APPENDIX 3a

Program Biological Resources Report

Program Biological Resources Report
Optimum Basin Management Program Update

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Chino Basin Watermaster and Inland Empire Utilities Agency

Jacobs

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List of Abbreviated Terms

amsl	average mean sea level
APE	Area of Potential Effect
BAA	Biological Analysis Area
BNSF	BNSF Railway Company
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CRLF	California red-legged frogs
CWA	Clean Water Act
DCH	Designated Critical Habitats
DOR	Division of Rail
Eagle Act	The Bald and Golden Eagle Protection Act
EFH	Essential Fish Habitat
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Orders
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FE	Federally Endangered
FESA	Federal Endangered Species Act
FMPs	Fishery Management Plans
FT	Federally Threatened
ITC	Intermodal Transit Center
ITP	Incidental Take Permit
MBTA	Migratory Bird Treaty Act
MP	Milepost
mph	miles per hour
MSHCP	Multiple Species Habitat Conservation Plan

List of Abbreviated Terms

NCCP	Natural Community Conservation Plans
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NPPA	Native Plant Protect Act
PEIR	Program Environmental Impact Report
PNES	Program Natural Environmental Study
ROW	Right-of-Way
RTC	Rail Traffic Controller
RWQCB	Regional Water Quality Control Board
SEIR	Subsequent Environmental Impact Report
SSC	Species of Special Concern
SCRRA	Southern California Regional Rail Authority
SJVR	San Joaquin Valley Rail
SR	State Route
ST	State Threatened
SWRCB	State Water Resources Control Board
TDA	Tom Dodson & Associates
TOD	Transit Oriented Development
UPRR	Union Pacific Railroad (or UP)
U.S.	United States
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U.S. Fish and Wildlife Services
USGS	U.S. Geological Survey
VFR	Valley foothill riparian
VOW	Valley oak woodland

Chapter 1. Project Description

1.1 Introduction

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 can cause physical changes in the environment. As discussed in Chapter 2, 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). 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 nine (9) Program Elements (PEs) and attempts to address all of the 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 stakeholders of the OBMPU Peace Agreement and regulatory agencies that will function as CEQA Responsible Agencies will have the option of relying upon a certified Final OBMPU Subsequent Environmental Impact Report (SEIR) for any future actions they take in support of the proposed program or an individual project described in this SEIR.

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. Below is a summary of the PE's

1.2 Summary of Findings

1.2.1 Project Category 1: Well Development and Monitoring Devices (PEs 1-9)

This Project Category includes the development of ASR, injection, pumping, groundwater level monitoring, and 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.

1.2.1.1 Proposed Mitigation and Minimization Measures for PEs 1-9:

- ***Where future project-related impacts will affect undeveloped land, 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 shall be taken:***
  - ***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, 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.*

❖ *Biological Resources Management Plan: During final design, a BRMP will be prepared to assemble the biological resources mitigation measures for each specific infrastructure improvement in the future. The BRMP will include terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility. The BRMP will also 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 the project-level environmental document, including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.*

❖ *To reduce or prevent activities that may adversely affect rivers, streambeds or wetlands, the following mitigation measures shall be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.*

- *Prior to discharge of fill or streambed alteration of jurisdictional areas, the project proponent shall obtain regulatory permits from the U.S. Army Corps of Engineers, local Regional Water Quality Control Board and the California Department of Fish and Wildlife. 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. A Habitat Mitigation and Monitoring Proposal shall be prepared and reviewed and approved by the appropriate regulatory agencies. The project proponent shall also obtain permits from the regulatory 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) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but OBMPU project proponents shall utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.*
- *Jurisdictional Water Preconstruction Surveys: A jurisdictional water preconstruction survey shall be conducted at least six months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and if possible within a 250-foot buffer. The purpose of this survey is to confirm the extent of jurisdictional waters in areas*

where permission to enter was not previously granted and where aerial photograph interpretation was used to estimate the extent of these features. 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.

