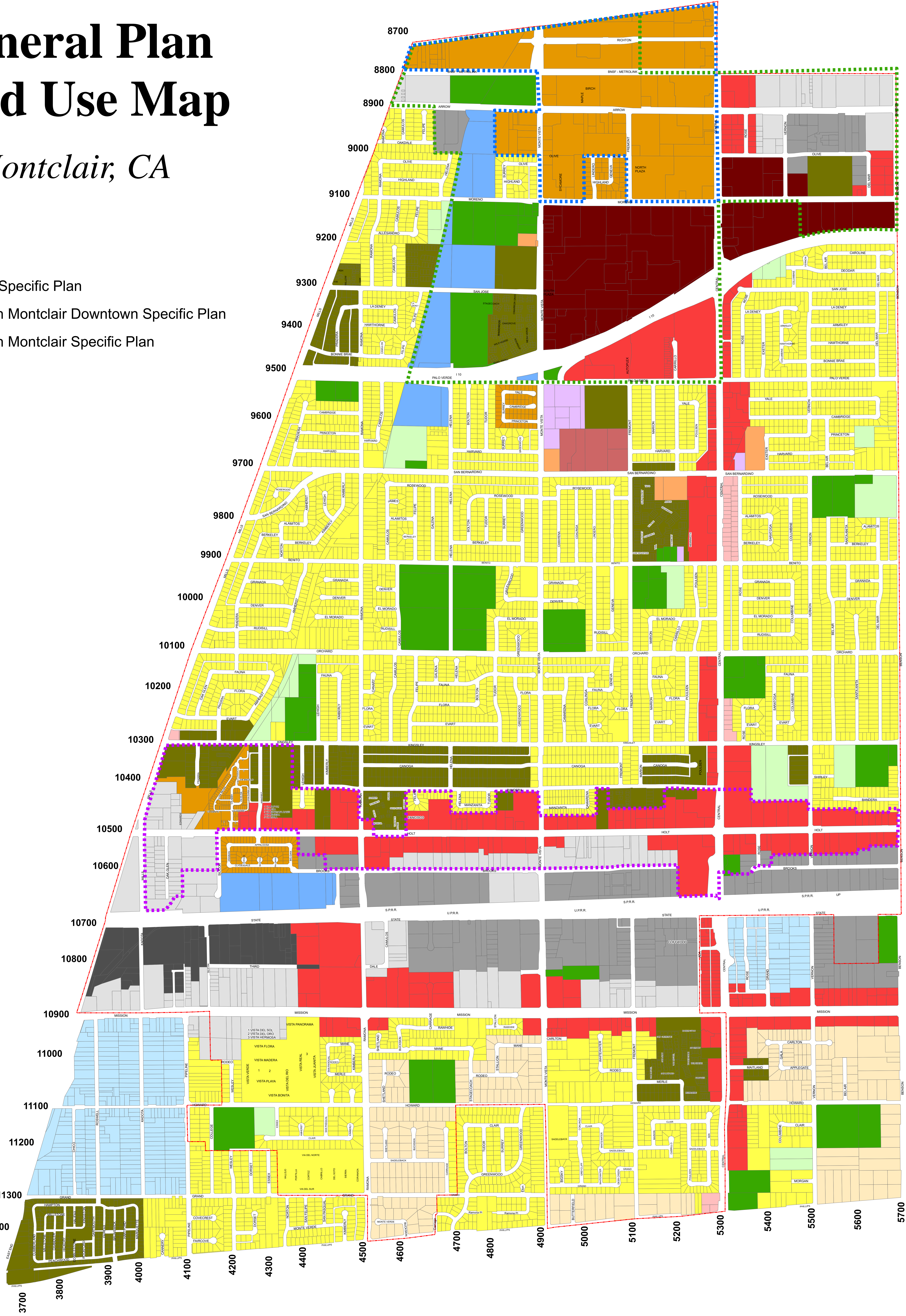


General Plan Land Use Map

Montclair, CA

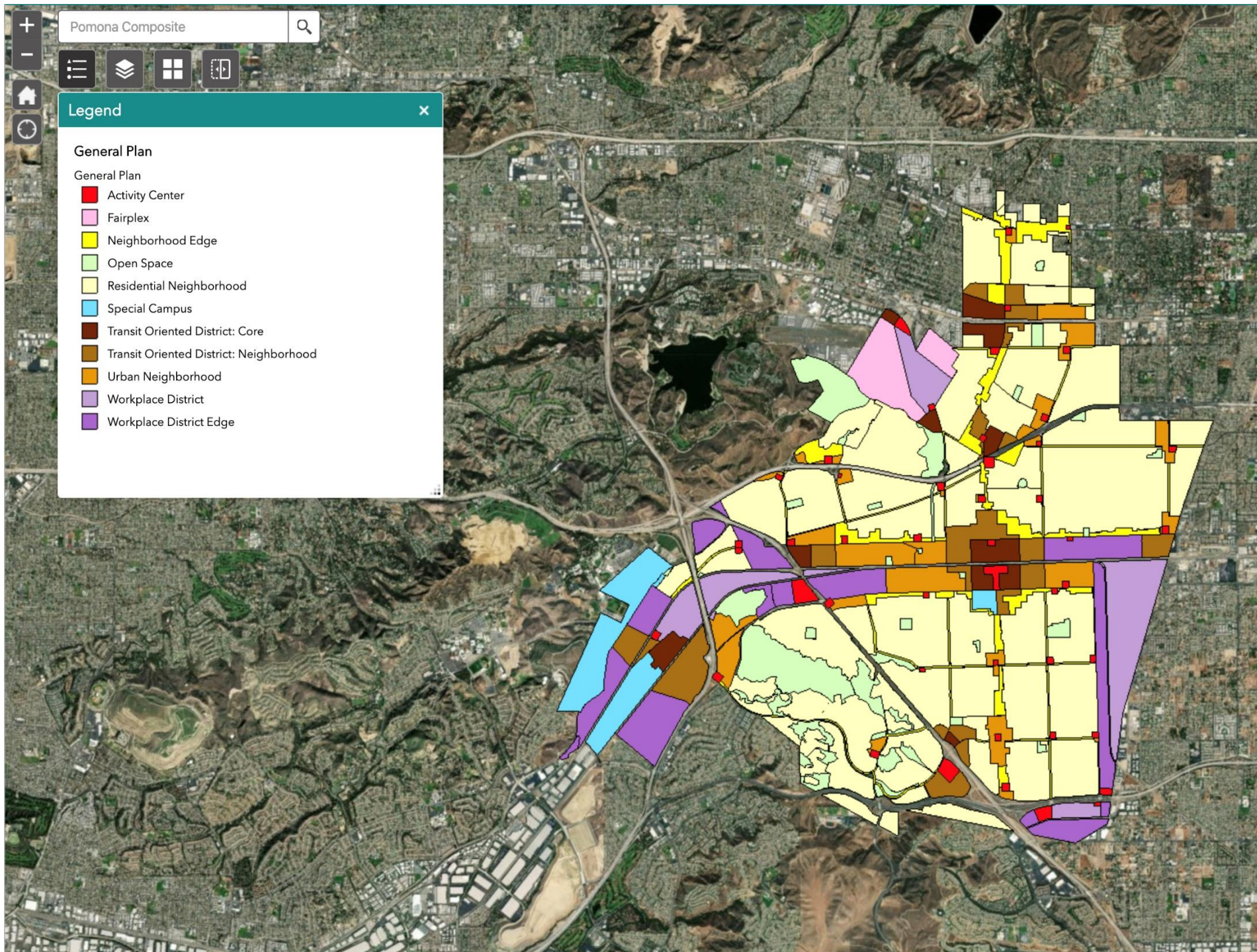
Legend

- Holt Specific Plan
- North Montclair Downtown Specific Plan
- North Montclair Specific Plan

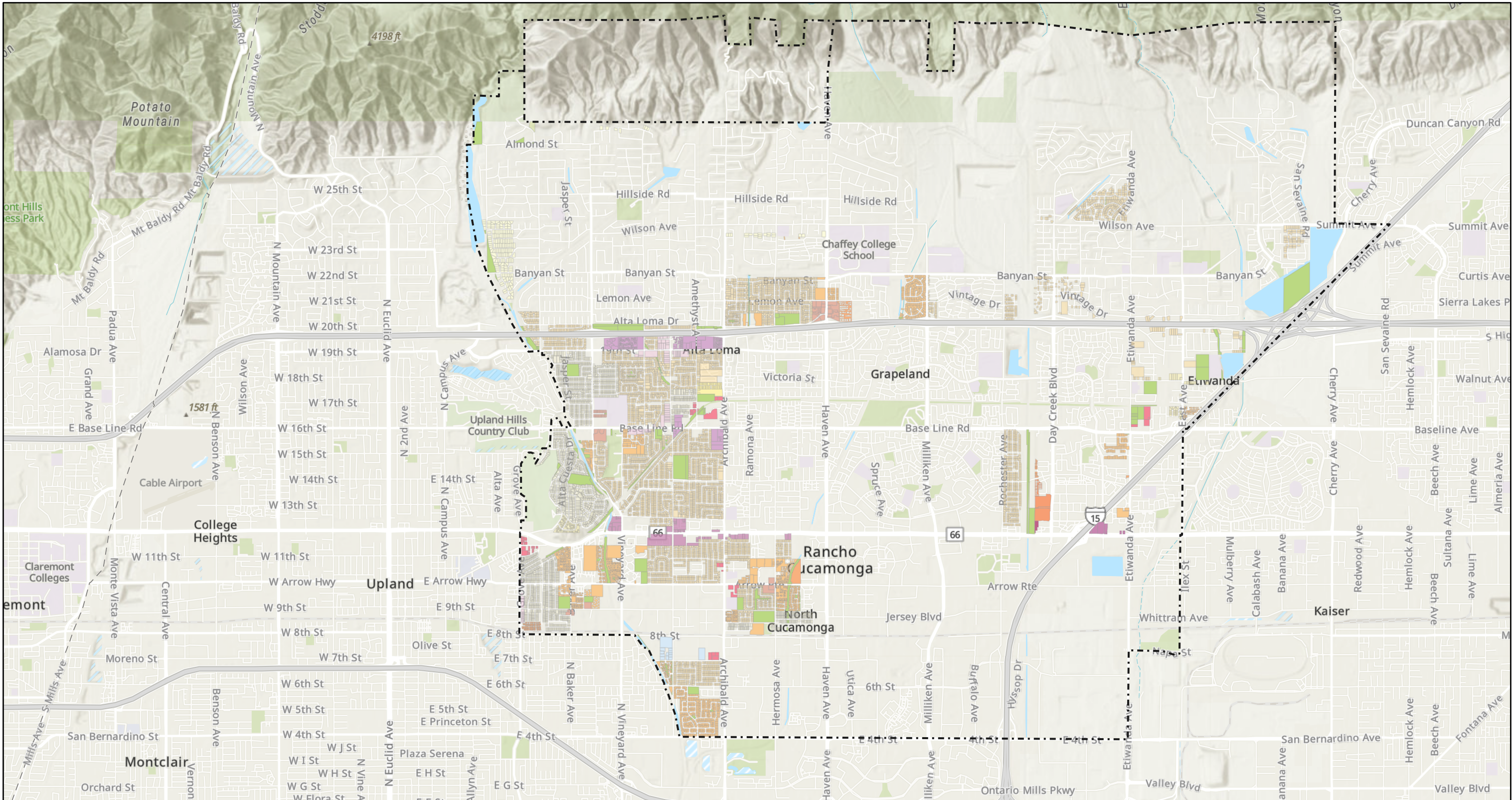


General Plan Land Use

- | | | | | |
|--------------------------|-------------------------|-----------------------|---------------------|---------------------|
| Very Low, 0-2 units/acre | Office Professional | Regional Commercial | Public/Quasi Public | Planned Development |
| Low, 3-7 units/acre | Neighborhood Commercial | Business Park | Neighborhood Park | Medical Center |
| Medium, 8-14 units/acre | General Commercial | Industrial Park | Conservation Basins | City Boundary |
| | | Limited Manufacturing | Community Plan | |



General Plan Map



3/15/2023, 11:50:57 AM

1:72,224

City Boundary Sphere Of Influence Outline

General Plan


 OS Natural Open Space

OS Rural Open Space

OS Rural Open Space Preserve

OS General Open Space and Facilities

 C Neighborhood Center

 C Traditional Town Center

 C City Center

☐ D Office Employment District

D 21st Century Employment District


 D Neo-Industrial Employment District

D Industrial Employment District

 MU Neighborhood Corridor Low

 MU Neighborhood Corridor

 MU City Corridor Moderate

 MU City Corridor High

 N Semi-rural Neighborhood

☐ N Traditional Neighborhood Low

☐ N Traditional Neighborhood Moderate

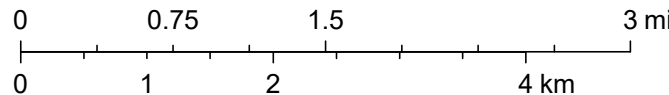
 N Traditional Neighborhood High

N Suburban Neighborhood Very Low

N Suburban Neighborhood Low

N Suburban Neighborhood Mod

 N Urban Neighborhood

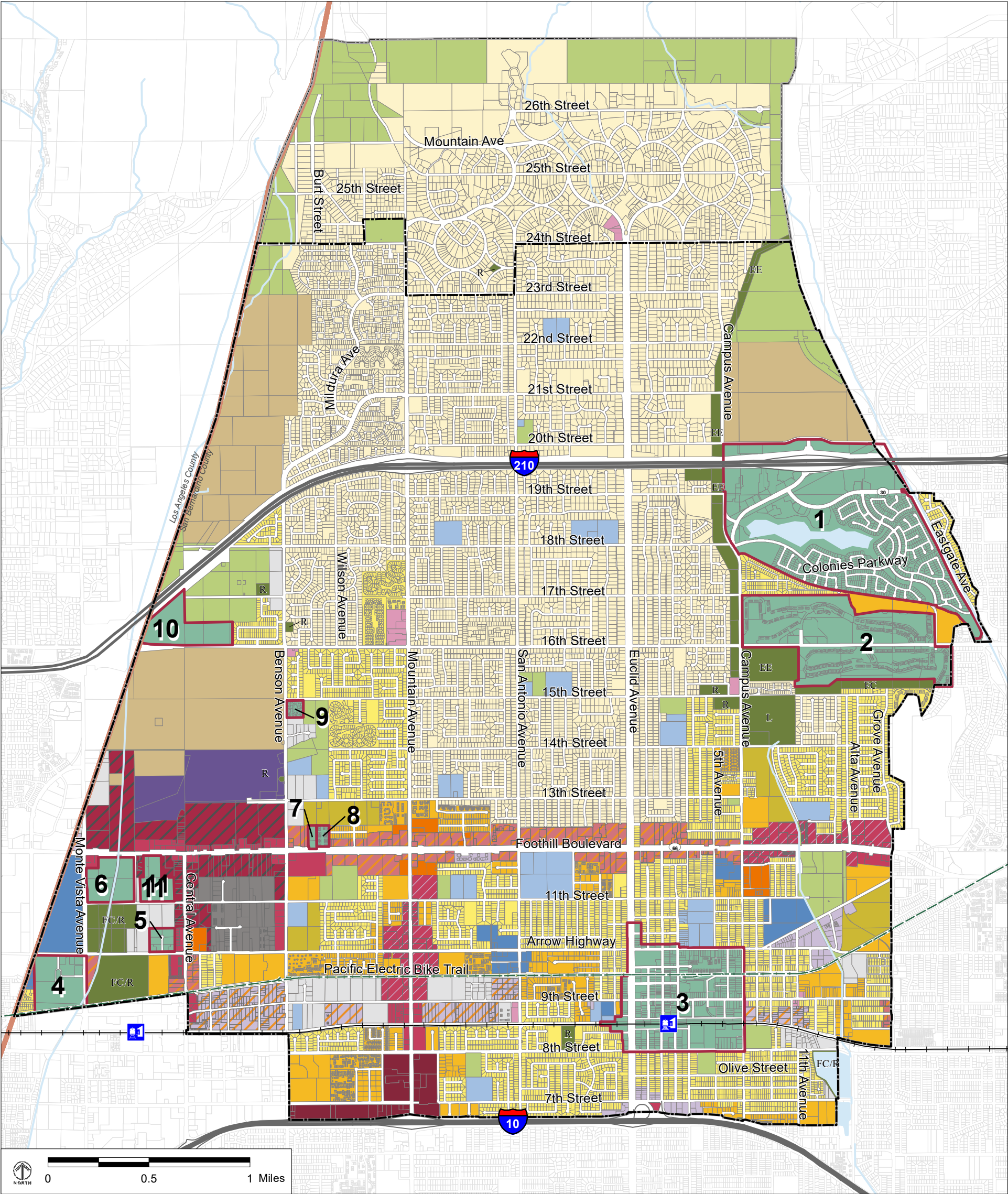


Esri, NASA, NGA, USGS, FEMA, City of Rancho Cucamonga
California State Parks, Esri, HERE, Garmin, SafeGraph
GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land
Management, EPA, NPS, USDA

City of Rancho Cucamonga General Plan Viewer

Esri, NASA, NGA, USGS, FEMA | City of Rancho Cucamonga, California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA

Map Date: 9/14/15



Source: City of Upland

SINGLE-FAMILY RESIDENTIAL

- LOW (0-4 du/ac; SFR-L)
- MEDIUM (4-10 du/ac; SFR-M)
- Mobile Home (8-14 du/ac; MH)

MULTI-FAMILY RESIDENTIAL

- LOW (10-20 du/ac; MFR-L)
- MEDIUM (20-30 du/ac; MFR-M)
- HIGH (30-40 du/ac; MFR-H)

COMMERCIAL

- Neighborhood Commercial (NC)
- Highway Commercial (HC)
- Regional Commercial (RC)
- Office/Professional (OP)

MIXED-USE

- Commercial/Residential Mixed-Use (C/R-MU)
- Commercial/Office
- Business/Residential Mixed-Use (B/R-MU)
- Commercial/Industrial Mixed-Use (C/IN-MU)

INDUSTRIAL

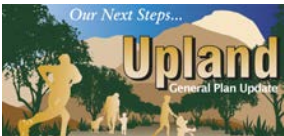
- Light Industrial/Business Park (LI-BP)
- Industrial (IN)
- Gravel Mine (GM)

SPECIAL/INSTITUTIONAL

- Cable Airport (CA)
- Institutional (I)
- Civic/School (C-P)
- Park/Open Space (P-OS)
- Public Utilities (PU)
- R- Reservoir
- L- Landfill
- EE- Edison Easement
- FC/R- Flood Control/Recharge

SPECIFIC PLAN

- Specific Plan (SP)
- 1. The Colonies
- 2. Upland Hills Country Club
- 3. Historic Downtown Upland
- 4. College Park
- 5. College Commerce Center
- 6. Harvest at Upland
- 7. Foothill Benson Terrace
- 8. Foothill Walk
- 9. Wyeth Cove
- 10. Park View
- 11. The Enclave
- Metrolink
- Rail Line
- Pacific Electric Trail
- City Limits
- Sphere of Influence
- County Boundary



**FIGURE LU-1
GENERAL PLAN LAND USE**

APPENDIX 8.3

**DRAFT SEIR COMMENT LETTERS WITH
RESPONSES TO COMMENTS / USPS DELIVERY
CONFIRMATION TO COMMENTERS**

TOM DODSON & ASSOCIATES

PHYSICAL ADDRESS: 2150 N. ARROWHEAD AVENUE SAN BERNARDINO, CA 92405

MAILING ADDRESS: PO BOX 2307, SAN BERNARDINO, CA 92406

TEL (909) 882-3612 • FAX (909) 882-7015

E-MAIL TDA@TDAENV.COM



MEMORANDUM

June 12, 2020

From: Tom Dodson

To: Ms. Sylvie Lee

Subj: Completion of the Chino Basin Watermaster Final Subsequent Environmental Impact Report for the Optimum Basin Management Program Update (SCH#202020183)

The Inland Empire Utilities Agency (IEUA) distributed the Draft Subsequent Environmental Impact Report (DSEIR) for the Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) (SCH#202020183) for public review with the review starting on March 27, 2020 and ending on May 11, 2020. The IEUA received 7 written comment letters on the proposed OBMPU DSEIR, which are responded to herein. The contents of a Final SEIR are defined in Section 15132 of the State California Environmental Quality Act (CEQA) Guidelines and include the following requirements: the DSEIR; comments and recommendations received on the Draft; a list of parties commenting on the DSEIR; responses to comments by the CEQA Lead Agency (IEUA); a mitigation monitoring and reporting program; a set of facts, findings and statement of overriding considerations (SOOC, where required); and any other information added by the Lead Agency as part of its decision-making process for a project. Because this DSEIR identified unavoidable significant adverse impacts that could not be mitigated, a SOOC will be required as part of the decision-making package before the Final SEIR can be certified. This memorandum and the attached responses to comments contained herein constitute a portion of the Final EIR for the Authority on this proposed project.

The following parties submitted comments. The comments in this letter are addressed in the attached Responses to Comments:

1. City of Ontario
2. California Department of Fish and Wildlife (CDFW)
3. Monte Vista Water District (MDWD)
4. San Bernardino County Department of Public Works
5. Orange County Water District (OCWD)
6. Riverside County Flood Control and Water Conservation District
7. State of California Department of Justice

This memorandum, combined with the Draft EIR, the above list of commenters, the attached comment letters and responses, the Mitigation Monitoring and Reporting Program, SOOC, and other staff materials in the final administrative record constitute the Final SEIR for the IEUA. The IEUA will hold a meeting on July 15, 2020 at 10:00 AM or thereafter to consider certification

of the Final SEIR. The meeting will be held in the Board room at the IEUA located at the Agency Headquarters, Board Room 6075 Kimball Avenue Chino, CA 91708.

Do not hesitate to give me a call if you have any questions regarding the contents of this package.

A handwritten signature in black ink that reads "Tom Dodson". The signature is written in a cursive, flowing style.