- *Regarding active bird nests, the following mitigation measure shall be applied to this program.*
  - *It is illegal to "take" active bird nests of native birds, and if such nests are present at a project site, no take is allowed. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal shall be conducted outside of the State identified nesting season (nesting season is approximately from February 15 through September 1 of a given calendar year). Alternatively, coordination with the CDFW to conduct nesting bird surveys shall be completed, and methodology of surveys will be agreed upon. All nesting bird surveys shall be conducted by a qualified biologist prior to initiation of ground disturbance to demonstrate that no bird nests will be disturbed by project construction activities.*

- *The following mitigation can reduce the impact to burrowing owl to a less than significant level.*
  - *Prior to commencement of construction activity in locations that are not fully developed, protocol burrowing owl survey shall 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 following mitigation can ensure consistency with any HCP or MSHCP.*
  - *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.*

- *Implementation of the above measures are protective of the environment. Should the regulatory agencies determine an alternative, equivalent mitigation program during acquisition of regulatory permits, such measure shall be deemed equivalent to the above measures and no additional environmental documentation shall be required to implement a measure different than outlined above. Note that if impacts cannot be mitigated or avoided in the manner outlined in the measures above, then subsequent environmental documentation would have to be prepared in accordance with procedures outlined in Section 15162 of the State CEQA Guidelines. Implementation of the following mitigation measures will ensure that project design and site selection reduce impacts to sensitive biological resources to the extent feasible.*
  - *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 facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific facilities improvement.*
  - *Require facility designs and maintenance activities to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions.*

- *Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources.*
- *Within riparian areas and wetlands subject to state or federal regulations, 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.*
- *Within habitats of plants listed by the CNDDB 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.*

- *Maximize the preservation of individual oak, sycamore and walnut trees within proposed development sites.*
- *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.*

❖ *Implementation of the following mitigation measures will ensure that project construction impacts to sensitive biological resources, including the potential effects of invasive species, are reduced to the extent feasible.*

- *4.2-12 Following construction activities 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 qualified biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.*
- *4.2-13 Clean Construction Equipment. During construction, equipment shall be cleaned 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.*
- *Contractor Education and Environmental Training.*
  - *Personnel who work onsite must attend a Contractor Education and Environmental Training session. The environmental training is likely to be required by the regulatory agencies and will cover general and specific biological information on the special-status plant species, 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.*
- *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) shall 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 (qualified 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.*

- *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.*
- *Rodenticides and Herbicides: Use of rodenticides and herbicides in the project footprint will be restricted. 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.*
- *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 to restrict special-status species from entering the construction area. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW. Clearance surveys will be conducted for special-status species after the exclusion fence is installed. If necessary, clearance surveys will be conducted daily.*
- *Equipment Staging Areas: Staging areas for construction equipment will be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors, to the maximum extent possible.*
- *Plastic mono-filament netting (erosion-control matting) or similar material shall <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.*
- *Vehicle Traffic. During ground-disturbing activities, project-related vehicle traffic shall 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, and off-road traffic will be prohibited.*
- *Entrapment Prevention: All excavated, steep-sided holes or trenches more than 8 inches deep shall 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 shall 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.*
- *Weed Control Plan: A Weed Control Plan shall be prepared and implemented to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics shall be addressed:*
  - *Schedule for noxious weed surveys.*
  - *Weed control treatments, including permitted herbicides, and manual and mechanical methods for application; herbicide application shall be restricted in Environmentally Sensitive Areas.*
  - *Timing of the weed control treatment for each plant species.*
  - *Fire prevention measures.*

- *Dewatering/Water Diversion: Open or flowing water may be present during construction. If construction occurs where there is open or flowing water, a strategy that is approved by the resource agencies (e.g., USACE, SWRCB/RWQCB, and CDFW), such as the creation of cofferdams, shall be used to dewater or divert water from the work area. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures is recommended 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.*

1.2.2 Project Category 2: Conveyance Facilities and Ancillary Facilities (PEs 2, 4-9)

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.

Potential Impacts, follow-on biological studies, and potential permitting requirements would be the same as Project Category 1.

1.2.3 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.

Potential Impacts, follow-on biological studies, and potential permitting requirements would be the same as Project Category 1.

1.2.4 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. Potential Impacts, follow-on biological studies, and potential permitting requirements would be the same as Project Category 1.

1.2.5 Operational Scenarios

In the event that a given facility will require periodic or routine operation maintenance, the maintenance will need to be identified, permitted if needed, and best management measures should be identified to minimize impacts to biological resources. Best Management Practices include but are not limited to 1) timing of maintenance outside nesting, flowering, breeding, or other biologically sensitive period 2) minimizing impacts to native habitats, 3) minimize impacts to special aquatic sites including wetlands 3) trash control, 4) spread of invasive species.

1.2.6 Construction Scenarios

In general, the types, configuration and exact location of future specific projects that will 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 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 maximum expected impacts that would result from construction and operation of the infrastructure. Impacts associated with specific future projects would 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.

1.2.7 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. 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.

1.3 Project Location

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.

The Optimum Basin Management Program (OBMP), which was based on the Peace I Agreement in the Chino Basin, focused on management actions within the Chino Groundwater Basin (Chino Basin or the 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 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.

Chapter 2. Study Methods

This chapter presents the methods used to identify biological resources in the project region. In addition, this chapter provides an overview of the various regulatory requirements, definitions of terms used, background review conducted, field surveys, post-field data processing, personnel and survey dates, and coordination efforts with agency and professional contacts. It also summarizes the study limitations and how they may influence the results presented in this report.

Because this is a program level document with individual facilities improvements expected to occur over the next 20+ years, only cursory level surveys were conducted throughout the project Study Area. Before conducting field surveys, existing background information was reviewed to identify the locations of jurisdictional waters, special-status plant and wildlife species, special-status plant communities, natural lands, and federally designated or proposed critical habitat units recorded or potentially occurring in the proposed infrastructure improvement areas. This section summarizes the background information that was reviewed.

2.1 Regulatory Requirements

2.1.1 Federal

Clean Water Act

The purpose of the Clean Water Act (CWA) (1977) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." *Section 404* of the CWA prohibits the discharge of dredged or fill material into "waters of the United States" without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 Code of Federal Regulations [CFR] 328.3 7b). *Section 401* of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the RWQCB.

In addition to the Section 404 and 401 regulating discharge of dredge or fill into Waters of the United States; 33 USC 408 (Chapter 9.1), Navigation and Navigable Waters. *Section 408* states it is unlawful for any person(s) to build upon, alter, deface, destroy, move, injure, obstruct or… impair the usefulness of any levee or other work built by the U.S. That the Secretary may, on the recommendation of the Chief of Engineers, grant permission for the alteration or permanent occupation or use of any of the public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work.

Rivers and Harbors Act 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable waters of the U.S.

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.

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. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

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.

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.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (1918) implements international treaties between the United States and other nations created to protect migratory birds, any of their parts, eggs, and nests from activities, such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR Part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Sections 3800, 3513, and 3503.5 of the California Fish and Game Code (CFGC).

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).

2.1.2 State

Sections 1600 through 1606 of the California Fish and Game Code (CFGC)

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.

California Endangered Species Act

The California Endangered Species Act (CESA) (Sections 2050 to 2085) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats by protecting "all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation." Animal species are listed by the CDFW as threatened or endangered, and plants are listed as rare, threatened, or endangered. However, only those plant species listed as threatened or endangered receive protection under the California ESA.

CESA mandates that state agencies do not approve a project that would jeopardize the continued existence of these species if reasonable and prudent alternatives are available that would avoid a jeopardy finding. There are no state agency consultation procedures under the California ESA. For projects that would affect a species that is federally and state listed, compliance with ESA satisfies the California ESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with the California ESA under Section 2080.1. For projects that would result in take of a species that is state listed only, the project sponsor must apply for a take permit, in accordance with Section 2081(b).

Fully Protected Species

Four sections of the California Fish and Game Code (CFGC) list 37 fully protected species (CFGC 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.

Bird Nesting Protections

Bird nesting protections (Sections 3503, 3503.5, 3511, and 3513) in the CFGC 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.

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.

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGC 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 (CFGC 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

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 (CFGC 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.

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, Engleman Oak, 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.

Santa Ana River Wash Habitat Conservation Plan

The primary goal of the Upper Santa Ana River Wash Habitat Conservation Plan (Wash Plan HCP or HCP) is to balance the ground-disturbing activities of water conservation, aggregate mining, recreational activities, and other public services in the Plan Area with the conservation of natural communities and populations of special-status plants and wildlife. The Wash Plan HCP has been prepared as part of the Incidental Take Permit (ITP) application submitted by the San Bernardino Valley Water Conservation District (Conservation District) to the U.S. Fish and Wildlife Service (USFWS).