Tom Dodson
Attachments



Comment Letter #1

PAUL S. LEON
MAYOR

DEBRA DORST-PORADA
MAYOR PRO TEM

ALAN D. WAPNER
JIM W. BOWMAN
RUBEN VALENCIA
COUNCIL MEMBERS

May 11, 2020

SCOTT OCHOA
CITY MANAGER

SHEILA MAUTZ
CITY CLERK

JAMES R. MILHISER
TREASURER

SCOTT BURTON
UTILITIES GENERAL MANAGER

VIA EMAIL AND FIRST CLASS MAIL

Slee@ieua.org
Ms. Sylvia Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Re: City of Ontario Comments on Draft Subsequent EIR for the Optimum Basin Management Program Update

Dear Ms. Lee,

1-1

The City of Ontario (City) submits the following comments related to the draft Subsequent Environmental Impact Report (DSEIR, Draft SEIR) for the Chino Basin Watermaster Optimum Basin Management Program Update (OBMP Update). We incorporate by reference the additional comments in the attached letter from Nossaman LLP.

1-2

The Draft SEIR raises a number of complex technical, legal and policy issues regarding the future long-term management of the Chino Basin and feasible alternatives and mitigation measures to avoid, minimize, and mitigate the environmental effects of the OBMP Update. The City objects to the certification of the Draft SEIR and the approval of the OBMP Update, unless and until (i) the parties develop an Implementation Plan and Agreement that serves as the Project Description, (ii) IEUA corrects the legal and factual errors identified in the City's comments; and (iii) IEUA recirculates a revised Draft SEIR for additional review and comment. In light of the issues identified below, the City again requests that IEUA and Watermaster complete CEQA review of storage management separately from the OBMP Update to allow for an increase in storage space up to 800,000 AF prior to the expiration of the current OBMP Programmatic EIR Addendum.

**RESPONSE TO COMMENT
LETTER #1
CITY OF ONTARIO**

- 1-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 1-2 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Please refer to responses below to specific issues raised by the commenter.

General Comments

1. The Approval of the Update Should Be Deferred to Allow the Parties to Develop an Implementation Plan and Agreement.

1-3 It is noteworthy that in 2000, after the OBMP was developed in a “collaborative public process,” the parties then developed an Implementation Plan and an agreement *prior to* CEQA review. This process served to ensure that CEQA review covered the correct scope: that is, the projects intended to be implemented by the parties. In the current OBMP Update, Watermaster chose to embark on the OBMP Update CEQA without any agreement by the parties on an implementation plan. It is possible and likely that what the parties agree to in the Implementation Plan will be different from the Project Description included in the current Draft SEIR.

1-4 The DSEIR states that the “OBMPU Implementation Plan Update (OBMPU IP) is a revision of the implementation plans included in the Peace I and Peace II Agreements and incorporates the proposed activities and facilities identified in the 2020 OBMPU and ongoing activities from the 2000 OBMP.” However, the parties have not yet drafted, reviewed or negotiated an implementation plan.

1-5 In addition, Appropriative Pool parties requested that Watermaster pursue CEQA review for storage management separately and in advance of the OBMP Update CEQA review. The primary driver for this request was the looming expiration of the current temporary storage excursion based on the 2017 Addendum. Instead, Watermaster inexplicably chose to delay CEQA review of storage management in order to concurrently evaluate the Storage Management Plan and the OBMP Update, despite the fact that these two documents were crafted in different processes and are not interdependent.

2. The Draft SEIR Fails to Address Issues Raised by the City of Ontario Regarding Discharge of Recycled Water to the Santa Ana River.

1-6 In an email related to the scope of the DSEIR following release of the Initial Study, the City pointed out that the topic of the Santa Ana River discharges and flows needed to be properly addressed. IEUA is currently engaged in re-negotiation of a regional wastewater contract that governs the use of recycled water. During these negotiations IEUA and its member agencies have taken contrary positions regarding the legal control over the disposition of recycled water. The Draft SEIR excludes any mention of ongoing conversations among Chino Basin stakeholders on an issue that is necessary for an adequate evaluation of the effects of the OBMP Update. The Draft SEIR’s assumption that IEUA has ownership of and control over treated wastewater flows and diversions creates a false premise to the evaluation of potential physical changes to the environment from the implementation of various activities under the OBMP Update. As a result, the Draft SEIR appears to be structured to advance IEUA’s position and does not provide an objective evaluation of the reasonable alternatives that are feasible and that could achieve most of the basic objectives of the OBMP Update.

1-7 The Draft SEIR is founded on incorrect assumptions regarding the legal regime governing continued discharge of recycled water to the Santa Ana River. The DSEIR improperly assumes that reclaimed water generated in the Chino Basin will continue to be used to comply with the Orange County Judgment. Rights to this recycled water are defined by a regional wastewater contract. The City, along with IEUA’s other member agencies, has a priority claim to recycled water generated by the regional wastewater treatment system, to the extent it contributes wastewater to that system. This source of water is essential for the City to meet the water supply needs of its customers. Retaining recycled water generated in the Chino Basin for beneficial uses in the Chino Basin is necessary for the Update to achieve its first stated goal of increasing the water supply and reliability for the Chino Basin Parties.

- 1-3 As described in the DSEIR (pg. 1-1), the Chino Basin Watermaster is composed of a Board of Directors that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies, effectively the water producers in the Chino Basin, as described in Appendix 1. The commenter is correct that the Watermaster member agencies have not agreed to an implementation plan for the OBMPU. It is also possible, as noted by the commenter, that what the Watermaster parties agree to will be different from the OBMPU analyzed in the DSEIR. The OBMPU Implementation Plan, as agreed upon in the future by the Parties, will provide a plan for programmatic activities and phasing of such activities with high level cost estimates. Ultimately, upon completion of conceptual design of a given project, the Applicant will present the project to the Watermaster for approval before implementation. If certain future projects under the OBMPU are not contained in the Implementation Plan, then the Watermaster or Implementing Agencies, where appropriate, can consider a follow-on CEQA document/determination, most likely through an Addendum. Where some projects are not carried forward under the OBMPU by the Watermaster or IEUA, other agencies in the Basin may avail themselves of the CEQA coverage afforded by the OBMPU SEIR to implement them. In either case the intrinsic value of the SEIR to provide a programmatic bridge to future projects will continue to have value.
- 1-4 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Please refer to response to comment 1-3 regarding scope of the SEIR and future projects.
- 1-5 Watermaster concluded that the Storage Management Plan (SMP) be included as one of several dependent components of the OBMPU. For example, the storage management plans are dependent on pipelines to deliver water; the ASR wells required to recharge water into and extract water from the Chino Groundwater Basin; some of the water available in the future may come from the new storage basins; pump stations to move water to areas of demand; and treatment plants to remove any contaminants. As should be obvious, the evaluation of the SMP requires evaluation of facilities that support the whole of the OBMPU. Hence, the scope of the environmental document is not reasonably segregated into two different documents as suggested in this comment. Further, the evaluation in the SEIR fully addresses the SMP facilities and activities, and certification of the SEIR in its present form allows implementation, and would not delay the facilities and activities of this Plan required to store of up to 1,000,000 acre feet (af) of additional water. Segregation of these documents would appear to be counterproductive.
- 1-6 Ownership and control over wastewater discharges is governed by contract, specifically the Chino Basin Regional Sewerage Service Agreement (Regional Contract) which has been in effect for almost 50 years. As correctly noted, the renewal of that contract is currently under negotiation, as it will lapse in 2023. It is neither the intent nor purpose of the SEIR to interpret contractual terms or resolve disputes between contracting parties, and certainly not to speculate on the outcome of dispute resolution. Further, what happens between IEUA and member agencies is still-in-progress, contract negotiations is inherently speculative, and until such negotiations are concluded it would be inappropriate for analysis or findings to be conducted. Local water supply and interpretation of contracts is beyond the scope of the OBMPU, as is the 1969 Judgment obligation to meet SAR base flow obligations. Consideration of acquisition of other supply sources is part of local supply development and not considered in the OBMPU.

For example, how much recycled water should be retained or diverted from IEUA's current discharges? Would such diversions occur on a continuous or periodic basis? What other supply sources should be used to meet baseflow obligations should alternatives to retain recycled water is included? The City did not provide any specifics or programmatic level project concepts as to what a project would or could consist of due to a lack of information at this stage of review. There are data available on Santa Ana River flows and discharges at various points along the River, but there are no specific project or proposals for diversions of wastewater discharges that were ripe for evaluation, even at the programmatic/subsequent EIR stage of review. Fundamentally, retention of recycled water would constitute a diversion of water from discharge to either Chino or Mill Creek, initially, and subsequently to the Santa Ana River in Prado Basin. When examining the issue of diversion of discharges (any type, including recycled water, stormwater, and non-point source urban discharges) in the DSEIR, the issue was deferred to future specific proposals because no such specific proposals were in the OBMPU and the complicated variables—only some of which are described above—make any future forecasts speculative. On page 4-90 of the DSEIR (Subchapter 4.3, Biological Resources), the issue of diversions and potential adverse impacts to Prado Basin habitat is addressed. Indirectly this section also applies to recycled water diversions, and the conclusion is that such diversions, until defined and evaluated in the broader context, can have a potentially significant adverse impact on biological resources of the Chino Basin. Mitigation measure (MM) **BIO-25** requires further CEQA evaluation of specific diversion proposals **when they are defined in sufficient detail to allow an evaluation**. Thus, based on the DSEIR evaluation, diversion of additional water as part of the OBMPU (including recycled water) was concluded to represent a potentially unavoidable significant adverse impact to Prado Basin biological resources until proven otherwise with a project specific CEQA evaluation. Regarding ownership and control of recycled water, the DSEIR takes no position other than that there is a potential for significant impacts on biological resources from any new diversions.

- 1-7 Ensuring a water supply sufficient for the current and future needs of local agencies is a matter of local concern and not within the subject matter considered in the SEIR. The SEIR does not undertake interpretation of the terms and conditions of the Orange County Judgment. As noted, the City's claim to recycled water is established in the Regional Contract, which grants the City an option to purchase available recycled water (Base Entitlement) from IEUA under express terms and conditions. The term of the option to purchase recycled water runs concurrently with the Regional Contract which will lapse in 2023. As noted above under response to comment 1-6, the DSEIR does not assume any future "legal regime" regarding recycled water, but the data clearly show that increased diversions and reduced discharge to the Prado Basin could cause significant impacts on important biological resources that are known to occur in Prado and that are dependent on the habitat of the area. Even though a primary goal of the OBMPU is to enhance water supplies, there is a potentially very high economic cost to reductions in flows that can adversely impact riparian/wetland habitat. Thus, explaining the inclusion of a requirement for further evaluation when a specific proposal is submitted for consideration. Before the City concludes that a diversion is economically feasible, it must understand the environmental costs of such a diversion versus other sources of water supply (which have their own environmental costs).

Page 3-27 of the DSEIR states, “Historically, the IEUA’s operating plan has prioritized the use of recycled water...[first] to meet the IEUA’s discharge obligation to the Santa Ana River (17,000 afy)....” This statement incorrectly describes both the historical and contractual management of recycled water in the following ways:

- 1-8 1. With limited exceptions, to date there has been sufficient recycled water in each year to meet direct use, recharge, and discharge requirements. In two recent years, IEUA discharged less than 17,000 AF of wet water to the river. By meeting direct use demands and recharging recycled water but not meeting its minimum discharge obligation in those instances, IEUA in practice prioritized direct use and recharge over the Santa Ana River obligation. Notably, this is consistent with the regional contract and the stance of IEUA’s member agencies.
- 1-9 2. Recycled water is governed by the regional contract between IEUA and its member agencies. IEUA’s “prioritization” of recycled water, whatever it may be, is subject to the terms of the regional contract. In the case of a conflict, the regional contract takes precedence over any policy that IEUA may unilaterally adopt.

1-10 Chino Basin Parties are in negotiations regarding revisions to the regional agreements governing recycled water. The DSEIR improperly and incorrectly presumes the result of those negotiations. For the DSEIR to meet the requirements of a program EIR, the DSEIR is required to be restructured to include in the Project Description the retention in the Chino Basin of recycled water generated by the Chino Basin Parties including the City.

3. The Draft SEIR Does Not Evaluate A Reasonable Range of Alternatives.

1-11 The DSEIR should evaluate an alternative that would allow for recycled water generated in the Chino Basin to be retained for use in the Chino Basin, rather than continuing to discharge recycled water to the Santa Ana River. This alternative is consistent with the City’s rights to the use of reclaimed water, but the Draft SEIR fails to include any evaluation of an alternative that would retain recycled water for use in the Basin.

1-12 The Draft SEIR acknowledges that some elements of the original OBMP have not been implemented since its approval twenty years ago. It is therefore foreseeable that some elements of the OBMP Update will not be implemented during the planning horizon of the OBMP Update. Therefore, the Draft SEIR should also evaluate an alternative that assumes that some elements of the program will not be implemented during the program’s planning horizon. The document appears to be written such that the activities are not only interrelated but also interdependent. For example, page 1-12 states that “no major changes in the program have been identified at this stage.” One “major change” in the program could be a decision not to implement one or more activities. The OBMP Update consists of discrete activities that are independent and must not rely upon the completion of other activities.

4. The Project Description is Unstable and Confusing.

1-13 The Project Description should be revised to clearly identify (i) the elements of the original OBMP that have been implemented and that will not be changed by the Update, (ii) the original elements of the OBMP that have been implemented, but that will be changed by the Update, (iii) the elements of the original OBMP that have not been implemented, but that are proposed to be changed by the Update, and (iv) the new elements proposed by the Update. Structuring the Project Description in this manner will allow the public to understand and distinguish the impacts of the existing and fully implemented OBMP elements from the impacts of original elements not implemented and from the impacts of new elements.

- 1-8 The statement contained in this comment is beyond the context or relevance to the SEIR. Nevertheless, historically IEUA has met the judgment obligations through recycled water. There are documents from the inception of the OC Judgment (Prado Settlement; Regional Contract Exhibit C), which identify recycled water from treatment plants as the means to satisfy the judgment obligation. As noted in response to comment 1-6, what happens between IEUA and member agencies in still-in-progress contract negotiations is inherently speculative, and until such negotiations are concluded it would be inappropriate for analysis or findings to be conducted.
- 1-9 Please refer to the responses to comments 1-6 and 1-8, which address the concerns raised in this comment completely. The commenter's corrections to the record are noted and will be included in the FSEIR.
- 1-10 IEUA disagrees that the DSEIR presumes the outcome of contract negotiations on regional agreements governing recycled water. To clarify that the OBMPU does not assume any particular use for recycled water, text has been added the FSEIR at page 3-27. IEUA also disagrees with the commenter's statement that the DSEIR is a program EIR. Please refer to response to comment 1-30.
- 1-11 The FSEIR has been revised to clarify that the OBMPU does not presume how recycled water will be used in the future. Please refer to response to comment 1-10. Accordingly, the alternative that is proposed by the commenter in this comment is unnecessary.
- 1-12 The commenter suggests that an alternative should be evaluated that assumes that some of the elements of the OBMPU will not be developed. The DSEIR considered, and rejected an alternative that would reduce the scope of the OBMPU, which is discussed under Chapter 5, Alternatives, on pages 5-2 through 5-4. The DSEIR acknowledges that minor tweaks or modifications to the OBMPU are likely to occur over the next 30 years, but that no major changes in the program have been identified at this stage that can be implemented without harming its ability to meet the essential program objective of enhancing the basin water supply through improving water supply reliability (DSEIR, pg. 5-3). Furthermore, the commenter suggests that "one 'major change' in the program could be a decision not to implement one or more activities"; here it appears that the reader assumes that the DSEIR, and ultimately the proposed certification of the FSEIR would mandate the development of each and every project proposed as part of the OBMPU. The CEQA process is discretionary in nature, and does not mandate that a given project be developed; for programmatic projects such as the OBMPU, individual elements may be installed, while others may be modified and further analyzed in subsequent CEQA documentation, or omitted from development based on future circumstances, etc. Ultimately, in response to this comment, Chapter 5 of the FSEIR analyzes a "Storage Management Plan only" (SMP) alternative, whereby only the facilities necessary to implement the SMP would be implemented. This alternative was also requested by the Monte Vista Water District, and has been added in response to both comments.
- 1-13 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The Project Description is arranged by describing the OBMP objectives and implementation actions established in 2000, OBMP implementation progress since 2000, and the implementation actions of the OBMPU, including the potential facility improvements that could result from implementation (DSEIR, pg. 3-9). Further, all of the new and improved

facilities proposed by the OBMPU are described in Section 3.5, "Summary of All Facilities." In this way, the DSEIR accomplishes the goal of presenting a stable, defined description of the project.

Closing

1-14

The City appreciates your prompt and thorough attention to the items identified herein, including the attached letter from Nossaman LLP. Addressing these deficiencies is critical to the success of this project in whichever form it is ultimately implemented. I continue to offer my and my team's support as we move forward collaboratively.

Sincerely,



Katie Gienger, P.E.
Water Resources Manager

c: Scott Burton, Utilities General Manager, City of Ontario
Peter Kavounas, General Manager, Chino Basin Watermaster
Fred Fudacz, Partner, Nossaman LLP

Enc: Comment Letter from Nossaman LLP

- 1-14 IEUA acknowledges that the letter from Nossaman LLP is an extension of the City of Ontario's letter and has responded to and fully addressed each comment provided herein. IEUA appreciates the extension of further collaboration by the City of Ontario.

Comment Letter #1



ATTORNEYS AT LAW

18101 Von Karman Avenue
Suite 1800
Irvine, CA 92612
T 949.833.7800
F 949.833.7878

Robert D. Thornton
D 949.477.7600
rthornton@nossaman.com

Refer To File # 280856-0002

DRAFT

May 6, 2020

VIA FIRST CLASS MAIL AND EMAIL
Slee@ieua.org

Ms. Sylvia Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Re: City of Ontario Comments on Draft Subsequent EIR for Optimum Basin
Management Plan Update

Dear Ms. Lee:

This letter is submitted on behalf of the City of Ontario (City). It provides comments on the Draft Subsequent Environmental Impact Report (DEIR) regarding the proposed Optimum Basin Management Plan Update (OBMPU or Update). This letter supplements other comments submitted by the City on the Update and/or DEIR.

1-15

The City Ontario owns water rights in the Chino Basin, and is a CEQA Responsible Agency regarding the OBMPU. As a CEQA Responsible Agency, the City has the authority to determine whether the DEIR is adequate for its use, to determine whether to prepare a subsequent EIR, and whether to challenge the DEIR in court. (14 Cal.Code.Reg., § 15096, subd. (e).)¹

1-16

As currently structured, the DEIR is not adequate. The City respectfully requests that the lead agency revise the DEIR to address the comments of the City, and to recirculate the revised DEIR for additional public review and comment. The City also requests that the Inland Empire Utilities Agency (IEUA) and the Watermaster defer any action on the DEIR (including certification) and on the Update until the necessary parties reach agreement on the terms of the agreement to implement revisions to the Optimum Basin Management Plan. The lead agency and responsible agencies could then

¹ Hereinafter, "CEQA Guidelines."

- 1-15 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. IEUA understands the City of Ontario's role as a CEQA Responsible Agency, and their authority under CEQA.
- 1-16 For the reasons outlined below and in the following comments, IEUA and the Watermaster do not agree with the conclusions stated in this comment. The City had an opportunity to comment on the scope of the OBMPU during the two years of meetings prior to compiling the OBMPU and subsequently during the Notice of Preparation (NOP) review period, and no formal input on a different OBMPU scope was provided. The Watermaster chose to take the most expansive view of the OBMPU projects and the DSEIR is fully consistent analyzes that project. Accordingly, it is inappropriate to delay action on the DSEIR until the Watermaster Parties agree on the terms of an implementation plan.

Where sufficient data is available the DSEIR analyses could address impacts comprehensively. Where actual locations or types of facility operations could not be specified, the DSEIR appropriately requires subsequent environmental evaluations to be prepared and processed in accordance with State CEQA Guidelines. It is important to keep two factors in mind. First, the DSEIR does not require all future facilities to be implemented, as CEQA is an enabling statute that does not force an agency to proceed with any facility or operation-activity in the future. Thus, the City's comment about the scope of the OBMPU should be have been addressed in some other forum, not at the end of the CEQA process. Second, the DSEIR is a Subsequent EIR that evaluates changes to the 2000 OBMP as analyzed in the 2000 OBMP PEIR and later CEQA documents tiering from that PEIR. CEQA states the following for a subsequent tier of a CEQA document: *Where a lead agency is using the tiering process in connection with an EIR for a large scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepare a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand (CEQA Guidelines §15152(c)).*

1-16 | determine the appropriate scope of any CEQA evaluation of those elements agreed to by
 cont'd | the parties to the implementation agreement.

1. The DEIR Is Not Sufficient as an Informational Document. It is Therefore Inadequate as a Matter of Law.

a. The DEIR Acknowledges that the 2000 Program EIR Is Out of Date and the Need for a Comprehensive Analysis of the Effects of the OBMPU.

1-17 | The OBMPU is the proposed update of the Optimum Basin Management Program – a large and complex program governing the management of regional water resources and groundwater of the Chino Basin. As the DEIR readily acknowledges, the OBMPU is an “expansive” program that covers nine program elements and the construction and operation of multiple new and revised facilities in four project categories including: (1) Well Development and Monitoring; (2) Conveyance Facilities and Ancillary Facilities; (3) Storage Basins, Recharge Facilities, and Storage Bands; and (4) Desalters and Water Treatment Facilities.

The Optimum Basin Management Program and the 2000 Final PEIR are over twenty years old. The DEIR states that the existing OBMP and related 2000 Program EIR, as supplemented, (i) are out of date, (ii) do not reflect current information regarding the hydrology and hydrogeology of the Chino Basin, (iii) do not address important new environmental issues impacting the environmental resources of the Chino Basin such as the impact of climate change on the state’s water supply and resulting impacts on Chino Basin stakeholders, and (iv) are not adequate to achieve the current objectives for the management of water resources of the Chino Basin. (Draft EIR, Initial Study, p. 3.) The Inland Empire Utilities Agency (IEUA) therefore determined that it was necessary to prepare a subsequent environmental impact report to comprehensively analyze the environmental effects of the OBMPU.

b. The DEIR Does Not Comply With CEQA Standards.

1-18 | The basic purpose of an EIR is to “provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.” (Pub. Resources Code, § 21061; see Guidelines, § 15003, subds. (b)–(e).) An EIR that complies with CEQA allows the public to know the basis on which the agency approved or rejected environmentally significant action, “so that the public, being duly informed, can respond accordingly to action with which it disagrees.” (*Laurel Heights Improvement Assn. v. Regents* (1988) 47 Cal.3d 376, 392 [invalidating EIR for university expansion].) “The failure to comply with the law subverts the purposes of CEQA if it omits material necessary to informed decision making and informed public participation.” (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 515.) For the DEIR to comply with CEQA

- 1-17 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The decision to prepare a Subsequent EIR was a collective decision made by IEUA, Watermaster, and other stakeholders in Chino Basin groundwater management.
- 1-18 This comment references CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines, which does not require a response.

1-18
 cont'd

requirements as an informational document, it must include sufficient detail to enable those who did not participate in its preparation to understand and to consider meaningfully the issues the proposed OBMPU raises. (*Id.* at p. 510 [“the adequacy of an EIR’s discussion of environmental impacts is an issue distinct from the extent to which the agency is correct in its determination whether the impacts are significant.”]) This is a question of law that the courts review *de novo*. (*Id.*; *Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 514–515 [invalidating regional transportation program EIR]; (*RiverWatch v. Olivenhain Municipal Water Dist.* (2009) 170 Cal.App.4th 1186, 1201 [“If a final environmental impact report (EIR) does not ‘adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences of the project,’ informed decision making cannot occur under CEQA and the final EIR is inadequate as a matter of law.”].)

For the reasons described in detail below and in the separate comments of the City, the DEIR fails to comply with CEQA standards as a matter of law. The DEIR:

1-19

- Does not meet the standards for a program EIR because it does not address adequately the water supply needs of the Chino Basin, and alternatives to achieve those needs, over the thirty-year life of the Update.

1-20

- Does not include a stable, finite, consistent, and comprehensible project description;

1-21

- Improperly tiers from prior EIRs that (i) analyze a different CEQA “project” and (ii) that the DEIR also contends are out of date;

1-22

- Fails to evaluate the significance of the effects of the Update as compared against a valid CEQA baseline of existing conditions;

1-23

- Defers evaluation of significant effects and mitigation measures;

1-24

- Does not evaluate adequately significant cumulative effects;

1-25

- Fails to explain in understandable terms the analytical route followed from evidence to the DEIR’s conclusions;

1-26

- Does not analyze effects using the most current version of the Chino Basin Groundwater Model, and instead uses an outdated version of the Model;

1-27

- Does not disclose material uncertainties in the Chino Basin Model or the environmental effects of the uncertainties;

- 1-19 Please refer to responses to comments 1-30 and 1-31.
- 1-20 Please refer to responses to comments 1-47 and 1-48.
- 1-21 The project defined in the 2000 OBMP PEIR remains the same as the project defined in the DSEIR, as all of the project objectives and the nine Program Elements to implement those objectives remain the same. The specific activities being evaluated, including but not limited to pipelines, wells, groundwater recharge and available storage capacity, remain the focus of the DSEIR as they were in the 2000 OBMP SEIR, and 2010 SEIR, and 2017 Addendum environmental documents. The system improvements are extensions of those previously installed and therefore, it is wholly appropriate to tier off of the previous environmental documents.
- 1-22 Please refer to responses to comments 1-41 through 1-46.
- 1-23 Please refer to responses to comments 1-35 through 1-37. CEQA Statute 15126.4(a)(1)(B) states that "Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way." The OBMPU creates real performance standards through mitigation to be met by the Implementing Agency for a given project. Many mitigation measures set a performance standard that a future project can either meet or otherwise, if it cannot meet the performance standard, would require subsequent project-specific CEQA evaluation to allow a final determination on each future project's specific impacts. This approach is deemed appropriate and consistent with utilization of a program environmental document in accordance with Sections 15162 and 15168 of the State CEQA Guidelines. Ultimately, the OBMPU has provided comprehensive mitigation measures designed to mitigate potential environmental impacts that may occur from OBMPU implementation within the range of sites that projects may be located as part of the diverse area that makes up the Chino Basin. No mitigation measures defers formulation of actions that would minimize impacts to a future time.
- 1-24 Cumulative effects are evaluated for each of the issues addressed in the OBMPU DSEIR and specific references to cumulative issues are addressed in the following text within these responses to comments. Please refer to response to comment 1-37.
- 1-25 This comment does not specify which impact conclusions lack explanation of the analytical route followed by the DSEIR. Without more guidance as to which section or sections of the DSEIR suffer from this alleged infirmity, IEUA is unable to respond to this comment further.
- 1-26 Please refer to response to comments 1-49 through 1-51.
- 1-27 Please refer to responses to comments 1-49 through 1-51.

1-28 |

- Does not evaluate a reasonable range of alternatives to the Update, including an alternative that would retain recycled water for use within the Chino Basin consistent with the City’s water rights to recycled water; and

1-29 |

- Fails to identify valid mitigation measures.

2. The DEIR Does Not Meet the Standards for a Program EIR.

a. Program EIR Standards.

1-30 | The purposes of a program EIR are to (a) provide a more thorough consideration of environmental effects and alternatives than could be provided in an EIR for an individual action, (b) ensure that cumulative impacts are fully considered, and (c) allow policy alternatives and program wide mitigation measures to be considered at an early stage. (CEQA Guidelines, § 15168, subd. (b).) The Draft EIR fails to accomplish the purposes of a program EIR because it (i) defers the evaluation of many effects of the Update to later project-level CEQA evaluations, (ii) fails to include an adequate evaluation of the cumulative effects of the program, (iii) defers the identification of enforceable measures to mitigate the significance of impacts of the program, and (iv) fails to evaluate a reasonable range of alternatives to the program.

1-31 | Program EIRs are subject to the same CEQA standards of legal sufficiency that apply to “project-level” EIRs. A program EIR is required to include “sufficient analysis to intelligently consider the environmental consequences of the project.” (*Cleveland Nat’l Forest Foundation v. San Diego Ass’n of Governments* 17 Cal.App.5th, *supra*, at p. 426 [invalidating program EIR for regional transportation plan].) A program EIR does not decrease the level of analysis otherwise required by CEQA. The agency is required to disclose what it reasonably can, and any determination that it is not feasible to provide sufficient information is required to be supported by substantial evidence.

b. Failure To Evaluate Retention of Recycled Water in Chino Basin.

1-32 | The first stated project objective and goal of the Update is “to increase the water supplies available for Chino Basin Parties and improve water supply reliability.” (DEIR, p. 1-4.) The DEIR acknowledges that projected climate change impacts on the region’s water supply necessitates a reevaluation of the OBMP. (DEIR, p. 3-2.) The California Department of Water Resources estimates that “[b]y the end of this century, California’s Sierra Nevada snowpack is projected to experience a 48-65% loss from the historical April 1 average.” (<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Change-and-Water> [visited 4.29.20].) Reductions in the Sierra Nevada snowpack, and increasingly stringent environmental restrictions on State Water Project exports are projected to reduce materially the reliability of water deliveries from the State Water Project. Reductions in precipitation in the Colorado River basin are also

- 1-28 Please refer to responses to comments 1-39 through 1-40.
- 1-29 Please refer to responses to comments 1-35 through 1-37. To the extent that the commenter is alleging that the DSEIR did not include feasible mitigation measures, it is up to the commenter to identify additional mitigation measures so that IEUA can evaluate their feasibility and determine whether to add them to the FSEIR. Without more, IEUA is not able to respond to this comment further.
- 1-30 The comment summarizes State CEQA Guidelines Section 15168(b), which does not require a response. The comment suggests that the DSEIR does not accomplish the purposes of a program EIR because it defers the evaluation of effects of the OBMPU to later project-level CEQA evaluations. First, the DSEIR is not a program EIR, but rather is a subsequent EIR tiered from the 2000 OBMP PEIR, the 2010 SEIR, and the 2017 Addendum. (CEQA Guidelines §§15152, 15168(c), (d).) Please refer to Chapter 1, which has corrected the incorrect and accidental use of “Program DSEIR” within this Chapter to omit the term Program, as it does not apply to this project. Second, the DSEIR analyzes environmental effects to the extent information exists to enable such an evaluation, even when such an evaluation requires forecasting, but the DSEIR terminates analysis where evaluation of the impact is too speculative for evaluation (CEQA Guidelines §§15144, 14145). Generally, environmental analysis was terminated where the particular location of future projects encompassed in the OBMPU is not known, and an environmental analysis without location-specific information would be speculative.

With respect to the DSEIR’s identification of mitigation measures, please refer to responses to comments 1-35 through 1-37. With respect to the range of alternatives considered in the DSEIR, please refer to responses to comments 1-38 through 1-40.

- 1-31 This comment summarizes CEQA principles and caselaw, and therefore does not require a response.
- 1-32 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.

1-32
 cont'd | estimated to result in reductions of delivery of Colorado River water to southern California. Collectively, climate change and changes in state law require the development of local water supplies, including the use of reclaimed surface and groundwater, to meet southern California's water supply needs.

1-33 | The DEIR improperly assumes that reclaimed water generated in the Chino Basin will continue to be used to comply with the Orange County Judgment. The City has a priority claim to recycled water to the extent contributed to the regional wastewater treatment system. This source of water is essential for the City to meet the water supply needs of its citizens. Retaining recycled water generated in the Chino Basin for beneficial uses in the Chino Basin is necessary if the Update is to achieve its first stated goal of increasing the water supply and reliability for the Chino Basin Parties.

1-34 | The Chino Basin Parties are in negotiations regarding revisions to the regional agreement governing recycled water. The DEIR improperly and incorrectly presumes the result of those negotiations. For the DEIR to meet the requirements of a program EIR, the DEIR is required to be restructured to include in the project description the retention in the Chino Basin of recycled water generated by the Chino Basin Parties including the City.

c. Improper Deferral of Analysis of Regional Impacts and Mitigation Measures.

1-35 | A primary function of a program EIR is to evaluate the regional effects of the program activities. This important function is defeated because the DEIR defers a quantitative evaluation of the regional impacts of program activities. While CEQA authorizes the use of tiered EIRs in some circumstances, CEQA does not allow the lead agency to defer an analysis of reasonably foreseeable significant impacts to a later EIR. (CEQA Guidelines, § 15152, subd. (b); *Vineyard Area Citizens for Responsible Growth v. City of Ranch Cordova* (2017) 40 Cal.4th 412, 441 [invalidating EIR for long-range development plan that deferred water supply analysis].) The DEIR defers any detailed evaluation of a number of regional effects of program activities. The following is a partial list of the Draft EIR's invalid deferral of the evaluation of impacts:

- Air quality impacts related to operation of Update facilities (DEIR, p. 4-27);
- Biological resource impacts (DEIR, p. 4-64);
- Archaeological resource impacts (DEIR, p. 4-92); and
- Greenhouse gas emission impacts (DEIR, p. 4-145).

1-36 | CEQA requires that an EIR discuss mitigation measures that minimize or avoid the project's significant effects. (Pub.Res.Code, §§ 21002, 21002.1, subd. (a); CEQA Guidelines, § 15126.4.) CEQA generally prohibits the deferral of the identification of feasible and enforceable mitigation measures to address the significant effects. (CEQA

- 1-33 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Please refer to responses to comments 1-7 and 1-10.
- 1-34 Please refer to responses to comments 1-6 and 1-10. The DSEIR does not presume any outcome of current negotiations; it relies on current factual conditions within the Chino Basin. If these circumstances change, new factual conditions can be addressed at that time. At this point any assumptions about the future would be speculative.
- 1-35 For each of the issues listed in the comment there is an evaluation of the resources at risk.

Operational Air Quality Emissions (DSEIR, pg. 4-27): The DSEIR analyzes operational air quality emissions, including sources from motor vehicles for periodic maintenance, electrical use from OBPMU facilities, and emissions from emergency diesel generators. Motor vehicle emissions for periodic maintenance were deemed not to result in a substantive new long-term emissions source due to the minimal number of trips per day. With one exception (emergency generators), operational activities related to OBMPU projects will utilize electricity or natural gas to provide energy for operations. Due to the variety of electricity sources (including solar and wind energy) and the disparate locations of energy generation, it is not possible to identify specific emissions associated with electricity use within the South Coast Air Basin (SCAB)—this clarification has been added to the text of the FSEIR. This becomes even more complex with the trend (as a State requirement) to obtain electricity from alternative energy sources in the future. Regarding natural gas use, this is usually consumed for building heating purposes, which are not being proposed under the OBMPU. With regard to emergency generators, they are stationary sources that operate and generate air emissions only when power is needed and electricity is not available. Such units do not generate air emissions daily, and would comply with SCAQMD permits for operating such equipment, so they are not considered a predictable annual emission source. Accordingly, the DSEIR did not improperly defer analysis OBMPU operational air quality emissions.

Biological Resource Impacts (DSEIR, pg. 4-64): The biological resources at risk from the OBMPU implementation are clearly identified in Subchapter 4.3 of the DSEIR. As required in Section 15152 of the State CEQA Guidelines, specific findings were made for each biology issue based on sensitivity of known resources in the Chino Basin, and specific mitigation measures were identified to address specific types of impacts. A potential to adversely impact Prado Basin habitats, particularly riparian/wetland habitat, was concluded to be unavoidable because certain construction or operation activities, such as diversion of additional surface runoff or essential construction in an area with unmitigable biological resources, may not be capable of mitigation. Consequently, a finding that the OBMPU could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources was reached in the DSEIR. The DSEIR properly truncates any further, project-specific analysis, however, because the specific locations of facilities are presently unknown, or, if known, site-specific investigations have not yet begun because the proposed project is at a conceptual level of planning. Analysis of site specific biological resource impacts can only occur once a site is identified or in the case of water diversions, once a water diversion project is identified (CEQA Guidelines §§15144, 15145).

Archaeological Resource Impacts (DSEIR, pg. 4-92): As is the case with biological resources, cultural resources are highly specific to location. Because the location for many OBMPU projects is unknown at this time, or if known, site-specific investigation has not yet begun because the proposed project is at a conceptual level of planning, the cultural resources evaluation focused on the level of sensitivity for different areas of the Chino Basin. Cultural resources apply to prehistoric or archaeological materials and historical resources. Under these two broad categories the Cultural Resources Evaluation provided as Subchapter 4.4 of the DSEIR identifies the types of impacts that can result from OBMPU implementation, not site specific impacts but based on sensitivity for cultural resources. Sensitivity analyses are appropriate when specific locations of proposed facilities is not known. Mitigation includes a requirement for site specific cultural resource surveys; avoidance of sensitive sites through relocation; or mitigation through recovery and recordation. MM **CUL-2** provides a detailed (step-by-step) procedure to protect cultural resources is presented that will apply to all future OBMPU projects. The net result is that a finding of less than significant adverse impact to cultural resources is justified. As with biological resources issues, this is a prospective impact forecast because the specific location of facilities is at present unknown and analysis of site specific cultural resource impacts can only occur once a site is identified or in the case of water diversions, once a water diversion project is identified (CEQA Guidelines §§15144, 15145).

Greenhouse Gases / Global Climate Change (DSEIR, pg. 4-145): Operational GHG emissions were analyzed at a general level, rather than through generation of specific operational emissions calculations as with construction emissions. While construction emissions can be estimated utilizing basic assumptions that apply to the whole of the types of OBMPU facilities that are being proposed, operational emissions cannot be estimated utilizing these same assumptions for the following reasons: (1) For certain types of facilities that are being proposed as part of the OBMPU, the IEUA and Watermaster have not collected sufficient data to predict operational energy demands, as such, for facilities such as ASR wells, the energy required is dependent on several factors (how deep the well is drilled, the type of equipment required to operate the well, where the water is delivered to/from, etc.), that cannot be known until project-level design has been completed; (2) The exact type and number of facilities that are considered appurtenances—such as booster pump stations, reservoirs, etc.—defined under Project Category 2: Conveyance Facilities and Related Infrastructure, have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (3) The exact type and number of new groundwater treatment facilities, and regional groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (4) the proposed upgrades to the Chino Desalters, to the WFA Agua de Lejos Treatment Plant, and to existing groundwater treatment facilities have not been defined, and as such the operational energy demands thereof cannot be known until project-level design has been completed; (5) and finally, until a specific project is proposed at the design level, it is not known what source of energy will be utilized to operate said facility, which renders determining the energy-related operational emissions a speculative matter given that energy is anticipated to be increasingly generated by alternative sources over the planning horizon for the OBMPU. As such, the OBMPU proposes vast range of facilities, the project-level design for which has not yet been defined such that previous data gathered by the Watermaster, IEUA, and stakeholders could be utilized to generate a Program-specific operational emissions calculation.

With one exception (emergency generators), operational activities related to projects will utilize electricity or natural gas to provide energy for operations. Due to the variety of electricity sources (including onsite solar and wind energy) and the disparate locations of energy generation, it is not possible to identify specific GHG emissions associated with electricity use within the South Coast Air Basin (SCAB) for this Project. Regarding natural gas use, this is usually consumed for building heating purposes, and we have no data on any structures being proposed under the OBMPU. This becomes even more complex with the trend (as a State requirement) to obtain electricity from alternative energy sources in the future. With regard to emergency generators, they are stationary sources that are permitted by SCAQMD and operate only when power is needed and electricity is not available. Thus, these units are permitted by SCAQMD, which cannot allow stationary sources to cause significant impact on air quality of the SCAB and such units do not generate emissions daily, only in emergencies, so they are not considered a daily emission source. The limited mobile source emissions related to project operations (at less than 50 round trips per day) would be *de minimus* within the SCAB. Because of the preceding factors, it was not necessary to provide formal emission calculations at this time. The deferred calculations for a high energy consuming project with related high GHG emissions can only be reasonably forecast when a specific project is brought forward. Hence, deferral is unavoidable for this resource category consistent with Section 15152 of the State CEQA Guidelines.

- 1-36 This comment summarizes CEQA principles and caselaw, and therefore does not require a response.

1-36
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Guidelines, § 15126.4, subd. (a)(1)(B).) Agencies may defer identification of the details of a mitigation measure where it is impractical to devise a specific measure. But in this circumstance the agency is required to commit to implementation of enforceable mitigation measures that will achieve identified performance standards articulated in the EIR. (*Id.*; *Sacramento Old City Ass'n v. City Council* (1991) 229 Cal.App.3d 1011, 1029.)

1-37

The DEIR defers the identification of specific mitigation measures to address significant effects of the Update and does not commit to enforceable performance standards. A partial list of examples of invalid, deferred mitigation include measures addressing the following:

- Biological Resources (DEIR, p. 4-68, 4-70);
- Cultural Resources (DEIR, p. 4-94);
- Energy (DEIR, p. 4-117);
- Cumulative hydrology effects (DEIR, p. 4-201);
- Subsidence effects (DEIR, p. 4-189);
- Net recharge effects (DEIR, p. 4-190);
- Hydraulic control effects (DEIR, p. 4-193);
- Hydrology effects (DEIR, p. 4-197-199);
- Erosion and siltation effects (DEIR, p. 4-204);

To comply with CEQA, mitigation measures must be effective and enforceable. Conditioning implementation of mitigation measures to the extent "feasible" renders the measure unenforceable in violation of CEQA. (*King & Gardner Farms, LLC v. County of Kern* 220 Cal.App.4th 161 [invalidating oil and gas permitting ordinance where mitigation only required where "feasible."].) In several other instances, the Draft EIR identifies mitigation measures, but then conditions the implementation of the measure only to the extent "feasible." (DEIR, p. 4-65 [biological resources mitigation "if feasible"].)

1-38

3. The DEIR Does Not Evaluate a Reasonable Range of Feasible Alternatives.

a. Limiting the Alternatives Analysis to the No Project Alternative Does Not Comply With the "Reasonable Range" Obligation.

CEQA requires a DEIR to evaluate a reasonable range of alternatives which would feasibly "attain most of basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project." (CEQA Guidelines, § 15126.6, subd. (a); *Watsonville Pilots Ass'n v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1087 [invalidating general plan EIR that included two alternatives with the same level of increased development as the proposed plan].)

- 1-37 The comment alleges that the DSEIR improperly defers identification of specific mitigation measures to address significant impacts and does not commit to enforceable performance standards. The comment generally cites to pages in the DSEIR, but does not specify which of the numbered mitigation measures included in the DSEIR alleged suffer from this infirmity. IEUA disagrees with the commenter's characterization of the DSEIR, and without specific references to mitigation measures, cannot respond further in detail.

The commenter also alleges that there are several instances where the term "feasible" is used in conjunction with a mitigation measure, and cites DSEIR, pg. 4-65, as an example. The DSEIR discusses impacts to critical habitat on pgs. 4-64 and 4-65. The DSEIR states, "The primary mitigation for potential impacts to critical habitat will be avoidance. Where avoidance is not feasible, mitigation measures **BIO-1** and **BIO-7** will be implemented." The DSEIR does not say that mitigation measures **BIO-1** and **BIO-7** will be implemented "if feasible," it indicates that these measures will come into play if avoidance itself is not feasible. This does not in any way render these mitigation measures unenforceable.