A number of other entities wish to participate in the implementation of the HCP through a Certificate of Inclusion (COI, described below) in order to receive coverage for their planned projects. They include the City of Redlands, City of Highland, San Bernardino Valley Municipal Water District (SBVMWD), East Valley Water District (East Valley), Cemex, Inc., and Robertson's Ready-Mix. The San Bernardino County Flood Control District (SBCFCD or Flood Control) will pursue an independent Implementing Agreement (IA) and ITP under the HCP. The Conservation District is asking the USFWS to authorize incidental take under Section 10 of the Federal Endangered Species Act (FESA) for the coastal California gnatcatcher (Polioptila californica californica), San Bernardino kangaroo rat (SBKR) (Dipodomys merriami parvus) and cactus wren (Campylorhynchus brunneicapillus). The Conservation District is also asking for coverage of the Santa Ana River woolly-star (Eriastrum densifolium ssp. sanctorum, woolly-star) and slender-horned spineflower (Dodecahema leptoceras, spineflower). Woolly-star and spineflower are also state-listed species and the Conservation District is also is seeking state authorization (Section 2081 permit under the California Endangered Species Act [CESA]) for incidental take of these species from the California Department of Fish and Wildlife (CDFW). Coverage of Non-Federally Listed Species and Plants.

The Wash Plan HCP includes avoidance, minimization, and mitigation measures for each of the Covered Species, whether or not it is currently federally listed. Although it is not currently federally listed, the Conservation District seeks incidental take coverage for the cactus wren in the event that it becomes listed during the proposed 30-year permit term. Note that the FESA does not prohibit take of listed plant species; however, the Conservation District

has included two of them in the Wash Plan HCP and requests assurances for them under USFWS's "No Surprises" assurances regulation (see Section 1.3.1, Federal Endangered Species Act). The Wash Plan HCP was prepared in accordance with USFWS guidance provided in the 1996 Habitat Conservation Planning Handbook (HCP Handbook), the 2000 Addendum to the HCP Handbook and the revised 2016 HCP Handbook. This HCP will do the following:

- 1. Provide for the conservation of the five Covered Species and their habitat within the Plan Area as mitigation for the effects of Covered Activities on Covered Species. San Bernardino Valley Water Conservation District Executive Summary Draft Final Upper Santa Ana River Wash HCP ES-2 May 2019 ICF 00544.13
- 2. Fulfill the requirements for an ITP as specified in Section 10(a)(1)(B) of the FESA, and FESA implementing regulations (Code of Federal Regulations (CFR), Title 50, Sections 17.22[b][2][i] and 17.32[b][2][i]).
- 3. Support the Conservation District's request to CDFW for an ITP pursuant to Section 2081(b) of the CESA.
- 4. Inform a FESA Section 7 consultation between USFWS and the U.S. Bureau of Land Management (BLM) regarding effects on listed species on federal lands in connection with activities covered by the Wash Plan (see Section 1.3, Regulatory Framework).
- 5. Fulfill the requirements of the 2008 Upper Santa Ana River HCP Wash Land Management and Habitat Conservation Plan Document and its certified Environmental Impact Report (EIR) regarding compliance with FESA and CESA and the identification of measures to avoid, minimize, mitigate, and monitor effects on these five species. Regulatory Framework

The Wash Plan HCP is specifically designed to comply with the FESA and CESA, and it is not intended to meet the regulatory permit requirements of other federal and state regulations. However, it has been designed to be consistent with those other regulations, including: λ California Fish and Game Code Sections 3511, 4700, 5050, and 5515 (Fully Protected Species) λ California Fish and Game Code Section 3503 (Bird Nests) λ California Fish and Game Code Section 3503.5 (Birds of Prey) λ Migratory Bird Treaty Act (MBTA) λ Bald and Golden Eagle Protection Act (Eagle Act) λ California Environmental Quality Act of 1970 (CEQA) λ Clean Water Act Sections 401, 402, and 404 λ Porter-Cologne Water Quality Control Act λ Fish and Game Code Sections 1601–1607 (Lake or Streambed Alteration Agreement) Compliance with these other state and federal regulations should be coordinated with the implementation of the HCP to maximize the efficiency of regulatory requirements such as mitigation, monitoring, and reporting.

The Conservation District will act as permit holder for the ITP and will convey the permit authority to other participants (Participating Entities) under Certificates of Inclusion (COI). Each COI will be associated with a single Participating Entity and will address one or a group of closely related Covered Activities. Flood Control has committed to work with USFWS to finalize their IA and ITP within two years of the issuance of the Conservation District's ITP under this HCP.