- 1-38 The commenter asserts that the DSEIR lacks a reasonable range of alternatives to the OBMPU project. IEUA disagrees, however, in response to comments by the commenter and the Monte Vista Water District, a SMP-only alternative has been added to Chapter 5 of the FSEIR. The commenter also alleges that the No Project/Baseline Alternative is not properly defined. IEUA disagrees. The no project alternative is the continuation of the OBMP, as directed by CEQA Guidelines §15126.6(e)(3)(a), which pertains to a project that is a revision to an existing ongoing operation. The OBMP was adopted 20 years ago as an integrated management plan to maintain a sustainable Chino Basin groundwater resource. Logical extrapolation all of the natural (such as surface water flows and natural recharge) and human activities (such groundwater extractions and man-made pollution) that can affect the Basin's groundwater aquifer were incorporated into the OBMP. Even without achieving all of the OBMP program objectives/projects, it has resulted in sustainable management of the Chino Basin over the intervening 20 years. However, when combined with the environmental and regulatory circumstances that have evolved and that currently exist, including the need to re-determine the storage and recovery capacity of the Basin, the scope of the Basin management programs and projects has also evolved. Hence, the Watermaster and Basin stakeholders redefined the Basin management programs and projects as an update, i.e., the OBMPU. In the meantime, the existing OBMP is the existing management plan that guides Watermaster and stakeholder Basin activities, and therefore, it was appropriately identified as the No Project/Baseline Alternative.

During the approximate two-year review process spent developing the basic elements of the OBMPU, and through the NOP process for the OBMPU SEIR, no alternatives to the OBMPU were presented as a comprehensive management program for the Chino Basin groundwater resources. This partly reflects the comprehensive nature of the management activities included in the OBMPU and the difficulties with defining a fact-based feasible alternative. This is further discussed regarding a recycled water alternative discussed in response to comment 1-11.

1-38
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The DEIR fails to analyze any alternative to the Update other than the No Project alternative. The No Project alternative does not satisfy the requirement for a reasonable range of alternatives because the alternative is defined as the continuation of the OBMP without the new and revised program activities. (DEIR, p. 5-4.) The DEIR states that the goals of the Update are the “same as” the goals of the OBMP. (DEIR, p. 3-4.) At the same time, the DEIR concludes that continuation of the OBMP will not achieve the goals and objectives of the Update. (DEIR, p. 5-7 [“under the No Project/Baseline alternative, the ability to attain the goals and objectives . . . would be virtually eliminated.”].) Thus, the DEIR does not include an evaluation of a reasonable range of alternatives that could attain most of the objectives of the Update.

1-39

The DEIR acknowledges that material elements of the twenty-year old OBMP have not been implemented. Nevertheless, the Draft EIR makes the implausible assumption that all elements of the Update will be implemented within the thirty-year planning horizon of the Update. There is no substantial evidence to support this dubious assumption. Indeed, given the continuing disagreement among the applicable parties regarding implementation of the OBMP, and the need for all of the applicable parties to agree to the implementation agreement, it is not reasonable for the DEIR to assume full implementation of the Update, which requires the agreement of all the Chino Basin Parties. Given the substantial possibility that not all elements of the OBMP Update will be agreed to, and the documented inability of timely implementation of OBMP elements, the DEIR should evaluate alternatives that assume that not all program elements will be implemented within the planning horizon of the Update.

b. The DEIR Should Evaluate An Alternative that Retains Recycled Water in the Basin.

1-40

The City has a priority claim to recycled water generated by the regional wastewater treatment system to the extent it contributes wastewater to the system. Retaining recycled water in the Basin would attain one of the most important objectives of the Update: increasing the water supply and reliability for the Chino Basin Parties. The DEIR should evaluate an alternative to the Update that retains recycled water generated by the regional wastewater treatment system for beneficial uses in the Basin. This alternative is feasible. It would attain the major objectives of the Update identified in the DEIR.

4. The DEIR Baseline Does Not Comply with CEQA.

1-41

CEQA requires the EIR to identify a “baseline” of environmental conditions against which the significant impacts of the proposed project are identified and evaluated. The baseline is required to reflect actual and realistic, not hypothetical, conditions. The EIR must employ a realistic baseline that will give the public and decision makers the most accurate picture practically possible of the project's likely impacts. (*Communities for a*

- 1-39 IEUA disagrees that the DSEIR should have assumed that some elements of the OBMPU would not be implemented during the project's thirty-year life. When a General Plan is compiled, for example, it represents a jurisdiction's vision for the ultimate build-out of the community. It is not an assumption that within that planning period, every parcel of land will be developed. This applies equally to the OBMPU. Not every program or project needs to be implemented to be successful in making progress to Basin sustainability. The key issue is defining an overarching program and projects to guide actions towards the "build-out" concept of sustainability. CEQA analysis requires that the DSEIR examine the "whole of the proposed action" not just the individual elements or actions. If not every element or action is implemented over the planning period, that is not failure, it represents incremental progress towards the concept of build-out sustainability. Thus, it is appropriate for the CEQA document to consider all elements of the concept/program as it is presented in the DSEIR. Please refer to response to comment 1-38, which discusses the addition of the SMP alternative.
- 1-40 Please refer to responses to comments 1-11.
- 1-41 IEUA disagrees with the commenter's characterization of the proper environmental baseline to analyze the OBMPU project. As discussed in response to comment 1-30, the DSEIR tiers from the 2000 OBMP PEIR, 2010 Peace II SEIR, and 2017 Addendum. Accordingly, the DSEIR analyzes a change to a project previously analyzed in prior EIRs, specifically the OBMP. When analyzing a change to a project previously analyzed in a prior EIR, CEQA directs that the subsequent EIR analyze the incremental differences between the original project as if it has been implemented against the modifications to that project. Accordingly, the DSEIR properly compares the environmental impacts of continuing the OBMP as modified by the Peace II SEIR, against the changes proposed in the OBMPU.

Better Environment v. South Coast Air Quality Mngmt. Dist. (2010) 48 Cal.4th 439, 322, 325, 328 [invalidating baseline based on existing permitted, but unrealistic emission levels from refinery].)

1-41
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With very narrow exceptions not applicable here, the baseline is required to be the “existing conditions” at the time of the preparation of the EIR. (CEQA Guidelines, § 15125, subd. (a); *Neighbors for Smart Rail v. Exposition Metro Line Construction Auth.* (2013) 57 Cal.4th 439, 448 [DEIR may not rely solely on a future conditions baseline unless the existing conditions baseline would be misleading].) An agency that elects not to provide an analysis based on existing conditions must provide an adequate justification for doing so. (*POET, LLC v. State Air Resources Bd.* (2017) 12 Cal.App.5th 52, 80 [baseline invalid because it overestimated NOx emission levels, resulting in underestimate of NOx emissions from change in air regulation].) The future impacts of full implementation of a proposed project are required to be compared against the “existing conditions” baseline. Thus, the DEIR should be evaluating the future impacts (i.e., impacts at the horizon year) of all elements of the Update against a baseline of existing conditions that are realistic -- not hypothetical.

Because the planning horizon for the Update is very lengthy (30 years) it is also necessary that the DEIR analyze the short-term and mid-term effects of the Update against the existing conditions baseline. A short and mid-term analysis is necessary to provide the public with a realistic analysis of how the effects of the Update will change over time. (*Neighbors for Smart Rail, supra*, 57 Cal.4th at p. 456.)

1-42

Where, as here, the “project” is a change to an existing plan or program, the future impacts of the changes to the program are **also** required to be compared against the impacts of the existing program. (CEQA Guidelines, §§ 15125, subd. (e), 15126.6 subd.(e)(3)(A); *Woodward Park Homeowners Ass’n v. City of Fresno* (2007) 150 Cal.App.4th 683, 707 [invalidating EIR that compared impacts of zone change against impacts of development under existing zoning]; (See also *Environmental Planning & Info. Council v. County of El Dorado* (1982) 131 Cal.App.3d 350 [invalidating baseline based on no project conditions].) Thus, CEQA is required to compare the future effect of all elements of the Update against both an existing conditions baseline, and to compare the future effects of the Update elements against the future effects of the existing OBMP.

1-43

The DEIR suffers from the same errors identified in *Woodward Park Homeowners Ass’n v. City of Fresno* and *Environmental Planning & Info Council v. County of El Dorado* because the DEIR determines the significance of effects by comparing the Update against the OBMP, rather than against existing conditions. The DEIR exacerbates this error by assuming effects of the OBMP that are not implemented, and that are therefore not reflected in the existing conditions baseline.

- 1-42 The commenter suggests that the DSEIR should analyze “short-term and mid-term effects” of the OBMPU, although it does not define what it believes the “short-term and mid-term” periods should be. IEUA disagrees with the commenter’s suggestion because based on the OBMPU as defined in the DSEIR, there is no mid-term to deal with. Instead, all of the project components are evaluated against the identified baseline as if they would be implemented in the near-term.

The commenter also indicates that future impacts of the OBMPU required to be analyzed against the impacts of the OBMP. Please refer to response to comment 1-41.

- 1-43 Please refer to response to comment 1-41.

1-44 The baseline used in the Draft EIR is confusing. The Draft EIR does not clearly describe the baseline used to identify significant impacts. In several sections, the baseline appears to be conditions in the absence of the OBMP. In other sections, the baseline appears to be conditions with implementation of the OBMP, but without the new facilities and activities proposed in the Update. The DEIR does not clearly describe the existing conditions or explain the time period used to determine the appropriate existing conditions baseline.

1-45 Regulations adopted by the Watermaster require safe yield reset calculations to be based on precipitation from 1921 to the date of the reset. The Draft EIR should disclose and explain any differences between the precipitation baseline required by the Watermaster regulations and the “existing conditions” baseline required to comply with CEQA.

Where, as here, the existing conditions varied over time (e.g. as result of variations in precipitation and water-year type, groundwater storage and extraction levels etc), the baseline should be defined to allow the public to understand the potential for worst-case effects (e.g. during drought years). For example, it is not appropriate to use an average or other similar generalizations of baseline conditions when doing so masks the project's real effects.

1-46 The confusion created by the baseline is made worse because of the DEIR's heavy reliance on complex, uncertain, and opaque computer and statistical models of groundwater and surface water. The California Supreme Court warned that reliance on complex computer or statistical models in the identification of future baseline conditions create the risk of, intentionally or unintentionally, obfuscating public understanding of environmental effects. (*Neighbors for Smart Rail, supra*, 57 Cal.4th at p. 456 [“an agency must not create unwarranted barriers to public understanding of the EIR by unnecessarily substituting a baseline of projected future conditions for one based on actual existing conditions”].)

For all of the above reasons, the baseline used by the DEIR to evaluate environmental effects is fatally flawed.

5. The Project Description is Not “Accurate, Stable and Finite.”

1-47 CEQA requires an EIR to include an “accurate, stable and finite” description of the project under review. Where there is a potential for varying levels of implementation of a project, the project description must clearly disclose the level proposed by the agency.

The “project” here is the Update to the OBMP. The DEIR Project Description includes the existing OBMP program elements, and the changes to the nine program elements proposed by the OBMPU. In several sections, the DEIR describes the Project

1-44 Please refer to response to comment 1-41. The commenter also states that the baseline appeared to change between sections of the DSEIR, but does not specify which changes to which the commenter is referring. Without more guidance as to which section or sections of the DSEIR suffer from this alleged infirmity, IEUA is unable to respond to this comment further.

1-45 Please refer to response to comment 1-41. In regards to the first paragraph of this comment, the comment conflates the Court-ordered Safe Yield reset methodology with the modeling methodology used to assess the basin response to projected groundwater management scenarios that include a best estimate of pumping, managed artificial recharge, replenishment and managed storage. The methodology used in the 2018 Storage Framework Investigation, the document used to analyze hydrologic impacts, uses a long-term historical record of precipitation and current and projected future cultural conditions to estimate the long-term average net recharge to the Basin. The model used in the 2018 Storage Framework Investigation used long-term precipitation data from 1921 to the 2017 (current at the time of the evaluation and consistent with the Court-ordered Safe Yield reset methodology).

In regards to the second paragraph of this comment, a review of historical groundwater level data indicates that the Chino Basin does not rapidly respond to extreme wet and dry periods and that the use of “expected value recharge” and projected groundwater pumping provides a reasonable basis for project evaluation. This occurs because the amount of storage in the basin is large when compared to variations in recharge and pumping. Additionally, mitigation measures have been prepared to ensure that monitoring data are used in addition to model-projections to assess potential MPI and adverse impacts and to assess the efficacy of mitigation measures that are implemented.

1-46 Please refer to response to comment 1-41. IEUA disagrees with the commenter that the models used to analyze groundwater and surface water are uncertain and opaque. While the models utilized to forecast groundwater hydrology impacts are complex, they have also been extensively validated by comparison with actual monitored conditions. In fact, the historical basin response predicted by the model used in the 2018 Storage Framework Investigation closely reflects the basin response as seen in actual monitoring data and it is the combined model results and monitored groundwater characteristics that were used to establish the groundwater hydrology baseline conditions. The model development included: extensive peer and stakeholder reviews, the latter group included water agency managers and elected decision makers that are neither scientists or modelers; and, the subsequent model applications to support the Safe Yield reset in 2015 and the 2018 Storage Framework Investigation involved stakeholder reviews. Extensive documentation of these efforts including extensive stakeholder outreach is available to the public on the Chino Basin Watermaster ftp site:

- https://cbwm.syncedtool.com/shares/folder/e83081106c3072/?folder_id=896, and
- https://cbwm.syncedtool.com/shares/folder/e83081106c3072/?folder_id=1406.

The modeling work used in the 2015 recalculation of the Safe Yield was accepted by these stakeholders and it was relied upon by the Superior Court in 2018 when it ordered the Safe Yield to be reset. The modeling work for the 2018 Storage Framework Investigation was also accepted by the Watermaster Board of Directors (Board) and the

Board relied upon it when it authorized the development of the 2020 SMP and the SMP inclusion in the OBMPU.

- 1-47 The OBMPU follows the OBMP format and general content, for example the goals remain the same and the program elements remain the same. However, the OBMPU project clearly delineates between new facilities, not previously analyzed by prior OBMP CEQA documents, and the OBMP facilities already analyzed under CEQA. For example, with respect to biological monitoring, the DSEIR states: "Under the OBMPU, Watermaster will continue these efforts, which will not involve any new or upgraded facilities. Since the 2000 OBMP PEIR and related CEQA documents have already evaluated the environmental impacts associated with the OBMP and the OBMPU will simply continue this previously analyzed program component, this activity will be treated as part of the baseline against which the OBMPU is evaluated." (DSEIR at 3-15.) This is an example of how the DSEIR informs the reader as to what features of the OBMPU are being analyzed in the DSEIR. Section 3.5 Summary of All Facilities, clearly delineates all of the facilities and activities envisioned under the OBMPU over the next 30 years. Further, the analyses contained within each Subchapter of the DSEIR identify the facilities of concern and their general, not specific location. The impact forecast analyses are performed on these facilities and operations, not the more general goals and program elements carried over from the OBMP to the OBMPU.

as continuing the OBMP (e.g., DEIR, p. 3-30.) The description of the Project as “continuing” implementation of the OBMP results in a flawed impact analysis that fails to distinguish clearly between the impacts of the OBMP that have been fully implemented and the impacts of the new features of the OBMP proposed in the Update.

1-47
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In some sections, the DEIR appears to analyze the impact of the continued implementation of the OBMP including the new and revised components of the Update. In other sections, the DEIR appears to limit the analysis to the impacts of the new facilities proposed in the Update. The errors in the project description are similar to the errors identified in the seminal project description case. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192 [invalidating LADWP Owens Valley groundwater project because of inconsistent description of project elements].) The confusing and inconsistent project description results in a very confusing analysis of the impacts of the Update.

1-48

For example, the evaluation of hydrology impacts refers to a “baseline” scenario “based on expected groundwater pumping and recharge activities of the parties in the absence of storage and recovery programs.” (DEIR, p. 4-172.) This baseline scenario is then compared against three scenarios of “increasing bands of storage, alternative facility and operating plans.” (DEIR, p. 4-173.) The project description does not select or propose a particular scenario. The Project Description is required to describe clearly the level of storage, facility and operation plans proposed by the lead agency. Failure to do so violates CEQA’s require for a “stable and finite” description of the project. (*Washoe Meadows Community v. Department of Parks and Recreation* (2017) 17 Cal.App.5th 277 [Invalid project description where agency did not propose specific level of discharge to river].)

6. The DEIR Does Not Use the Best Available Model and Fails to Disclose Uncertainties in the Groundwater Model.

a. The DEIR Does Not Use the Current Groundwater Model.

1-49

CEQA requires the Draft EIR to evaluate the impacts of the Update using the best available data and methods. (*Berkeley Keep Jets Over the Bay v. Board of Port Comm’s* (2001) 91 Cal.App.4th 1344.) The Draft EIR evaluates the hydrology and water quality impacts of the Update using outdated elements of, and assumptions in, the 2013 version of the Chino Basin Groundwater Model (Model). Over the last several years, consultants to the Watermaster have revised the Model to prepare the 2020 Safe Yield Reset. The revisions to the Model have resulted in material changes to the estimated safe yield, but the 2020 Model revisions are not evaluated in the Draft EIR. The Draft EIR should be revised to incorporate the most recent revisions to the assumptions and elements of the Model, and should disclose any differences between the versions of the Model used in the preparation of the Draft EIR and in the 2020 Safe Yield Reset Report.

- 1-48 The commenter suggests that including three possible scenarios for increasing groundwater storage violates CEQA's requirement to present a "stable and finite" project description. IEUA disagrees. It is common in CEQA documents to analyze variations as to how the project may be implemented, depending on future circumstances. The scenarios presented under Hydrology and Water Quality, issues (a) and (b) encompass the various impacts related to actions within different storage bands to demonstrate the specific impacts that would occur with utilization of these storage bands as OBMPU facilities are developed. As such, the scenarios are not presented as a selection, but rather are presented to enable stakeholder use of storage space up to 700,000 af and conjunctive-use by Storage and Recovery Programs from 700,000 af to 1,000,000 af.
- 1-49 Wildermuth Environmental, Inc. (WEI) has prepared a technical memorandum dated June 14, 2020 (WEI Technical Memo), to respond to comments 1-49 through 1-51. The WEI Technical Memo has been appended to the Final SEIR as an appendix, and revisions to Chapter 4.7, Hydrology and Water Quality, have been made to clarify information presented in the DSEIR with respect to the model used, conclusions reached, and inherent uncertainty in any modeling process.

The commenter is correct that WEI has prepared the 2020 Chino Valley Model (2020 CVM), which was submitted to the Watermaster Board in May 2020. The model used to analyze hydrology and water quality in the DSEIR, however, was the 2017 Watermaster Chino Basin groundwater model (2017 model), not a 2013 model, as alleged by the commenter. The WEI Technical describes the differences between the 2017 model and the 2020 CVM.

The WEI Technical Memo considers whether reevaluating the hydrology and water quality impacts disclosed in the DSEIR using the 2020 CVM would disclose any new or substantially more severe environmental impacts with respect to net recharge and safe yield, pumping sustainability, land subsidence, hydraulic control, and groundwater quality, and concludes that no new or substantially more severe environmental impacts would occur. Further, the WEI Technical Memo notes that any future storage and recovery projects proposed under the OBMPU would apply to Watermaster for approval, and would be evaluated using the most current of the groundwater model in effect, whether that is the 2020 CVM or a future updated version of the model.

b. Failure to Disclose Uncertainties in the Model and Disagreements Regarding the Model.

CEQA requires an EIR to disclose uncertainties in the analysis of environmental effects, and is also required to disclose disagreements with analytical methods employed by the EIR. (CEQA Guidelines, § 15151 [requiring “good faith effort at full disclosure”]; *Berkeley Keep Jets Over the Bay*, *supra* at p. 1367 [invalidating EIR for airport expansion that relied on outdated profile of aircraft emissions].) The obligation to use the best available data and methods is particularly important where, as here, the project has a long-term planning horizon, and the EIR is relying on statistical and computer modeling to forecast project effects. (*Neighbors for Smart Rail*, *supra*, 57 Cal.4th at p. 456.)

The 2013 version of the Chino Basin Model used in the DEIR includes numerous assumptions and parameters to forecast future groundwater conditions in the Chino Basin and downstream impacts of the Update. The author of the model (WEI) has acknowledged that some important elements of the 2013 version of the Model are outdated, and have been replaced by the 2020 version of the Model. (WEI Technical Memorandum, April 27, 2020 [incorporated by reference].) Indeed, WEI is relying on the 2020 version of the Model to calculate the 2020 Safe Yield Reset required by the judgment. If a ten-year adjustment in the Safe Yield Rest requires the use of the latest version of the Model, *a fortiori*, the lead agency should be using the most current version of the Model to evaluate the significant effects of the thirty-year Update. The WEI Technical Memorandum documents that the 2020 version of the Model includes material changes to the 2013 version:

- “Since the prior Safe Yield re-calculation, the number of hydraulic subareas has substantially increased to more accurately estimate precipitation/runoff processes and stormwater recharge.”
- “In the 2020 CVM, the method for estimating daily precipitation for each hydrologic subarea was improved from past reliance on interpolating daily precipitation at precipitation stations across the watershed”
- “Subarea surface flows from the Cucamonga and Riverside Basins are greater in the 2020 CVM relative to the 2013 Model”
- “Streambed infiltration in the Santa Ana River has also increased.”
- “The pumping projections used in the 2020 safe yield calculation are about 6,000 to 27,000 afs less for 2015 through 2035”

(WEI, Technical Memorandum at p. 2-3.)

1-50 Please refer to response to comment 1-49.

1-51 As documented in the April 23, 2020 comments of Thomas Harder & Co. on the 2020 Safe Yield Reset (incorporated by reference), there is significant uncertainty in the Chino Basin Model. Predictive uncertainty analysis is a standard practice in groundwater modeling, and is a best management practice identified by the Department of Water Resources for groundwater analyses prepared pursuant to the Sustainable Groundwater Management Act.

The Draft EIR fails to disclose any of the uncertainties in the Model, and fails to evaluate the potential for errors in the impact evaluation related to modeling uncertainties. The Draft EIR is required to disclose fully the uncertainties in the Model and disclose the range of potential impacts of the Update in light of the uncertainties.

c. The DEIR is Not Written in Plain Language. It Fails to Explain the Model in Terms that the Public is Able to Understand.

1-52 EIRs are required to be organized and written in a manner that will make them “meaningful and useful to decision-makers and the public.” (Pub.Res.Code, § 21003(b). EIRs must be written in plain language. (CEQA Guidelines, § 15140.) Documents that are “hypertechnical and confusing in their presentation may be incomprehensible to the very people they are meant to inform.” (*San Franciscans for Reasonable Growth v. City & County of San Francisco* (1987) 193 Cal.App.3d 1544, 1548.)

The Chino Basin Model is the central analytical device used by the DEIR to evaluate hydrologic and water quality impacts of the Update. But the DEIR does not explain the Model, or the analysis of hydrologic and water quality effects in a manner that is clear and comprehensible to the public. The following are just a few of many representative examples of the DEIR’s opaque and confusing language:

- 1-53
- “A Baseline planning scenario (Scenario 1A) based on expected groundwater pumping and recharge activities of the parties in the absence of Storage and Recovery Programs (as of 2017) was developed as a point of comparison to the Storage and Recovery Programs. And Storage and Recovery Program scenarios based on the two bands (FMSB and the 2000,000 af for use by future Storage and Recovery Programs) were also developed to compare against the Baseline and identify their impacts (Scenarios 2, 3 and 4).”
 - “The Programs do not specifically address the facilities proposed as part of the OBMPU, and outline in the Project Description under Summary of All Facilities. However, these facilities fall under the same general project categories as those included as part of the OBMPU, and the impacts are assumed to correspond equally unless otherwise specified.” (DEIR, p. 4-

- 1-51 Please refer to responses to comment 1-49. The commenter incorporates by reference April 23, 2020 comments by Thomas Harder & Co. regarding the 2020 CVM. As those comments do not concern the 2017 model and do not concern the analysis presented in the DSEIR, no further response is required. Further, the Final SEIR has been updated to provide a discussion about model uncertainty, as discussed in the WEI Technical Memo.
- 1-52 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Please refer to responses to comments 1-46, 1-49, and 1-53.
- 1-53 IEUA disagrees that the DSEIR uses language that is hyper-technical and confusing. The commenter provides three examples that it suggests are indicative of the lack of clarity in the DSEIR. Yet one of the problems with abstracting text from a document is that the preceding and following text are not provided. The text on pages 4-172 and 4-173 of the DSEIR would demonstrate that all of the terms that the commenter may find confusing or opaque are defined in the preceding and following paragraphs, including Table 4.7-4. Storage and recovery programs are defined for Stakeholders in the Basin and for additional programs beyond Stakeholders. The only confusing term in this whole paragraph is FMSB, which is defined in the preceding paragraph to mean “First Managed Storage Band” (700,000 to 800,000 acre-feet). The Baseline planning scenario was developed from actual historic pumping patterns by the groundwater pumpers in the Chino Basin. Also, the number is not 2000,000 af, it is 200,000 af. The language used is clearly not hyper-technical, but uses plain words or defined acronyms.

Regarding the second bullet, this is also a selected quote taken out of context. The language is plain and not opaque or confusing. It simply states that the facilities identified in one document (the 2018 SFI) are not exactly the same as in the OBMPU, but the effect of implementing the OBMPU facilities correspond “equally” to those discussed in the SFI.

Regarding the third bullet, this quote is taken out of context from a paragraph that concerns Projected Recharge and Replenishment Capacity. The acronym “ASR” is defined in the acronym list in the DSEIR’s Table of Contents, and Exhibit 4.7-6 on the following page (DSEIR, pg. 4-177) presents a table showing how various types of water will be used for different recharge sources, and what amounts of recharge the OBMPU estimates will occur.

Regarding the fourth bullet, again there are no hydrology or model technical jargon in this quote, only references to supplemental water supplies. When examined in the context of the paragraph as a whole and the adjacent Table 4.7-6, this statement presents a clear discussion of the different available water supplies that can supply supplemental water to the Chino Basin.

Regarding the fifth bullet, there are hydrology or model technical jargon in this quote, only references to previously defined terms. For example, “MPI” (Material Physical Injury) is defined in the list of acronyms and at several locations in Chapter 3, Project Description. “MZ-1” is Management Zone 1 which is also defined Chapter 3 and at several points in the in the Hydrology Subchapter. This quote clearly references the basis for determining whether new land subsidence has been initiated.

Regarding the final bullet, the circumstances are similar to the previous five instances referenced in this comment. Baseline scenarios have been previously defined in this Subchapter and if the reviewer has any confusion section 4 can be referenced (beginning on page 4-172) to refresh the memory of what each scenario proposes. The intent is to use the information to determine under what circumstances new land subsidence can be initiated.

1-53
 cont'd

173.)

- “The ASR and in-lieu recharge capacities are estimated to be about 5,480 afy and 17,700 afy, respectively (WEI 2018). The initial OBMP recharge master plan was developed in 2002; its current version is the 2013 Amendment to the 2010 Recharge Master Plan Update (2013 RMPU) (WEI 2013).” (DEIR at p. 4-176.)
- “Future supplemental water recharge capacity requirements are estimated using future supplemental water recharge projections in the context of the availability of supplemental water for recharge.” (DEIR, p. 4-177.)
- “To evaluate the risk of MPI due to subsidence over the entirety of MZ-1, historical groundwater levels were used to develop a groundwater level control surface (new land subsidence metric throughout MZ-1 that define the likelihood of initiating new subsidence.” (DEIR, p. 4-164.)
- “The new land subsidence projections described above indicate, for the baseline scenarios described in section 4 and in Storage and Recovery Program scenarios described in this section that new land subsidence could occur by 2056 under baseline conditions (Scenarios 1A) and with Storage and Recovery Programs operating (Scenarios 2C through 4B).” (DEIR, p. 4-185.)

1-54

It is impossible for anyone without a familiarity with hydrologic engineering and experience with hydrologic modeling to understand text such as the above. The language seems designed to obfuscate the analysis of the Update’s effects rather than provide an analysis that is “meaningful and useful” to the public.

7. Conclusion.

1-55

The City respectfully requests that the lead agency revise the DEIR to address the comments above, and to recirculate the revised DEIR for additional public review and comment. The City also requests that the Inland Empire Utilities Agency (IEUA) and the Watermaster defer any action on the DEIR and on the Update until the necessary parties reach agreement on the terms of the agreement to implement revisions to the Optimum Basin Management Plan. The lead agency and responsible agencies could then determine the appropriate scope of any CEQA evaluation of those elements agreed to by the parties to the implementation agreement.

- 1-54 IEUA disagrees with the commenter's statement that it is impossible for anyone without familiarity with hydrologic engineering and experience with hydrologic modeling to understand the bulleted text discussed in response to comment 1-53. The OBMPU is undoubtedly a complex document. But the language used in the DSEIR text is consistent with the text of the standard Initial Study Environmental Checklist Form, Appendix G of the State CEQA Guidelines. The DSEIR does reference several complex environmental issues, but they are clearly explained and well referenced as the basis for making impact forecasts. There is no complex technical jargon in any of the referenced quotes under response 1-53, and the reader is able to reference previous text where acronyms such as "ASR," and "MPI," are defined and terms such as "Scenarios" are described. There is no inappropriate use of obfuscation or jargon to confuse the public. Please also refer to response to comment 1-46.
- 1-55 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.

Sylvia Lee
Inland Empire Utilities Agency
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DRAFT

Very truly yours,

D R A F T

Robert D. Thornton
Nossaman LLP

RDT:lmb



State of California . Natural Resources Agency

CDFW OF FISH AND WILDLIFE

Inland Deserts Region

3602 Inland Empire Boulevard, Suite C-220

Ontario, CA 91764

www.wildlife.ca.gov

Comment Letter #2

GAVIN NEWSOM, Governor

CHARLTON H. BONHAM, Director



May 8, 2020

Sent via email

Ms. Sylvie Lee, P.E.

Inland Empire Utilities Agency

6075 Kimball Avenue, Chino, CA 91708

Slee@ieua.org

Subject: Chino Basin Watermaster, Optimum Basin Management Program Update Draft
Subsequent Environmental Impact Report - State Clearinghouse No.
2020020183

Dear Ms. Lee:

The California Department of Fish and Wildlife (CDFW) received the Subsequent Environmental Impact Report (SEIR) from the Inland Empire Utilities Agency (IEUA; the CEQA lead agency) for the Optimum Basin Management Program Update (OBMPU; Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹

2-1

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the OBMPU that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the OBMPU that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

2-2

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

2-3

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. For example, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

**RESPONSE TO COMMENT
LETTER #2
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
INLAND DESERTS REGION**

- 2-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. IEUA acknowledges the role of the California Department of Fish and Wildlife's (CDFW) as a commenter on this Project.
- 2-2 IEUA acknowledges the CDFW's role as a Trustee Agency under CEQA for this Project, and understands that authorization as provided by the Fish and Game Code for several Project-related activities may be required.
- 2-3 IEUA acknowledges the CDFW's role as a Responsible Agency under CEQA for this Project, and understands that authorization as provided by the Fish and Game Code for several Project-related activities may be required.

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PROJECT DESCRIPTION

2-4 The OBMPU covers the Chino Basin which includes approximately 235 square miles in the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Chino Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W.

The Chino Basin Watermaster (Watermaster) developed a regional water resources and groundwater management program for the Chino Basin (Optimum Basin Management Program; OBMP). The update to the OBMP is intended to address possible program activities and projects at a programmatic level over the next 30 years. The current draft SEIR (herein referred to as 'OBMPU SEIR') addresses the current environmental setting, assesses the impacts related to the construction and operation of the regional program, and provides information to support required permitting process.

PROJECT BACKGROUND

2-5 The original OBMP and the accompanying Programmatic EIR (PEIR; July 2000) described the physical state of the groundwater basin and defined a set of management goals and actions. Agreements to implement the OBMP (termed 'Peace I Agreement' and 'Peace II Agreement'), and their associated CEQA analysis (Peace II SEIR, 2010; SEIR amendment, 2017) were also approved. The OBMP identified and described several management activities that, if implemented, could achieve the OBMP goals. These activities, and associated objectives and tasks defined in the 2000 OBMP, have been retained for the OBMPU. The OBMPU Implementation Plan Update is a revision of the implementation plans included in the Peace I and Peace II Agreements and incorporates the proposed activities and facilities identified in the 2020 OBMPU and ongoing activities from the 2000 OBMP.

COMMENTS AND RECOMMENDATIONS

2-6 CDFW is concerned about the adequacy of the OBMPU SEIR in identifying potentially significant impacts and establishing adequate and enforceable mitigation measures. CDFW's comments and recommendations are presented below.

Impact Analysis

2-7 The SEIR describes the intent of the document as follows: "*This document assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed Project. This Program (Draft) SEIR is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this Project.*" (SEIR, p. 1-2). Such analysis would allow CDFW to provide specific input on the adequacy of the analysis, and whether that analysis was sufficient for use in future discretionary actions, such as Fish and Game Code section 1602 Lake and Streambed Alteration Agreements or Fish and Game Code section 2081 Incidental Take Permits. However, the SEIR does not identify or assess any impacts to biological resources, and in most cases, defers this analysis to some future action. In the case of direct

- 2-4 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 2-5 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 2-6 As demonstrated below, the IEUA believes that the potentially significant impacts and extensive mitigation measures, specifically those meant to minimize biological resource impacts, are adequate; thus, IEUA disagrees with CDFW's assertion made in this comment.
- 2-7 The IEUA does not agree with the commenter's statement that the DSEIR does not identify or assess impacts to biological resources. The OBMPU proposes projects that fit into four Project Categories outlined under Section 3.5 of Chapter 3, Project Description, of the DSEIR (pages 3-42 and 3-43). The specific locations for the majority of the facilities outlined in the OBMPU are unknown, and furthermore, where a specific location is proposed (CIM, Jurupa Basin, Chino Desalters, etc.), specific proposals containing design or proposed improvements thereof have not yet been defined. Therefore, analysis of site specific biological resource impacts can only occur once a site is identified and a project has been defined. IEUA prepared the OBMPU as a Subsequent EIR, and CEQA states the following for a subsequent tier of a CEQA document: *Where a lead agency is using the tiering process in connection with an EIR for a large scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepare a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.* IEUA would like to point out that the original OBMP was implemented under similar circumstances for projects such as Chino Desalters, recycled water programs, hydraulic control, and other facilities/programs. Regardless, the Chino Basin stakeholders have worked closely with CDFW over the past 20 years to minimize impacts to important biological resources from direct ground disturbance and the Watermaster's Prado Basin Habitat Sustainability Program (PBHSP) was developed to provide sufficient information to manage Prado Basin's important resources from indirect impacts to from groundwater production. Please refer to the response to comment 2-8, below for a continued discussion of the concerns raised in this comment.

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2-7
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impacts to biological resources, the OBMPU SEIR defers this analysis to future CEQA analysis, stating, *"Because it is difficult to determine the number or extent of these kinds of impacts, direct impacts on special-status wildlife species will be addressed in subsequent, project specific environmental reviews once a specific component of the OBMPU has been defined for design and implementation."* (SEIR, p. 4-62). In the case of indirect impacts to biological resources, the OBMPU SEIR conceded that *"potential indirect impacts associated with future OBMP facilities include alteration of jurisdictional water hydrology, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution"*, but concluded that it would be *"difficult to quantify and measure these kinds of impacts, indirect impacts on special-status wildlife species are described qualitatively and will be quantitatively addressed in project specific second tier environmental evaluations"*. (SEIR, p. 4-62). Similarly, for ongoing operations or maintenance activities requiring ground disturbance, clearing, and grubbing, the OBMPU SEIR concluded that these actions *"could cause erosion and sedimentation or could indirectly affect the hydrology of nearby jurisdictional waters and the species that depend on these resources."* However, the OBMPU SEIR determined that *"maintenance activities that would have potential impacts on special-status wildlife species are limited to the program right-of-way areas that are currently in service or that will be added to normal program operations and maintenance through separate design, environmental review and construction of such facilities at a later date"* (SEIR, p. 4-62).

2-8

While CDFW recognizes the programmatic nature of the SEIR, some level of analysis could be completed at this time based on the data and information collected within the previous 20 years of OBMP implementation, information gathered in biological surveys for proposed Project areas, and the foreseeable impacts associated with future, contemplated projects. If the SEIR will defer biological analysis to future, second tier environmental analysis, the SEIR should specify the threshold that will be relied on for requiring additional environmental review, and which of the projects contemplated will be required to complete additional environmental review. If the threshold for triggering additional environmental review is low, or if additional environmental reviewed is not anticipated, CDFW requests that the lead agency recirculate this SEIR and include the results of an appropriate level of analysis for which CDFW may rely on for future discretionary actions. Regardless of the lead agency's approach for analyzing specific biological impacts, the SEIR must address the 'whole of the action', as it is inappropriate under CEQA review to divide a project into smaller, separate projects. The SEIR must address the cumulative effects of the Project as a whole.

2-9

The SEIR claims that, *"To the extent feasible, this document utilizes conservative (worst case) assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them."* CDFW disagrees that the SEIR provides conservative assumptions in forecasting impacts and argues that potential impacts may have been underestimated. According to the OBMPU SEIR (Section 4.3 Biological), direct impacts from construction of any facility should *"only result in mostly minimal impacts on special-status wildlife species, because only a limited amount of marginal habitat for special-status wildlife species would be impacted by construction activities. All facilities would impact barren, urban, or agricultural areas, and thus construction would potentially impact only the special-status wildlife species that use mostly urban areas (e.g., special-status bird species, special-status mammal species, special-status bat species or species present in wetland or streambed habitats)."* Adjacency to urban areas does not necessarily determine habitat value or the use of these areas by special-status species. CDFW is concerned that the SEIR has trivialized the significance of the Project's potential impacts on

- 2-8 Please refer to responses to comments 1-35 and 1-40. The scope of the OBMPU is such that many projects could be developed within a diverse range of areas within the Chino Basin, which is a vast area within which to identify specific biological resources impacts that would result from the proposed Program. As required in Section 15152 of the State CEQA Guidelines, specific findings were made for each biology issue based on sensitivity of known resources in the Chino Basin, and specific mitigation measures were identified to address specific types of impacts. The suggested approach in this comment was actually used in evaluating the potential for direct impacts from construction of storage basins in the Mill Creek area (found to be a potentially significant impact to biological resources) and initially the same conclusion was envisioned for the indirect effects of future water diversion projects. Refer to response to comment 5-7 which addresses the direct and indirect effects of diverting surface water (stormwater flows, recycled water flows, and urban dry-weather flows). Due to the lack of data on how such a diversion program could be implemented in the future, however, this topic was deferred to second-tier CEQA evaluations.

The DSEIR identified the specific steps that would determine the level of significance for a given OBMPU facility on page 4-64, and acknowledges that there are many areas within the Chino Basin that may support candidate, sensitive, or special status species. As such, it is not possible, as the commenter suggests, to provide site-specific impacts related to future OBMPU Projects, as the level of specificity for OBMPU Projects required to make such findings has yet to be determined. Further, where facilities have some locational flexibility the primary mitigation is to avoid by relocating to a site without significant biological resources.

The commenter suggests that the DSEIR should “specify the threshold that will be relied on for requiring additional environmental review, and which of the projects contemplated will be required to complete additional environmental review.” CEQA Guidelines sections 15162, 15163, and 15164 provide standards for when subsequent environmental analysis is required, and if required, what type of CEQA document should be prepared. Further, the bullet points outlined on page 4-64 of the DSEIR clearly outline the manner in which thresholds for future Projects would be used to determine the level of significance for a given OBMPU facility.

1. For each new project, biological resources and supporting habitat will be reviewed for presence or absence.
2. Impacts will be determined using a habitat-based approach utilizing a combination of background review, habitat mapping during field surveys, and aerial photograph interpretation.
3. Impacts to critical habitat will be determined based on the location of such habitat to a given project footprint and the presence of primary constituent elements.
4. Construction and operational impacts will be considered temporary if they can be fully restored to pre-disturbance conditions following construction.
5. Impacts will be considered permanent when they have lasting effects beyond the project construction period, or cannot be fully restored following construction.
6. Impacts on wetlands/jurisdictional waters will be considered permanent where these features cannot be restored to their pre-project condition due to the permanent loss of jurisdictional features caused by new infrastructure.

For a detailed discussion of the biological resource mitigation measures and performance standards thereof, please refer to response to comment 1-37, which

demonstrates that the OBMPU DSEIR does not defer mitigation, and is committed to adhere to stringent performance standards.

IEUA disagrees that the DSEIR fails to analyze the “whole of the action.” The DSEIR analyzes direct, indirect, and cumulative impacts associated with the OBMPU, as required by CEQA. For example, cumulative impacts related to biological resources are discussed on page 4-74 of the DSEIR. The DSEIR determined that, there are certain areas, such as the Mills Wetlands and Prado Basin within the overall project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. Because a specific proposal to develop a project within these and other areas of the Basin known to contain sensitive resources has not been submitted to the Watermaster, there is a potential that an individual OBMPU facility may be developed and have operations within an area containing biological resources that cannot be avoided, even at the design level. Consequently, a finding that the OBMPU could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources was reached in the DSEIR. However, this is a prospective impact forecast because the specific location of facilities is at present unknown and analysis of site specific biological resource impacts can only occur once a site is identified. As such, the IEUA believes that the DSEIR has fully addressed the cumulative effects of the project as a whole.

- 2-9 CDFW appears to assume that, based on this quote, the OBMPU assumes that special status species do not utilize urban areas. However, within the quote abstracted from the DSEIR, the DSEIR states that “construction would potentially impact only the special-status wildlife species that use mostly urban areas,” which acknowledges that future OBMPU Projects may impact special status species and habitat. IEUA would like to amend that, the suggestion that construction of OBMPU facilities would occur within barren, urban, or agricultural areas, does not negate the fact that special status species, critical habitat, and habitat supporting special status species exists within the Chino Basin. Furthermore, IEUA has amended MM **BIO-1** in the FSEIR to expand the requirement for site surveys to encompass various types of OBMPU project sites, not just undeveloped land to ensure that impacts that may occur within all valuable habitat—in urban areas, or otherwise—are mitigated completely as part of the FSEIR (see underline, strikeout changes, below):

BIO-1 *All future OBMPU Projects shall be required to consult with a qualified professional to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a qualified professional, in any case in which a future OBMPU project* ~~*Where future project-related impacts will affect undeveloped land, or in which the Implementing Agency seeks State Funding, site surveys shall be conducted by a qualified biologist/ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the following subsequent mitigation actions will be taken:*~~

- a. *The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.*
- b. *The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological*

resource impacts at a project site with sensitive biological resources has been accomplished.

- c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted. in areas that were not previously surveyed because of access or timing issues or project design changes, preconstruction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species.*

Additionally, IEUA has amended MM **BIO-6** in the FSEIR to expand the requirement for burrowing owl surveys to various types of OBMPU project sites, not just undeveloped land to ensure that potential impacts to burrowing owl at all potential areas containing burrowing owl habitat—within urban areas, or otherwise—are addressed and mitigated completely as part of the FSEIR (see underline, strikeout changes, below):

BIO-6 *All future OBMPU Projects shall be required to consult with a qualified professional to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl surveys survey by a qualified professional, or in locations that are not fully developed, protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the “Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012”, or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed and approved by CDFW that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.*

The intent of these modifications is to broaden the scope of analysis for site specific impacts to include all potential OBMPU project sites. IEUA believes that, with the above changes to MMs **BIO-1** and **BIO-6**, potential impacts to any special status species within a future OBMPU project sites will be mitigated to the greatest extent feasible. These responses to comments demonstrate that the DSEIR has not underestimated potential biological resource impacts.

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2-9
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special-status species that could use such areas. Many special-status species, including burrowing owl (*Athene cunicularia*) and tricolored blackbirds (*Agelaius tricolor*) use disturbed areas, such as agricultural fields and manmade structures (burrowing owls) that could be indirectly and/or directly impacted by the Project. Impacts to special-status species, regardless of habitat quality or location, must be identified, evaluated and mitigated to a level below significance.