The Wash Plan Incidental Take Permit was issued by the U.S. Fish and Wildlife Service on July 13, 2020, allowing the Conservation District to permit Covered Species.

2.2 Studies Required

In order to develop this programmatic Biological Resource Report, available information was reviewed from resource management plans and other relevant documents to determine locations and types of biological resources that have the potential to exist within and adjacent to the Study Area. Field studies were conducted as part of OBMP in 2013. Focused field studies will be completed once specific project activities and a schedule for those activities are determined.

The California Natural Diversity Database (CDFW, January 2023), U.S. Fish and Wildlife Service County lists (USFWS, 2023), California Native Plant Society Electronic Inventory of Rare and Endangered Plants of California (January 2023), and National Wetlands Inventory (USFWR, January 2023) were queried for occurrence of special status species and habitats within the Chino Basin. CDFW BIOS database was also queried for general habitat types and potential features subject to environmental regulations (e.g., Clean Water Act [CWA], Porter-Cologne Water Quality Control Act [Porter-Cologne] and California Department of Fish and Wildlife's Fish and Game Code 1600 et seq. jurisdictional features) that may exist within or adjacent to the Study Area.

Additionally, studies conducted for previous facility improvements within Chino Basin were reviewed. These studies include the Draft San Bernardino County Countywide Plan Biological Resources Existing Conditions Report (Dudek, May 2019)

In addition to the aforementioned literature reviews, reconnaissance-based field surveys of the Study Area were performed in 2013 to assess general and dominant vegetation types, habitat types, and the potential for special status wildlife and plant species to occur within the project areas. Community types were based on observed dominant vegetation composition and density. Vegetation classifications of plant communities in the Study Area were derived from the criteria and definitions of Holland (1986).

2.2.1 Limitations That May Influence Results

Several limitations that may influence the results of the studies presented in this report were identified. These limitations are beyond IEUA and Chino Basin Watermaster's control and are associated with permission to enter private property and physical access limitation. Once these future development areas are defined and access can be established, focused surveys and site access will be required.

Additionally, the programmatic nature of the project with facilities being proposed over the next 20+ years does not warrant focused surveys for each of the proposed locations at this time. Typically, biological surveys are valid for one year. Any focused biological surveys conducted now would need to be redone once a specific facility is designed and the second-tier level environmental process is initiated.

Estimations and assumptions regarding the potential for jurisdictional waters and special-status species were based on assessments from previous projects, and existing resource information. In some instances, these assessments are based solely on aerial photography, which provides an adequate level of detail for a programmatic environmental document.

Chapter 3. Results: Environmental Setting

3.1 Descriptions of the Existing Biological and Physical Conditions of the Study Area

3.1.1 Study Area

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. 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 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.

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.

The principal environmental actions that may need to be implemented as a part of this project are:

1. Compliance with NEPA and CEQA guidelines regarding sensitive biological resources
2. U.S. Army Corps of Engineers (COE) 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. California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement
9. (Section 1600 of the Fish and Game Code)
10. State of California Native Plant Protection Act
11. Plant Protection and Management Ordinances (County Code Title 8, Div. 11)

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 at a prospective specific project site, 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), CDFW, and/or COE.

The Prado 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 area

in southern California. This area supports a wide array of sensitive species, both floral and faunal. According to the Biological Resources section for the Chino Basin Groundwater storage Program Draft Environmental Impact Report for MWDSC, 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 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 MWDSC Chino Basin Groundwater Storage EIR'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 MWDSC Chino Basin EIR also reports that many of these tributary streams will 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 has approximately 13,000 acres of wild land situated in the hills north of Santa Ana Canyon. Although Chino Hill State Park containing large blocks of non-native grasslands, it also contains 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 the boundary of the project area.

Based on the most recent field surveys of the area and desktop review for Peace II, 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 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 in the reservoir, treated wastewater plant effluent and 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-leved 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.

Plant Communities

Additionally, a review of San Bernardino and Riverside County general plan documents listed the plant communities shown below as being present in the project area. The general characteristics of the plant communities described below were extracted from San Bernardino County's Biological Resources Report.