Analysis of Cumulative Effects to Biological Resources

2-10

The Watermaster prepared and circulated a Notice of Preparation (NOP) for the OBMPU. As part of the review process, Orange County Water District (OCWD) requested that the OBMPU SEIR evaluate within Prado Basin the following:

- 1) The groundwater levels (e.g., groundwater pumping, groundwater storage, or groundwater overdraft) and the distribution of groundwater dependent ecosystem, such as riparian vegetation and wetlands;
- 2) Any changes or effects to surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River;
- 3) The potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species; and
- 4) A quantitative analysis of impacts on Santa Ana River flows.

According to the OBMPU SEIR, impacts to biological resources have been assessed in the Biological Resources Subchapter 4.3 and in the Biological Resources Assessment (Volume 2 of the SEIR), with mitigation being identified “*where applicable to address impacts of OBMPU Projects on groundwater levels and potential related habitat impacts*”.

The comments below are separated to reflect the distinction between the entire watershed within the Chino Basin and the ‘Prado Basin’.

Prado Basin

2-11

Under Section 4.3.6(a).1 Prado Basin Habitat, it was concluded that: “**a reasonable assumption of the volume of water consumed by Prado Basin wetland/riparian habitat is about 18,000 AFY (emphasis added).** The IEUA and Western Municipal Water District (WMWD) are responsible for an average annual flow of 42,000 afy at Prado. However, when their cumulative credits exceed 30,000 afy (which they currently do and will continue to do so for the foreseeable future), they are responsible for a minimum annual flow of 34,000 afy. IEUA and WMWD split this responsibility 50/50, thus each agency is responsible for 17,000 afy of flow at Prado. The OBMPU is not anticipated to result in the inability of either IEUA or WMWD to meet this obligation, **and is therefore not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin (emphasis added)**”.

CDFW is concerned that “reasonable assumptions”, rather than data and detailed analyses, were used to determine whether significant impacts to habitat are anticipated to occur. The Watermaster, on behalf of the Chino Basin stakeholders and parties, is to maintain habitat in the Prado Basin as defined in the Peace II SEIR. Specifically, within the Peace II SEIR (Section 4.3.8 Cumulative Impacts), it states that “*the proposed OBMPU may result in a reduction in surface flows into Prado Basin. In addition, Low Impact Development ordinances, local policies,*

- 2-10 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 2-11 IEUA and Watermaster are unaware of any higher “assumptions” for the volume of water required to meet the evapotranspiration demands of the Prado Basin habitat. Since water diversion evaluations are deferred to a second-tier CEQA evaluation, detailed analyses will be able to incorporate the data from the Upper Santa Ana Watershed Habitat Conservation Plan (HCP) and other studies conducted specifically for proposed diversions. IEUA and Watermaster have partnered with CDFW in the development of the HCP, and are working towards the same goal, which is to protect sufficient habitat to support species of concern in the HCP. As noted in the DSEIR, the potential impact of any diversion will depend on specific content of the diversion proposal. As indicated in the DSEIR a proposal to install diversion facilities to capture periodic excess stormwater runoff flows may have minimal impact, while continuous diversions during drought years may have greater impact. The commenter is correct that a monitoring process is in place to evaluate the effects of diversions by all water agencies in the Upper Santa Ana River Watershed. Further, based on communications with Valley District, the HCP EIR should be available in the near future, and the published data can then be used in conjunction with any future proposal in the Chino Basin to divert surface water, unless they are already included in the Santa Ana River HCP EIR.

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*and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. **These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports special-status species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub*** (emphasis added). To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, regional organizations such as the Santa Ana Watershed Project Authority (SAWPA) and San Bernardino Valley Water District have developed local programs and partnerships to address cumulative impacts to habitat within Prado Basin." Pursuant to the OBMP Implementation Plan, long-term plans for monitoring groundwater production, groundwater level, groundwater quality, ground level (including remote sensing), surface water, and well construction/destruction have been developed and implemented to not only meet the OBMP requirements, but to also meet other regulatory requirements and Watermaster obligations under agreements, Court orders, and CEQA.

2-12

For example, the Prado Basin Habitat Sustainability Program (PBHS) has produced a time series of data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both regional mapping using multi-spectral remote-sensing data and air photos. In particular, the 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are "losing reaches" characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are "gaining reaches" characterized by groundwater discharge. This and other available data should be used in analyzing the potential cumulative impacts of the Project. CDFW realizes that the full extent of OBMPU may not be known at this time, but maintains that in order to determine significant environmental impacts and feasible mitigation measures, meaningful analyses need to be conducted and disclosed prior to Project approval.

2-13

While the results of the PBHS were not included in the OMBPU SEIR, it did clarify that "*the monitoring within the PBHS itself is not considered mitigation, but the commitment of Watermaster to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) serves as the mitigation to offset such damage or loss of Prado Basin Habitat*". As this monitoring program is intended to prevent impacts to habitat, it would be beneficial to discuss the monitoring results, adaptive management actions taken as a result of adverse effects identified, and strategies to mitigate potential future impacts that may occur from this proposed Project. To be effective, CDFW recommends that adaptive management should include: (1) objectives describing the desired condition; (2) management that is designed to meet the objectives; (3) monitoring to determine if the objectives are, or have been, met; and (4) management that is adapted if the objectives are not reached. To avoid irreversible change, detection of smaller changes may be important while they are still relatively minor. CDFW is available to assist the IEUA to identify 'adverse impacts to the riparian habitat or special-status species' and coordinate with all parties on future adaptive management action(s) that may need to be implemented.

2-14

Burrowing owl
 The OBMPU SEIR discusses the need and availability of water to sustain certain vegetation communities and the species that depend on these habitats. The SEIR should also address

- 2-12 Please refer to response to comment 2-11. In addition, MM **BIO-25** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects. At this time, no specific diversions in the Chino Basin have been proposed, and proposals being considered in other portions of the Upper Santa Ana River Watershed have not yet been collectively identified. Based on communications with Valley District, the HCP EIR should be available in the near future, and the published data can then be used in conjunction with any future proposal in the Chino Basin to divert surface water, unless they are already included in the Santa Ana River HCP EIR.
- 2-13 Please refer to response to comment 2-12, referencing MM **BIO-25**, and a similar comment and response, 5-4, from OCWD. As indicated in response to comment 2-12, Mitigation BIO-25 incorporates the PBHSP and requires use of that dataset to evaluate potential impacts caused by proposed diversion projects.

The commenter notes that it would be beneficial to discuss the results of monitoring within the PBHS, adaptive management actions taken as a result of adverse effects identified, and strategies to mitigate potential future impacts. IEUA and Watermaster previously agreed to implement MM 4.4-3 as part of the 2010 Peace II EIR, which stated *"IEUA, Watermaster, OCWD and individual stakeholders, that choose to participate, will jointly fund and develop an adaptive management program that will include, but not be limited to: monitoring riparian habitat quality and extent; investigating and identifying essential factors to long-term sustainability of Prado Basin riparian habitat; identification of specific parameters that can be monitored to measure potential effects of Peace II Agreement implementation effects on Prado Basin; and identification of water management options to minimize the Peace II Agreement effects on Prado Basin. This adaptive management program will be prepared as a contingency to define available management actions by Prado Basin stakeholders to address unforeseeable significant adverse impacts, as well as to contribute to the long-term sustainability of the Prado Basin riparian habitat."* MM 4.4-3 is being implemented under the supervision of the Prado Basin Habitat Sustainability Committee. As of this time, no adverse effects have been identified through monitoring within the PBHS, and as such, no adaptive management actions have been taken as a result. IEUA and Watermaster are open to discuss "adaptive management" options on a watershed-wide basis with the commenter and any other interested parties under the supervision of the Prado Basin Habitat Sustainability Committee in a collaborative manner. The framework is in place to do so through MM 4.4-3 of the 2010 Peace II EIR. Furthermore, as stated throughout these responses to comments, water diversion evaluations are deferred to a second-tier CEQA evaluation, which will enable further collaboration with CDFW and other agencies where a specific project is being proposed, such that tangible mitigation and adaptive management can be developed. As such proposals are developed, more detailed analyses will be able to incorporate the data from the Upper Santa Ana Watershed HCP and other studies conducted specifically for proposed diversions, enabling a greater range of data from which to develop adaptive management strategies.

- 2-14 This and the following comment summarize activities related to the operations of the Prado Dam that may adversely impact burrowing owl (BUOW) habitat in the Chino Basin. While the OBMPU may affect the amount of water that flows into Prado Dam, the OBMPU as defined does not anticipate capturing additional water behind Prado Dam and raising the reservoir's water level. Accordingly, the DSEIR does not analyze the

impacts of potential inundation behind Prado Dam on BUOW habitat because that is not part of the OBMPU project. With the exception of the proposed storage basins in the OBMPU, the majority of projects will cause minimal disturbance within undeveloped land in the southern portion of the Chino Basin. This does not mean the proposed OBMPU projects will not encounter BUOW, but with implementation of MM **BIO-6** direct adverse impacts to BUOW can be fully mitigated. In order to address cumulative or indirect impacts to BUOW, CDFW may need to assess distribution and constituent elements so that habitat loss affecting this species may also be offset.

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 Inland Empire Utilities Agency
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2-14
 cont'd

areas where flooding and water inundation is not preferred. The primary purpose of Prado Reservoir is flood control for the Santa Ana River Watershed, with water conservation being secondary. CDFW is aware that an agreement between OCWD, the United States Army Corps of Engineers (USACE) and the United States Fish and Wildlife Service was reached in 1993 that allowed for increased water conservation from March through September each year to store up to 26,000 acre-feet of water at elevation 505 feet. In 2006, a subsequent agreement was made to capture additional water behind Prado Dam to store more water from October through February each year by increasing the conservation pool for recharge of groundwater from elevation 494 feet to 498 feet. It is CDFW's understanding that a deviation to the Prado Dam Water Control Plan to increase the flood season water surface elevation of the pool behind Prado Dam from an elevation 498 feet to 505 feet for a period of five years has occurred. More water storage, particularly during winter, may increase the extent of areas subject to inundation, including burrowing owl occupied and/or suitable breeding and wintering habitat.

2-15

Much of the land contained below the 566-foot inundation line behind Prado Dam is intended to accommodate natural open space, wildlife preserves, and crop farming. Within the area previously known as the 'Dairy Preserve', large housing and industrial developments, including the Preserve (City of Chino), as well as, the Ontario Ranch (City of Ontario) have collected development fees over the last two decades to offset impacts to burrowing owls. The CEQA documents for these large planning developments proposed the creation, enhancement, and/or expansion of 300 acres (600 acres total) of high-quality wildlife habitat located generally below the Prado Dam 566-foot inundation line. While CDFW is unclear whether the proposed increase of water storage will affect habitat suitable for burrowing owl, given the past increases of storage to meet stakeholders demands, CDFW would like to have a better understanding of how burrowing owls and their habitat will be monitored and mitigated for over the next 30 years.

Watershed

2-16

Within the OBMPU SEIR Section 4.3 Biological Resources, the "*potential impacts on jurisdictional waters, special-status plant communities, protected trees, special-status plant, and wildlife species (including critical habitat) will be analyzed for each facility as site-specific design has been established. Once a particular facility area of potential effect (APE) is established, a **detailed second-tier evaluation to assure resource impacts are quantified, and site-specific measures are identified. Where none of the biological resource impacts occur in Prado Basin will occur, no further biological resource impact analysis may be necessary (emphasis added).***" Furthermore, Section 4.3.6(a).1 Prado Basin Habitat concluded that for any future surface water diversions, "*mitigation is required to continue the monitoring program and to conduct detailed environmental reviews of future diversion impacts on **Prado Basin habitat prior to approval of such projects (emphasis added).*** Thus, no specific diversion project can be implemented until an appropriate second-tier, public CEQA review is completed".

CDFW is concerned that potential impacts will only be addressed if those impacts will occur within the Prado Basin, even though the project covers the entirety of the Chino Basin. Under Section 15355 of the CEQA Guidelines, cumulative effects refers to "*two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts*". Physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The Lead Agency must determine whether the cumulative impact is significant, as well as whether an individual effect is 'cumulatively considerable'. This means "*the incremental*

2-15 Please refer to response to comment 2-14.

2-16 The commenter misquotes language found on page 4-62 of the DSEIR. The omitted portions of the segment quoted in comment 2-16 are indicated in underline: “Once a particular facility area of potential effect (APE) is established, the following steps will be taken during a detailed second-tier evaluation to assure resource impacts are quantified, and site specific measures are identified; Where none of the biological resource impacts discussed under the 4.3.6(a).1 Conclusion below, will occur, no further biological resource impact analysis may be necessary; Where potentially significant impacts may occur, but specific mitigation outlined under 4.3.7 Avoidance, Minimization, and Mitigation Measures, below, can reduce such impacts to a less than significant level.” This discussion is not intended to indicate that only biological resource impacts in the Prado Basin are analyzed and mitigated by the DSEIR. In fact, the impact conclusion at the end of the section states, “Ultimately, because the Chino Basin contains many areas that may support candidate, sensitive, or special status species, and the specific sites in which future OBMPU facilities will be developed is presently unknown, a significant impact may occur.”

Nevertheless, MM **BIO-25** in the FSEIR has been revised, as follows, to remove any doubt that it should apply to affected sensitive habitat:

BIO-25 Permanent Water Diversion Projects: The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. A second-tier CEQA evaluation shall be conducted for proposed water diversion projects associated with the OBMPU. The potential impacts to Prado Basin and sensitive habitat (for example riparian, wetland, or critical habitat) from implementation of such diversion projects shall receive public review, including pertinent wildlife management agencies and interested parties.

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effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (Guidelines Section 15064(h)(1)).

2-16
 cont'd

The OBMPU SEIR includes storage basin projects that would divert flows that ultimately reach Prado Basin (Project Category 3). Also, groundwater pumping can alter how water moves between an aquifer and a stream, lake, or pond by either intercepting groundwater flow that discharges into the surface-water body under natural conditions, or by increasing the rate of water movement from the surface-water body into an aquifer (e.g., draw down, cone of depression, etc.). Finally, diversion of surface water, recycling of water, and other water manipulation can alter and affect biological resources throughout the watershed. Thus, CDFW strongly encourages IEUA to consider the entire watershed and how the OBMPU will affect vegetation communities and the species that depend on those habitats.

Mitigation

2-17

The SEIR states, "*if the regulatory agencies determine an alternative, equivalent mitigation program during acquisition of regulatory permits, such measure shall be deemed equivalent to the avoidance and minimization measures listed in SEIR Section 4.3.7... no additional environmental documentation shall be required to implement a measure different than the listed avoidance measures*". CEQA requires environmental review of discretionary projects at the earliest *meaningful* stage to analyze and plan for the reduction and/or avoidance of environmental impacts *before* deciding to approve the project(s). While there are often discrepancies between CEQA's mandate for *early* review and its requirement of *detailed* discussions of impacts and mitigation measures, postponing the analysis of impacts to a future date is not appropriate. CEQA Guidelines §15126.4, subdivision (a)(1)(8) states formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after project approval. Courts have also repeatedly not supported conclusions that impacts are mitigatable when essential studies, and therefore impact assessments, are incomplete (*Sundstrom v. County of Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry v. City of Murrietta* (1995) 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc. v. County of Orange* (2005) 131 Cal. App. 4th 777). Therefore, CDFW strongly suggests the SEIR incorporate sufficient, specific, and current biological information on the existing habitat and species at the Project site; measures to minimize and avoid sensitive biological resources; and mitigation measures to offset the loss of native flora and fauna and State waters. The CEQA document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement.

FURTHER COORDINATION

2-18

The CDFW appreciates the opportunity to comment on the SEIR for the OBMPU (State Clearinghouse No. 2020020183) and recommends that the IEUA address the CDFW's comments and concerns.

If you should have any questions pertaining to the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Kim Romich at (909) 980-3818 or at kimberly.romich@wildlife.ca.gov.

- 2-17 Please refer to response to comment 2-8 above. Additionally, this comment appears to suggest that the DSEIR defers mitigation and does not commit to enforceable performance standards. The following responses are provided to demonstrate lack of deferral and commitment to performance standards. Response to comment 1-37 demonstrates that the OBMPU DSEIR does not defer mitigation, and is committed to adhere to stringent performance standards. Furthermore, the specific location of OBMPU facilities is presently unknown and analysis of site specific biological resource impacts can only occur once a site is identified. As such, no one given project has been defined that would require a Lake or Streambed Alteration Agreement (LSAA) at this time; once a proposal for a given project is defined, an analysis as to whether a second-tier environmental document would be required. If a LSAA is required, that second-tier environmental document would be used to satisfy the environmental review necessary for the LSAA.
- 2-18 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The contact information provided in this comment will be retained in the project file.

Ms. Sylvie Lee
Optimum Basin Management Program Update (SCH 2020020183)
Inland Empire Utilities Agency
Page 8 of 8

Sincerely,
DocuSigned by:

Patricia Moyer
Scott Wilson

Patricia Moyer

Environmental Program Manager

cc: Office of Planning and Research, State Clearinghouse, Sacramento
ec: HCPB CEQA Coordinator



May 11, 2020

Sylvia Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Delivered via email to Sylvia Lee, slee@ieua.org

Comments on Draft March 2020 Subsequent Environmental Impact Report for the Chino Basin Optimum Basin Management Program Update

Dear Ms. Lee,

3-1 Monte Vista Water District (District) appreciates this opportunity to provide comments on the Draft Subsequent Environmental Impact Report (SEIR) regarding the proposed Optimum Basin Management Plan Update (OBMPU).

1. **The District opposes the portion of the proposed OBMPU project that removes 25,000 acre-feet per year of production from Management Zone 1 of the Chino Basin.**

3-2 The Chino Basin Judgment includes a Court-ordered adherence to a “Physical Solution” that provides for “the maximum reasonable beneficial use of the waters of Chino Basin...to meet the requirements of water users having rights in...Chino Basin.” The Judgment further clarifies this provision: “A fundamental premise of the Physical Solution is that all water users dependent upon the Chino Basin be allowed to pump sufficient waters from the Basin to meet their requirements.” (§39, 42)

The Draft SEIR proposes a project that is inconsistent with the Physical Solution. The proposed project seeks to “relocate up to 25,000 afy of pumping from [Management Zone 1]” (page 3-26 and elsewhere). This proposed relocation of production out of Management Zone 1 of the Chino Basin would directly impact the ability of the District and other Judgment parties who produce groundwater from Management Zone 1 to “pump sufficient waters from the Basin to meet their requirements.”

W a t e r D i s t r i c t

10575 Central Avenue, Post Office Box 71 • Montclair, CA 91763 • (909) 624-0035 • FAX (909) 624-4725 • www.mvwd.org

Sandra S. Rose
PRESIDENT

G. Michael Milhiser
VICE PRESIDENT

Manny Martinez
DIRECTOR / BOARD AUDITOR

Philip L. Erwin
DIRECTOR

Tony Lopez
DIRECTOR

**RESPONSE TO COMMENT
LETTER #3
MONTE VISTA WATER DISTRICT**

- 3-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 3-2 Monte Vista Water District (District) is focusing on a single aspect of the OBMPU and Watermaster's program to manage subsidence in Management Zone 1 (MZ-1) of the Chino Basin. The whole of the text discussing the subsidence in MZ-1 states: *A potential recommendation of the Subsidence Management Plan for Northwest MZ-1 is conducting wet-water and/or in-lieu recharge methods that will result in a net increase in recharge. Interim work performed in Northwest MZ-1 to support the development of a subsidence management plan for this area suggests that land subsidence could be reduced or abated if recharge in Northwest MZ-1 is increased by at least 20,000 afy, pumping is decreased by at least 20,000 afy, or some combination of both totaling about 20,000 afy. Exhibit 13 is a time-series chart of groundwater pumping, wet-water recharge, and land subsidence (represented as negative vertical ground motion) in Northwest MZ-1 from 1978-2019. Recent pumping in Northwest MZ-1 has decreased significantly: 2017-2019 pumping averaged about 12,000 afy compared to about 19,000 afy since the implementation of the OBMP (2001-2016), a reduction of about 7,000 afy. The reduced pumping is mainly due to water quality issues. Additionally, recent wet-water recharge in Northwest MZ-1 has increased: 2017-2019 recharge averaged about 15,000 afy compared to about 9,000 afy since the implementation of the OBMP (2001-2016), an increase of about 6,000 afy. Exhibit 13 shows that these recent decreases in pumping and increases in recharge, totaling about 13,000 afy, appear to coincide with reduced rates of land subsidence in Northwest MZ-1. This suggests that reduced pumping and/or increased recharge can abate land subsidence in Northwest MZ-1. If the Subsidence Management Plan for Northwest MZ-1 recommends a combination of reduced pumping and wet-water recharge to abate ongoing land subsidence, the pumpers in this area who elect to reduce pumping in accordance with the plan may have difficulty in fully utilizing their water rights with existing infrastructure.*

Under the OBMPU, facilities may be needed to: (1) relocate pumping from Northwest MZ-1 to MZ-2 and/or MZ-3, (2) replace some of their pumping with surface or recycled water as a form of in-lieu recharge, (3) facilitate increased wet-water recharge, or (4) a combination of some or all of the above. The operation of these facilities would result in increased groundwater levels that would impact the state of Hydraulic Control; thus, facilities and operations would be needed to ensure that Hydraulic Control is maintained.

Comment 3-2 touches on some of the complexity of maintaining the delicate balance between pumping rights and potential MPI effects. The District's position is clearly stated in the comment, but it will require a balanced approach based on pumping relocation, use of surface or recycled water, and increased wet water recharge to prevent further subsidence in MZ-1. In this process it may be necessary to use a wider concept than just pumping locally from MZ-1 to meet the District's water supply obligations. What is clear is that additional facilities as identified in the Project Description will be needed in the future to achieve the balance between water rights and potential MPI. By evaluating these facilities in the OBMPU DSEIR Watermaster, the

District and other groundwater producers in MZ-1 can proceed to quickly implement the future mutually agreed upon solution.

2. The District requests that the SEIR include an alternative project that focuses on Chino Basin storage management.

3-3

The SEIR states that “based on the integrated nature of the OBMPU programs, reducing its scope relative to the proposed project is not considered to be a ‘feasible’ alternative” (page 1-12). The District does not believe this to be the case. The District requests that the SEIR include an alternative project limited only to the storage management portions of the OBMPU project, consistent with Chino Basin Watermaster’s 2019 Storage Framework Investigation. The SEIR should study this alternative project to ensure that storage management may move forward regardless of the fate of the remaining portions of the OBMPU project scope.

3-4

The District respectfully requests that the lead agency revise the Draft SEIR to address the above comments and then recirculate the revised SEIR for additional public review and comment.

Thank you for the opportunity to provide comments on the proposed document. If there are any questions, please feel free to contact me at (909) 267-2125 or jscottcoe@mvwd.org.

Sincerely,

Monte Vista Water District



Justin M. Scott-Coe
General Manager

cc: Monte Vista Water District Board of Directors

- 3-3 The CEQA Guidelines require that a lead agency identify any alternatives that were considered but rejected during the scoping process and to briefly explain the reasons underlying the lead agency's decision. "Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts." (CEQA Guidelines §15126.6(c)).

The DSEIR identified a "Reducing the Project Scope" alternative in its alternatives scoping process (DSEIR, pg. 5-2) but declined to discuss this alternative in depth in the DSEIR because the OBMPU "consists of a complex, complicated and integrated program that incorporates a mix of projects and operations that are designed to meet the primary re-stated objectives of the OBMPU to meet sustainable and sufficient water supply through 2050. Although minor tweaks or modifications to the OBMPU are likely to occur over the next 30 years, no major changes in the program have been identified at this stage that can be implemented without harming its ability to meet the essential program objective of increasing water supply in a sustainable manner." (DSEIR, pg. 5-3). The text in the paragraph above has been amended in the FSEIR to state, "Although minor tweaks or modifications to the OBMPU are likely to occur over the next 30 years, no major changes in the program have been identified at this stage that can be implemented without harming its ability to meet each of the essential OBMPU program objectives."

The commenter disagrees that a reduced project alternative would be infeasible and requests that the FSEIR analyze an alternative "limited only to the storage management portions of the OBMPU project, consistent with Chino Basin Watermaster's 2019 Storage Framework Investigation." The DSEIR incorporates the 2019 Storage Framework Investigation as part of the project description (DSEIR, pgs. 3-39 through 3-42). As discussed in the DSEIR, a number of new facilities and improvements to existing facilities would be required to achieve what the DSEIR analyzes with respect to the 2019 Storage Framework Investigation. This alternative would not include portions of the OBMPU project, including but not limited to the surface water storage basins described in the DSEIR at pgs. 3-19 through 3-21. By removing project elements, however, this reduced project alternative would violate the social and policy goals that underlie the OBMPU itself.

In response to the commenter and a comment received from the City of Ontario, a "Storage Management Plan-only" (SMP) alternative has been added to Chapter 5 of the FSEIR.

- 3-4 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Based on a review of the comments received and the responses to them, IEUA after conferring with the Watermaster does not intend to separate the storage management project from the OBMPU, nor is there a plan to recirculate the OBMPU DSEIR.



Comment Letter #4

Department of Public Works

- Flood Control
- Operations
- Solid Waste Management
- Surveyor
- Transportation

www.SBCounty.gov

Brendon Biggs, M.S., P.E.
Interim Director

May 11, 2020

File: 10(ENV)-4.01

Sylvie Lee, P.E.,
Inland Empire Utilities Agency,
6075 Kimball Avenue,
Chino, CA 91708
Email: Slee@ieua.org

Transmitted Via Email

RE: CEQA NOTICE OF COMPLETION OF A DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT FOR THE CHINO BASIN WATERMASTER OPTIMUM BASIN MANAGEMENT PROGRAM PROJECT

Dear Ms. Lee:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on April 1, 2020** and pursuant to our review, the following comments are provided:

Flood Control Planning and Water Resources Division (Michael Fam, Chief, 909-387-8120):

1. From the information that was provided, it appears that the project proponent proposes to revise the existing Facility Master Plan in order to make facility improvements needed to meet IEUA's long-term planning objectives. Any revision to the drainage should be reviewed and approved by the jurisdictional agency in which the revision occurs. The need for any changes and their impacts should be addressed in the EIR prior to adoption and certification by the Lead Agency. The project is subject to the following District Comprehensive Storm Drain Plans (CSDP) and Master Plans of Drainage (MPD):

- | | | |
|------------------------|--------------------|--------------------|
| • CSDP 1 | • Ontario MPD | • W. Cucamonga MPD |
| • Chino Airport MSDP | • Montclair MPD | • Upland MPD |
| • Chino Hills Area MPD | • Rancho Cucamonga | • Chino Hills MPD |
| • CSDP 2 | • Chino MPD | |

2. According to the most recent FEMA Flood Insurance Rate Maps (FIRM), Panels 06071C7915H, 7920H, 8600H, 8605H, 8606H, 8607H, 8608H, 8615H, 8616H, 8620H, 8629H, 8638H, 8643H, 8644H, 8651H, 8652H, 8654H, 8656H, 8657H, 8658H, 8659H, 8665H, 8666H, 8667H, 9330H, 9335H, 9345H, 9375H, dated August 28, 2008; 7895J, 8634J, 8635J, 8642J, dated September 26, 2014; 8609J, 8617J, 8628J, 8630J, dated February 18, 2015; 7870J, 7890J, 8633J, 8637J, 8639J, 8641J, 8653J, dated September 2, 2016; the proposed site lies within Zones A, AE, AH, AO, D, X-shaded (500-yr. floodplain), X-unshaded, and the Regulatory Floodway.

**RESPONSE TO COMMENT
LETTER #4
SAN BERNARDINO COUNTY DEPARTMENT OF PUBLIC WORKS**

- 4-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. Note that this project is being processed by IEUA as the lead agency on behalf of Watermaster; as such, the assumption made in this comment that the project proposes to revise the existing IEUA Facility Master Plan is incorrect. The project provides an update to the OBMP, revised as the OBMPU, which will meet the long-term planning objectives of in managing the Chino Groundwater Basin, not IEUA in particular. IEUA understands that the OBMPU encompasses an area containing multiple MDPs and CSDPs. The DSEIR evaluated impacts to flood control facilities under Hydrology and Water Quality (Subchapter 4.7), and in Utilities and Service Systems (DSEIR Subchapter 4.9 and IS). Mitigation has been identified in the DSEIR to ensure that either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur (Mitigation Measure [MM] **HYD-13**). This measure will require the drainage plans to be developed in accordance with applicable regulations and requirements for the County and/or the City in which a given facility would be located, which will ensure that future OBMPU facilities meet the requirements of the County Department of Public Works (Flood Control). Additionally, MM **HYD-16** requires the Implementing Agency for a given recharge or stormwater retention basin to create a management plan established to the satisfaction of the appropriate County Flood Control. As such, the analysis contained in the DSEIR and further discussed herein demonstrates that impacts to County Flood Control facilities are contemplated and mitigated to the greatest extent feasible given the undefined nature of the location and scope of projects proposed as part of the OBMPU.
- 4-2 The DSEIR included all of the FEMA panels for the whole Chino Basin and all FEMA regulations will be observed in accordance with the type of project that will be implemented. IEUA hereby incorporates the additional FEMA panels listed within this comment that were not included as part of the DSEIR on page 4-159 by reference.

Permits/Operations Support Division (Melissa Walker, Chief, 909-387-7995):

4-3

1. The Project involves use of San Bernardino County Flood Control District (SBCFCD) right-of-way and facilities. Any new or altered activities on the District's right-of-way or facilities, will require a permit from the SBCFCD prior to start of construction and may require amendments to existing agreements between the SBCFCD and local water agencies. Also, SBCFCD facilities built by the Army Corps of Engineers (ACOE) will require the SBCFCD to obtain approval (408-Permit) from the ACOE. The necessity for any, or all of these permits, and any impacts associated with them, should be addressed in the DEIR prior to adoption and certification.

4-4

2. The proposed recommendations include potential conversion of the Lower Cucamonga Creek Basins (SBCFCD System Number 1-310-2A) and Riverside Basin (SBCFCD System Number 1-604-4) into a multipurpose facility that would temporary store storm water. Operations Support is in concurrence with Mitigation Measure HYD-16. If there are any modification required for the Cucamonga Creek Channel (SBCFCD Number 1-310-1H), this system conveys flows from each basin and is under the co-jurisdiction of the United States Army Corps of Engineers (USACE) and may require permits from the USACE.

4-5

3. Page 4-208, Section HYD-16, correct the first sentence to read, "...SBCFCD, RCFCD, and/or Division of Safety...."

4-6

4. Section 3.4.3.2 Program Element 2. Develop and Implement Comprehensive Recharge Program and Section 3.4.3.2.3 OBMPU Project Description - The recommended recharge program outlined for the Lower Cucamonga Creek Basins and Riverside Basins, may require an Amendment to original Agreement 03-0083 (Between IEUA, CBWC, SBCFCD, & CBWM), and approval from the San Bernardino County Board of Supervisor acting as the governing body of the SBCFCD, since Lower Cucamonga Creek Basin and Riverside Basin were not included in the original Agreement 03-0083 or the Memorandum of Agreement that was included as part of Agreement 03-0083.

4-7

5. The Watermaster's Diversion Permits Number 19895 and 20753 with the Stater Water Resources Board do not include Lower Cucamonga Creek Basins or Riverside Basins, these permits MAY need to be updated with the State Water Resources Board.

4-8

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

Michael Perry

Michael R. Perry
Supervising Planner
Environmental Management

- 4-3 Please refer to response to comment 4-2, which addresses mitigation identified in the DSEIR related to drainage and flood control management. Prior to any activities on SBCFCD right-of-way, the SBCFCD will be contacted and permit applications will be submitted for processing and permits acquired for the proposed activities; additionally, should a given project require a United States ACOE 408 permit, permit applications will be submitted for processing and permits will be acquired where appropriate. Regulatory permits related to discharge of fill or streambed alteration are addressed under Subchapter 4.3, Biological Resources; MM **BIO-3** will require minimization of impacts from any future project that must discharge fill into a channel or otherwise alter a streambed through requiring that impacts are minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. As stated above, the analysis contained in the DSEIR and further discussed herein demonstrates that impacts to SBCFCD facilities and that would require USACOE permits are contemplated and mitigated to the greatest extent feasible given the undefined nature of the location and scope of projects proposed as part of the OBMPU.
- 4-4 IEUA and Watermaster understand that any modifications required for the Cucamonga Creek Channel may require permits from the USACOE, and any USACOE permit applications will be submitted for processing and permits will be acquired if appropriate.
- 4-5 IEUA has amended the FSEIR to address the correction provided in this comment such that MM **HYD-16** will be altered as follows:

HYD-16: *Prior to implementation of any recharge or stormwater retention basin projects as either existing or new basins, a management plan will be established to the satisfaction of SBCFCD, RCFCD ~~Division of Safety of Dams (DSOD), and/or Division of Safety.~~ This plan shall be created specifically for each individual basin to ensure the safety of surrounding property and people from undue risks associated with water-related hazards (i.e. flooding). The management plan will firmly establish a priority of flood-control functions over and above recharge or retention-related operations. Weather forecasts of upcoming storm events will be carefully monitored and in the event of a significant forecasted storm-event, water deliveries the basins will be ceased until further notice is received from SBCFCD or RCFCD that it is safe for deliveries to resume. Additionally, each SBCFCD or RCFCD basin will have a specific management plan developed, so as to coordinate flood control with surface water recharge or retention. This mitigation measure will ensure that people and property are not subject to additional risk associated with water-related hazards in the Basin, and will allow SBCFCD or RCFCD to make full utilization of the basin's flood control capacity in the event of a storm.*

- 4-6 IEUA and Watermaster understand that the recommended recharge program outlined for the Lower Cucamonga Creek Basins and Riverside Basins may require an Amendment to original Agreement, and approval from the San Bernardino County Board of Supervisor on behalf of the SBCFCD. Additionally, IEUA and Watermaster understand that any Amendments must be submitted to, renewed by, and approved by the SBCFCD before such a project can be considered at the Lower Cucamonga Creek and Riverside Basins.
- 4-7 As stated under response to comment 4-6, IEUA and Watermaster understand that the Watermaster's Diversion Permits with the State Water Resources Control Board (SWRCB) do not include Lower Cucamonga Creek Basins or Riverside Basins, and as such the permits thereof may need to be updated. Should these permits require updating, SWRCB permit applications will be submitted for processing and permits will

be acquired or amended as appropriate before a project can be considered at the Lower Cucamonga Creek and Riverside Basins.

- 4-8 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. IEUA will include the SBCFCD the circulation list for all future project notices, public reviews, and public hearings.

DIRECTORS

DENIS R. BILODEAU, P.E.
JORDAN BRANDMAN
CATHY GREEN
DINA L. NGUYEN, ESQ.
KELLY E. ROWE, C.E.G., C.H.
VICENTE SARMIENTO, ESQ.
STEPHEN R. SHELDON
TRI TA
ROGER C. YOH, P.E.
AHMAD ZAHRA



Comment Letter #5
ORANGE COUNTY WATER DISTRICT

ORANGE COUNTY'S GROUNDWATER AUTHORITY

OFFICERS

President
VICENTE SARMIENTO, ESQ.
First Vice President
CATHY GREEN
Second Vice President
STEPHEN R. SHELDON
General Manager
MICHAEL R. MARKUS, P.E., D.WRE

May 11, 2020

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino CA, 91708

Subject: OCWD Comments on Draft SEIR for Chino Basin Watermaster OBMP Update, SCH#2020020183

Dear Ms. ^{Sylvie} Lee:

5-1

The Orange County Water District (OCWD) appreciates the opportunity to comment on the Draft Subsequent Environmental Impact Report (Draft SEIR) (SCH 2020020183) for projects proposed in the Chino Basin Optimum Basin Management Program Update (OBMPU).

5-2

OCWD is a special district formed in 1933 by an act of the California Legislature. The District manages the groundwater basin that underlies north and central Orange County. Water produced from the basin is the primary water supply for approximately 2.5 million residents living within the District's boundaries. OCWD also owns more than 2,000 acres of land in the Prado Basin and is keenly interested in projects that may affect the Prado Basin.

By virtue of its statutory authority and its extensive activities in Prado Basin, including water conservation/stormwater capture and operation of constructed wetlands to enhance Santa Ana River water quality, OCWD is particularly sensitive to environmental values and natural resources in Prado Basin.

5-3

As stated in OCWD's comment letter submitted for the Notice of Preparation of the OBMPU dated March 6, 2020, "the distribution of riparian vegetation and wetlands in Prado Basin and the occurrence of shallow groundwater and groundwater discharge to the ground surface (commonly referred to a 'rising groundwater' or 'groundwater seepage') are typical of a Groundwater Dependent Ecosystem (GDE)." The CA Department of Water Resources (DWR) defines a GDE as an "ecological community or species that is dependent on groundwater emerging from aquifers or on groundwater occurring near the ground surface". Given the habitat in Prado Basin's dependence on surface water and on the year-round

**RESPONSE TO COMMENT
LETTER #5
ORANGE COUNTY WATER DISTRICT**

- 5-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 5-2 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The contributions of the Orange County Water District (OCWD or District) to environmental values and natural resources in Prado Basin is recognized by IEUA and the Watermaster.
- 5-3 First, OCWD's interpretation of the findings in the biology section and MM **BIO-25** is correct. For a variety of reasons, including lack of specific diversion proposals, and the related inability to model the diversion effects on surface water flows and rising groundwater volumes as a result of this lack of specific proposals, a decision was made to defer evaluation of diversions to the future when sufficient information is available to conduct a meaningful evaluation. This approach is consistent with Section 15152 of the State CEQA Guidelines. IEUA also believes that, once the EIR/EIS addressing the Upper Santa Ana Watershed Habitat Conservation Plan becomes available (nearing completion by the San Bernardino Valley Municipal Water District), it will be possible to better understand the cumulative effects on the Prado Basin GDE. Please refer to response to comment 1-6 which further confirms IEUA and Watermaster's commitment to fully address effects on Prado Basin GDE resources when sufficient information is available, as described above.

5-3
cont'd

availability of shallow groundwater, the Final SEIR should evaluate and address the vital linkage between the hydrologic conditions and biological impacts from projects in the OBMPU. As an example, embedded in the OBMPU are proposed projects to build diversions structures, storage basins and booster pump stations on Chino, Lower Cucamonga and Mill Creeks. These projects propose to divert and capture stormwater and dry-weather flows. OCWD understands and recognizes that future diversion projects within the OBMPU will undergo a Second Tier CEQA evaluation once these specific projects are identified. OCWD assumes that the diversions covered under Mitigation Measure BIO-25 will include all dry-weather flow diversions, decreased discharge of recycled water, and stormwater capture or diversions projects. If this is not an accurate interpretation of Mitigation Measure BIO-25, it should be clarified in the Final SEIR.

5-4

Pursuant to the execution of the Peace II agreement in 2007, Chino Basin Watermaster (CBWM) and Inland Empire Utilities Agency (IEUA) formed the Prado Basin Habitat Sustainability Committee (PBHSC), of which OCWD is a participating member. As mentioned on page 4-63 of the Draft SEIR, "[t]he monitoring itself is not considered mitigation, but the commitment of Watermaster to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) serves as the mitigation to offset such damage or loss of Prado Basin Habitat". Whereas OCWD recognizes the value and function of the monitoring component in the Prado Basin Habitat Sustainability Program, the program has not established thresholds to identify at what level of impact the impact is determined to be significant and therefore requires mitigation. Although an EIR can permissibly defer the identification of project-specific mitigation measures where the mitigative effect of such measures can be reasonably assured, the Draft SEIR does not identify specific mitigation measures nor does it identify guidelines or criteria for any future project-specific mitigation measures that would ensure that significant impacts related to damage or loss of Prado Basin habitat or biological resources would not occur. As it is stated in the Draft EIR that the monitoring conducted by the PBHSC is not a form of mitigation, the Final SEIR should define what criteria are used to define when impacts to biological resources such as riparian habitat have occurred. The Final SEIR should also identify measures that could be implemented to provide reasonable assurance that significant environmental impacts associated with the loss of habitat will not occur.

5-5

The hydrological modeling used in the Draft SEIR was conducted using a 10-year model using 3 take, 3 hold and 4 put years. This hydrological model depicts future groundwater conditions under various scenarios by changing the volumes of puts and takes to reflect likely hydrologic outcomes. The model uses the 10-year average of the 123-year annual average precipitation. Exhibit 4.7-1 in the Draft SEIR shows that weather patterns in the Chino Basin can have long term trends that deviate from the average. It is common to have dry and wet periods last much longer than 10 years. Global climate change adds an

- 5-4 When monitoring began in Prado Basin, IEUA and Watermaster more or less assumed that as the PBHSC the data accumulated, any member of the Committee that identified a measurable change in Prado Basin habitat could bring it to the attention of the Committee as a potential significant impact. There are several regulatory agencies (CDFW and USFWS), and OCWD, that review the data and have the knowledge to raise such a concern. Essentially this has been an *ad hoc* method of identifying “significant change.” However, when the EIR/EIS addressing the Upper Santa Ana Watershed Habitat Conservation Plan (HCP) is published with its more extensive database on sensitive species, it should be possible to address the cumulative causes of changes to Prado Basin. Perhaps this is the proper time to use the PBHSC or an alternative working group to develop thresholds of significance for change in Prado and plausible alternative adaptive management plans that can coincide with the approval process for the HP. In the meantime, IEUA and Watermaster recommend relying on the existing PBHSC process to identify issues of concern. Additionally, as discussed under response to comment 1-6, MM **BIO-25** requires further CEQA evaluation of specific diversion proposals when they are defined in sufficient detail to allow an evaluation, which would enable enforceable mitigation to protect Prado Basin habitat to be developed and implemented as it applies to a specific project.
- 5-5 This comment focuses on assumptions used to model future proposed OBMPU diversion projects. The arguments for examining longer drought periods as part of the modeling effort reflects the consensus of scientists regarding global warming effects on California’s future climate. A commitment to a specific length of drought for use in the model would be inappropriate for the OBMPU, but Watermaster can work with WEI or other agencies, including OCWD, to define appropriate future lengths of drought to include in future modeling efforts for diversion projects.

5-5
cont'd

additional level of uncertainty to assessing future conditions, since scientific publications suggest future weather cycles could exhibit more extreme conditions compared to historic observed conditions. Long-term droughts are one of the conditions that can have large negative impacts on the availability of water to support riparian vegetation in Prado Basin. For Second Tier CEQA evaluations that are conducted for diversion projects, the analyses should account for long-term droughts that can occur in the future.

5-6

Mitigation Measure BIO-7 states "Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP." Please confirm that this will include the Upper Santa Ana River Habitat Conservation Plan that is being developed by the Upper Santa Ana River Sustainable Resources Alliance.

5-7

Page 4-75 of the Draft SEIR states "Because the specific locations for future OBMPU Projects are not presently known, there is a potential that a future OBMPU facility may be developed in an area containing significant biological resources that cannot be avoided. Though substantial mitigation is provided to minimize impacts under most circumstances for future OBMPU facilities, no feasible mitigation exists to completely avoid impacts to biological resources within the Chino Basin. Thus, the proposed Project is forecast to cause significant unavoidable adverse impacts to biological resources." OCWD assumes that this text in the Draft SEIR does not refer to impacts to riparian vegetation due to decreased availability of water to support healthy riparian habitat. Decreased availability of water for riparian habitat and subsequent adverse impacts on riparian habitat could occur through a decrease in available surface water or a greater depth to groundwater or a combination of these two factors. We assume that this text in the Draft SEIR refers to impacts caused by construction itself, such as physical removal of vegetation to construct a project. Please clarify if this text in the Draft SEIR relates to impacts such as removal of vegetation as part of construction of facilities and does not refer to impacts on riparian vegetation caused by decreased availability of water.

5-8

As a point of clarity OCWD would like the Final SEIR to more precisely define Appendix 1. Appendix 1 is titled 'List of Pools'. Page 2 of Appendix 1 then appears to list the Chair and Vice Chair and other persons who are members of the Agricultural Pool Committee. Please clarify if this list on Page 2 is intended to identify members of the Agricultural Pool or members of the Agricultural Pool Committee. OCWD is also a member of the Agricultural Pool, as specified by the Judgment entered in Chino Basin Municipal Water District v. City of Chino, et al., San Bernardino Superior Court, Case No. RCVRS 51010 (formerly Case No. 164327) as Restated.

- 5-6 This comment is somewhat vague and appears to request that IEUA include MM **BIO-7** as a measure in another environmental document. This measure is specific to OBMPU projects, not other projects that IEUA may implement under a different environmental document or project approval process. IEUA believes it should leave identification of mitigation under the HCP to the Valley District, and any projects implemented under that program/document would comply with those requirements.
- 5-7 As originally envisioned, the significance finding for biological resources was intended to encompass both direct impacts from construction activities and potential impacts from water diversions. As the analysis continued and it became clear that a specific scenario for water diversions was not available, the decision to include MM **BIO-25** removed future proposed diversions from the biological resources finding of significance. The actual significance determination for diversions will be made after a second-tier environmental document is completed.
- 5-8 IEUA acknowledges that OCWF is a member of the Agricultural Pool; the referenced list in Appendix 2 is referencing members of the Agricultural Pool Committee.

Ms. Sylvie Lee, P.E.

May 11, 2020

Page 4 of 4

5-9

Because of OCWD's extensive activities in Prado Basin, we request that IEUA continue to provide notification to OCWD for all projects and their related CEQA analysis that have the potential to impact the Prado Basin and its groundwater dependent habitat.

If you have any questions, please contact Kevin O'Toole at (714) 378-8248 or kotoole@ocwd.com.

Sincerely,

A handwritten signature in blue ink, appearing to be 'M. Markus', with a stylized flourish at the end.

Michael R. Markus, P.E., D.WRE, BCEE, F.ASCE
General Manager

- 5-9 OCWD can count on continuing to receive notification of any projects under IEUA jurisdiction and under the OBMPU. The point of contact is noted and Mr. Kevin O'Toole will be notified of such projects.

Comment Letter #6

JASON E. UHLEY
General Manager-Chief Engineer



1995 MARKET STREET
RIVERSIDE, CA 92501
951.955.1200
FAX 951.788.9965
www.rcflood.org

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

May 11, 2020

Emailed this date to: Slee@ieua.org

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Dear Ms. Lee:

Re: Notice of Availability of a Draft Subsequent
Environmental Impact Report for the
Chino Basin Watermaster Optimum Basin
Management Program Update

6-1

This letter is written in response to the Notice of Availability of a Draft Subsequent Environmental Impact Report (DSEIR) received by the Riverside County Flood Control and Water Conservation District (District). The Inland Empire Utilities Agency (IEUA) has prepared a DSEIR for the proposed Optimum Basin Management Program Update (OBMPU) describing facility improvements and activities of the Chino Basin Watermaster (CBWM). IEUA is the Lead Agency for this project under the California Environmental Quality Act (CEQA) and has prepared this document on behalf of the CBWM. The District is tasked with effectively managing flood hazards to protect life and property within western Riverside County.

6-2

The District has reviewed the DSEIR provided and has the following comments regarding this project:

1. Please be advised that the proposed project is located within multiple District Master Drainage Plans (MDP). When fully implemented, these MDP facilities will provide adequate drainage and flood protection within the MDP area. The District's MDP facility maps can be viewed online at: <http://content.rcflood.org/MDPADP/>. The proposed project facilities should be designed and constructed in a manner to avoid conflicts with the MDP facilities. To obtain further information on the MDP and proposed facilities, please contact Mike Wong of the District's Planning Section at 951.955.1345.

6-3

2. The proposed project may impact existing District facilities and rights of way. Any work that involves District rights of way, easements, or facilities will require an encroachment permit from the District. Therefore, the District will likely be a CEQA Responsible Agency, and any potential impacts to District facilities should be considered in the DSEIR. To obtain further information on District encroachment permits and to find an application form, please refer to <https://rcflood.org/I-Want-To/Services/Obtain-Encroachment-or-Access-Permit>, or contact the District at 951.955.1200 and speak with encroachment permit staff to help confirm permit requirements.

6-4

Thank you for the opportunity to review this DSEIR. If you have any questions or require additional information regarding the comments on this letter, please contact Sean Berriman at 951.955.1242 or me at 951.955.1306.

Very truly yours,

RANDY SHEPPEARD
Senior Flood Control Planner

SB:mcv
P8\231170

**RESPONSE TO COMMENT
LETTER #6
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

- 6-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The District is correct that IEUA is the Lead Agency on behalf of the Watermaster, and IEUA understands the District's role within western Riverside County, within in which the Chino Basin is partially located.
- 6-2 IEUA understands that the OBMPU encompasses an area containing multiple MDPs. Prior to any activities within District MDPs, the District will be contacted to ensure that design of future OBMPU facilities avoid conflicts with MDP facilities, and to ensure that should any conflicts occur, equal or greater drainage and flood protection are installed that meet District requirements.
- 6-3 Prior to any activities on County Flood Control and Water Conservation District right-of-way, the District will be contacted and permit applications will be submitted for processing and permits acquired for the proposed activities. The DSEIR evaluated impacts to flood control facilities under Hydrology and Water Quality (Subchapter 4.7), and in Utilities and Service Systems (DSEIR Subchapter 4.9 and IS). Mitigation has been identified in the DSEIR to ensure that either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur (MM **HYD-13**). This measure will require the drainage plans to be developed in accordance with applicable regulations and requirements for the County and/or the City in which a given facility would be located, which will ensure that future OBMPU facilities meet the requirements of the County Flood Control and Water Conservation District. Additionally, MM **HYD-16** requires the Implementing Agency for a given recharge or stormwater retention basin to create a management plan established to the satisfaction of the appropriate County Flood Control District. As such, the analysis contained in the DSEIR and further discussed herein demonstrates that impacts to District facilities are contemplated and mitigated to the greatest extent feasible given the undefined nature of the location and scope of many projects proposed as part of the OBMPU.
- 6-4 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project, and the contact information provided will be retained in the project file.

XAVIER BECERRA
Attorney General

Comment Letter #7

State of California
DEPARTMENT OF JUSTICE

300 SOUTH SPRING STREET, SUITE 1702
LOS ANGELES, CA 90013

Public: (213) 269-6000
Telephone: (213) 269-6359
Facsimile: (213) 897-2802
E-Mail: Carol.Boyd@doj.ca.gov

May 11, 2020

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Attn.: Ms. Sylvie Lee, P.E.
slee@ieua.org

Via Electronic and U.S. Mail

RE: Chino Basin Optimum Basin Management Program Update
Comments on Draft Subsequent Environmental Impact Report

Dear Ms. Lee:

7-1

The Inland Empire Utilities Agency (IEUA), as Lead Agency, has prepared a Draft Subsequent Environmental Impact Report (DSEIR) that summarizes the potential environmental effects associated with the implementation of projects identified in Chino Basin Watermaster's Optimum Basin Management Program Update (OBMPU). We respectfully submit the following comments on the DSEIR in the document's chronological order:

7-2

The California Institution for Men

Page x of the DSEIR, listing Abbreviations and Acronyms, and various parts of the document (although not all occurrences), misidentifies "CIM" as "Chino Institute for Men" or "California Institute for Men." The correct term is "California Institution for Men."

7-3

The 2020 Storage Management Plan

Page 3-41 of the DSEIR, discussing the 2020 SMP, identifies the need for Watermaster to "periodically review and update the SMP ... at least five years before the aggregate amount of managed storage by the Parties is projected to fall below 340,000 af." This summary of the SMP lacks important context for the 340,000 af threshold, which was established because impacts to the basin (e.g., subsidence induced by groundwater withdrawal, loss of pumping sustainability caused by groundwater withdrawal, etc.) due to a reduction of existing managed storage below this threshold have not been evaluated. As of the date of these comments, Watermaster has not approved the 2020 SMP or any implementation plan for storage management. Given that the SMP, even after being adopted, may be modified in the future, we request that such potentially significant impacts and any other MPI resulting from the aggregate amount of managed storage by the Parties falling below 340,000 af be identified as a potentially significant impact. Mitigation measures to address such potentially significant impacts should include, at a

**RESPONSE TO COMMENT
LETTER #7
STATE OF CALIFORNIA DEPARTMENT OF JUSTICE**

- 7-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.
- 7-2 Your comment is noted and all instances in the DSEIR in which Chino Institute for Men or CIM are utilized have been corrected in the FSEIR with the correct term: California Institute for Men (CIM).
- 7-3 The commenter is correct as to how the 340,000 af threshold was established. This seems like a simple enough request that can be accommodated in the document. The 2020 SMP includes the requested analysis of MPI in comment items (a) through (c), and as such can be mitigated through implementation of MMs **HYD-1** through **HYD-11** (refer to pages 4-197 through 4-201 of the DSEIR). These measures will ensure that Watermaster will utilize the Basin model to form a basis from which to determine (1) whether future OBMPU projects would result in: (a) loss of pumping sustainability, (b) subsidence, (c) potential reduction in net recharge and impacts to Safe Yield, (d) potential adverse impacts to Hydraulic Control, and/or (e) potential degradation of water quality, and (2) enable Watermaster and the Implementing Agency for a given project to respond with appropriate mitigation based on utilization of the model.

7-3
cont'd

minimum, requirements for Watermaster to (a) conduct an MPI analysis at least five years before the aggregate amount of managed storage by the Parties is projected to fall below 340,000 af; (b) prepare a report that describes its analysis and conclusions regarding potential MPI to the basin; and (c) develop and implement measures to mitigate MPI caused by removal of managed storage below the 340,000 af threshold.

Use of CIM Property

Page 3-58 of the DSEIR identifies a potential project for a new diversion structure, booster pump stations, pipelines and storage basin at CIM. According to the DSEIR, “the new storage basin...could have an estimated area between 50 and 100 acres, although its capacity and the amount of surface water diverted is unknown at this time. The proposed new storage basin will require conveyance facilities that include up to 60,000 linear feet of pipelines and presently an unknown number, locations and capacities of booster pump stations, basins and related appurtenances.”

7-4

The California Department of Corrections and Rehabilitation (CDCR) recognizes that the DSEIR is a Program Level Environmental Impact Report and not an approval document to construct a storage basin, conveyance facilities, booster pump stations, and associated pipelines at CIM. However, CDCR is not aware of such a project and has not been approached to discuss such a project. A storage basin of this magnitude would require another Tier of California Environmental Quality Act analysis, and CDCR has general concerns with any proposed physical improvements within the boundaries of CIM in light of the fact this is an operating correctional facility. Additional study and consultation with CDCR will be required to determine if CDCR could ultimately support construction of these improvements at CIM. Therefore, this is not a foreseeable project at this time.

The Agricultural Pool

7-5

Page 3-72 of the DSEIR identifies the “State of California, California Institut[ion] for Men,” “State of California, Department of Conservation,” and “State of California, Department of Justice,” as public entity members of the Agricultural Pool. This is inconsistent with the Restated Judgment’s expansive definition of the State of California as a member of the Agricultural Pool. (See Restated Judgment, p. 7, ¶ 10 [“all future production by the State or its departments or agencies for overlying use on State-owned lands shall be considered as agricultural pool use.”].) Accordingly, Section 3.7 should simply identify the “State of California.”

The County of San Bernardino is another public entity member of the Agricultural Pool, but it was omitted from your list.

- 7-4 The Chino Basin Watermaster identified a list of potential areas within the Chino Basin that would be large enough to accommodate future storage basins. IEUA and Watermaster understand that there is no agreement in place to develop within the CIM facility, and will consult with the CDCR, should IEUA, Watermaster, or stakeholder seek to develop the storage basin at the CIM facility. Additionally, IEUA and Watermaster understand that a specific proposal must be submitted to, renewed by, and approved by the CDCR before such a project can be considered at the CIM.
- 7-5 IEUA hereby corrects the record to state only "State of California" under the Agricultural Pool, 2019* on page 3-72 of the DSEIR in accordance with the corrections and clarifications made in this comment. Note that the County of San Bernardino was included in the DSEIR Appendix 1, List of Pools under Agricultural Pool, as such it is acknowledged that the County of San Bernardino is part of the 2020 Agricultural Pool.

7-6 Further, this section of the DSEIR states that Appendix 1 lists “all Agricultural Pool participants.” However, Appendix 1 only lists members of the Agricultural Pool Committee, not all of its constituent members.

7-7 Thank you for the opportunity to comment of the DSEIR. As a stakeholder and landowner, the State of California considers local and regional environmental issues to be a priority as the need for water as a consumable commodity and the use, conveyance, and disposal thereof impacts CDCR’s institutions. The State looks forward to a continued collaboration with the Chino Basin Watermaster, the County of San Bernardino, and IEUA, all of whom continue asset use at CIM through monitoring well agreements or rights of entry (including use by California Polytechnic University, Pomona to dispose of effluent on CIM property – a combination of both CIM and IEUA wastewater).

Please feel free to contact me if you have any questions.

Sincerely,

/S/ Carol A.Z. Boyd

CAROL A. Z. BOYD
Deputy Attorney General

For XAVIER BECERRA
Attorney General

CAZB: Self

cc: Michael Beaber, Associate Director, Facility Planning, Construction and Management, CDCR
Tamer Ahmed, Associate Director, Facility Planning, Construction and Management, CDCR
Peter Connelly, Senior Environmental Planner, CDCR
Dean L. Borg, Director, Facility Planning, Construction and Management, CDCR
Robert Feenstra, Chair, Agricultural Pool

- 7-6 Your comment is noted and IEUA hereby corrects the record in accordance with the corrections and clarifications made in this comment to clarify that Appendix 1 lists all members of the Agricultural Pool Committee, not all of its constituent members.
- 7-7 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. IEUA has attempted to provide good faith, reasoned responses as required by CEQA (Section 15088). IEUA and Watermaster also look forward to a continued relationship with the CDCR.

CITY OF ONTARIO
KATIE GIENGER PE
WATER RESOURCES MANAGER
1425 SOUTH BON VIEW AVENUE
ONTARIO CA 91761-4406

CALIFORNIA DEPT OF FISH & WILDLIFE
INLAND EMPIRE REGION
SCOTT WILSON, ENV PROGRAM MGR
3602 INLAND EMPIRE BLVD, SUITE C-220
ONTARIO CA 91764

MONTE VISTA WATER DISTRICT
JUSTIN SCOTT-COE, GENERAL MGR
10575 CENTRAL AVENUE
MONTCLAIR CA 91763

SAN BERNARDINO COUNTY
DEPT OF PUBLIC WORKS-EMD
MICHAEL PERRY
825 EAST THIRD STREET
SAN BERNARDINO CA 92415

ORANGE COUNTY WATER DISTRICT
MICHAEL R MARKUS, GM
PO BOX 8300
FOUNTAIN VALLEY CA 92728-8300

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
RANDY SHEPPEARD, SR. FLOOD
CONTROL PLANNER
1995 MARKET STREET
RIVERSIDE CA 92501

CALIFORNIA DEPARTMENT OF JUSTICE
CAROL BOYD, DEPUTY ATTORNEY
GENERAL
300 SOUTH SPRING STREET, STE 1702
LOS ANGELES CA 90013

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3602 INLAND EMPIRE BLVD, SUITE C-220
ONTARIO CA 91764



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SAN BERNARDINO COUNTY
DEPT OF PUBLIC WORKS-EMD
MICHAEL PERRY
825 EAST THIRD STREET
SAN BERNARDINO CA 92415



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7019 2970 0001 1893 2539

PS Form 3811, July 2015 PSN 7530-02-000-9053 CBW-271 Commenter Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Mey J. Escamilla

☒ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

JUL 6 2020

D. Is delivery address different from item 1? ☒ Yes
If YES, enter delivery address below: ☐ No

92415-0885

3. Service Type

- ☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Mail
☐ Mail Restricted Delivery
- ☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☒ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

ORANGE COUNTY WATER DISTRICT
MICHAEL R MARKUS, GM
PO BOX 8300
FOUNTAIN VALLEY CA 92728-8300



9590 9402 5683 9346 6123 59

2. Article Number (Transfer from service label)

7019 2970 0001 1893 2546

PS Form 3811, July 2015 PSN 7530-02-000-9053 CBW-271 Commenter Domestic Return Receipt

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

[Signature]

☒ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery
☐ Mail
☐ Mail Restricted Delivery
- ☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☒ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...

Track Another Package +

Tracking Number: 70192280000141277519

Remove X

Your item was delivered to the front desk, reception area, or mail room at 12:38 pm on July 6, 2020 in ONTARIO, CA 91761.

Delivered

July 6, 2020 at 12:38 pm
Delivered, Front Desk/Reception/Mail Room
ONTARIO, CA 91761

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Feedback

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

ONTARIO, CA 91761

Certified Mail Fee \$3.55

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy)

☐ Return Receipt (electronic)

☐ Certified Mail Restricted Delivery

☐ Adult Signature Required

☐ Adult Signature Restricted Delivery

\$2.85

\$0.00

\$0.00

\$0.00

\$0.00

Postage \$1.20

Total \$7.15

Sent KATIE GIENGER PE

Street WATER RESOURCES MANAGER

City, ONTARIO CA 91761-4406

PS Form 3800, April 2019 Edition (PSN 7530-02-000-9000) Instructions

0405 05

Postmark Here

07/02/2020

70192280000141277519

6152 22TH 1000 0822 610L

See Less ^

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Go to our FAQs section to find answers to your tracking questions.

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS.com® - USPS Tracking® Results

ATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...

For delivery information, visit our website at www.usps.com®.

MONTCLAIR, CA 91763

Certified Mail Fee \$3.55
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

0405
05

Postmark
Here

Postage \$1.20

Total F \$7.60 07/02/2020

MONTE VISTA WATER DISTRICT
JUSTIN SCOTT-COE, GENERAL MGR
10575 CENTRAL AVENUE
MONTCLAIR CA 91763

PS Form 3800, Instructions

FAQs >

Another Package +

Tracking Number: 70192970000118932522

The delivery status of your item has not been updated as of July 7, 2020, 1:10 am. We apologize that it may arrive later than expected.

Alert

July 7, 2020 at 1:10 am
Awaiting Delivery Scan

Get Updates ▾

Text & Email Updates ▾

Tracking History ▴

July 7, 2020, 1:10 am

Awaiting Delivery Scan

The delivery status of your item has not been updated as of July 7, 2020, 1:10 am. We apologize that it may arrive later than expected.

July 6, 2020, 7:10 am

Available for Pickup

MONTCLAIR, CA 91763

Remove X

Feedback

Justin Scott-Coe
General Manager

7/7/20
Spoke w Justin, he
has seen it.
Confirmed w his assistant
that it was
received.
1:25 pm.
1 909-160
e.x. 160

Stamped
Rec'd 7/7/20

sent Link as a back up

<https://www.ieua.org/jobmpu-cegal>

Product Tracking & Reporting

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USPS Corporate
Accounts

July 10, 2020

USPS Tracking Intranet

Delivery Signature and Address



Price Change 1/26/2020:

USPS Premium Tracking: USPS will offer a fee-based service to extend the availability of tracking data on domestic competitive products for an additional 6 months up to 10 years. In addition, customers can also request a Premium Tracking Statement via email.

The Manual Entry Acceptance screen will be modified to use the Pricing Engine for all rates calculations. Users will no longer enter fees for Collect on Delivery (COD) and Additional Insurance; instead, users will enter the dollar amount to be collected for COD or the insured value for Insurance.

Tracking Number: 7019 2970 0001 1893 2553

This item was delivered on 07/07/2020 at 10:46:00

[Return to Tracking Number View](#)

Signature	AC RT-11 K-19
Address	1495 MCLet

Enter up to 35 items separated by commas

Select Search Type: Quick Search

Submit

Product Tracking & Reporting, All Rights Reserved
Version: 20.3.3 0.92

SENDER: COMPLETE THIS SECTION ■ Complete items 1, 2, and 3. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailpiece, or on the front if space permits. 1. Article Addressed to: RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT RANDY SHEPPEARD, SR. FLOOD CONTROL PLANNER 1995 MARKET STREET RIVERSIDE CA 92501		COMPLETE THIS SECTION ON DELIVERY A. Signature <input checked="" type="checkbox"/> Agent B. Received by (Printed Name) <input type="checkbox"/> Addressee C. Date of Delivery 7/7/20 D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
3. Service Type <input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Mail Restricted Delivery <input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery		9590 9402 5683 9346 6123 42 Article Number (Transfer from service label) 7019 2970 0001 1893 2553	

ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...

USPS Tracking®

FAQs >

Track Another Package +

Tracking Number: 70192970000118932560

Remove X

Your item has been delivered to an agent for final delivery in LOS ANGELES, CA 90013 on July 7, 2020 at 10:01 am.

✓ Delivered to Agent

July 7, 2020 at 10:01 am
Delivered to Agent for Final Delivery
LOS ANGELES, CA 90013

Get Updates ▾

Text & Email Updates

Tracking History

Product Information

7019 2970 0001 1893 2560

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at www.usps.com ®.	
LOS ANGELES, CA 90013	
Certified Mail Fee	\$3.55
Extra Services & Fees (check box, add fee as appropriate)	\$2.35
<input type="checkbox"/> Return Receipt (hardcopy)	\$0.00
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00
Postage	\$1.20
Total	\$7.10
Sent to: CALIFORNIA DEPARTMENT OF JUSTICE CAROL BOYD, DEPUTY ATTORNEY GENERAL 300 SOUTH SPRING STREET, STE 1702 LOS ANGELES CA 90013	
PS Form 3800, June 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

0405 05
Postmark Here
07/02/2020

See Less ^

Feedback

Can't find what you're looking for?

Go to our FAQs section to find answers to your tracking questions.

<https://tools.usps.com/go/TrackConfirmAction?tRef=fullpage&tlc=2&text28777=&tlLabels=70192970000118932560%2C>