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 not 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 grown 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 severely 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 I 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 associate 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, Engelman 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 CDFG 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. On sensitive plant species may occur in the grassland areas of the northern Valley area of San Bernardino County, 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 or 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 CDFG 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 own, 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)

3.1.2 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 has its confluence with the Santa Ana River in Prado Basin in the southern portions of MZ's 1-5, and St. 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 within the project alignment.

3.1.3 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 2023) 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 designed or proposed a more specific soil map would be prepared for those specific activities.

The following 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 south of the program area have been urbanized and/or altered to produce crops.

Table 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	Ramona-Hanford-Greenfield-Gorgonio (well- to excessively drained, low to medium runoff,

	runoff, slow to moderate permeability, 0 to 9% slope)	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)	
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)

3.1.4 Biological and Physical Conditions of the Study Areas

This section describes the existing biological and physical conditions of the Study Areas. The descriptions are general in nature, and specific resources are addressed in more detail in Chapter 4, Discussion of Impacts and Mitigation.

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 urbanized, i.e., 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.

3.1.5 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, and some residual agricultural uses just north of Prado Basin. 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 trees and other nonnative or ornamental vegetation.

3.1.6 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 blackcrowned night-heron (*Nycticorax nycticorax*) are conspicuous breeders among the larger water birds. The tree swallow (*Tachycinera 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 piedbilled 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 voci/erus*), 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 (*Colaples 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 califomicus*) 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 (*Piruophis 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 Cam Swift, 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*).

3.2 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.] 670.5).
- Species that meet the definitions of "rare" or "endangered" under the California Environmental Quality Act (CEQA Guidelines Sections 15380 and 15125).

- Plants presumed by the California Native Plant Society (CNPS) to be "extinct in California" (Lists 1A, CNPS 2023).
- Plants considered by the CNPS to be "rare, threatened, or endangered in California" (Lists 1B and 2, CNPS 2023).
- Plants listed by CNPS as plants about which more information is needed to determine their status (List 3, CNPS 2023), 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 2023); 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], 4,700 [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 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 seablight, desert lavender, seep willow, and arrowweed (Bradley and Deacon 1967, Küchler 1977. Paysen et al. 1980, Parker and Matyas 1981).
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, buttonbrush, and willows. The herbaceous layer consists of sedges, rushes, grasses, miner's lettuce, Douglas sagewort, poison-hemlock, and hoary nettle. (CDFW, 2023)

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
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 (*Lepidospartum squamatum*) 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 (*Salvia apiana*), redberry (*Rhamnus crocea*), California buckwheat, Spanish bayonet, California croton (*Croton californicus*), cholla (*Opuntia spp.*), tarragon (*Artemisia dracunculus*), yerba santa (*Eriodictyon spp.*), 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 Plan Area: slender-horned spineflower (*Dodecahema leptocerus*) and Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*). (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 (Arundo), 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

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
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
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 for up to 153,000 acres of land. Focal species covered include least Bells 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

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
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 woolly 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:** 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	Coastal sage scrub; Riversidian sage scrub; California gnatcatcher
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

3.2.1 Special Status Plant and Animal Species Potentially Occurring Along or Within the Project Assessment Areas

3.2.1.1 Special Status Plant Species with Potential for Occurrence in the Project Area

Santa Ana River woollystar (*Eriastrum densifolium*) (Federal and State Endangered)
Santa Ana River woollystar 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 woollystar 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.

3.2.1.2 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 shelds 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 male have. 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 CDFG 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 CDFG. 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 take beetles, cicadas, bugs, wasps, flies, katydids, dragonflies, damselflies, praying mantids, lacewings, mosquito hawks, cankerworms, fall webworms (Platyprepia 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 Game 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 (*Dipomys 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 Southern California's 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 gravely 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 a granivorous. In doing dissection of kangaroo rat stomach it was found that their diets composed 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 (*Polioptila 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)

The southwestern willow flycatcher is a small passerine, or perching bird, less than 15 cm (5.75 in) long from the tip of its bill to the tip of its tail. It weighs 11-12 grams. It has a brownish-olive to gray-green upper body, a whitish throat contrasting with a pale olive breast, a pale yellow belly, and two light wing bars. Males and females do not

differ in plumage, but juveniles differ from adults by having buffy wing bars. Southwestern willow flycatchers are neotropical migrants that breed in patches of riparian habitat throughout the American southwest. Their breeding habitat currently ranges from southern California, through southern Nevada, southern Utah, Arizona, New Mexico, southwestern Colorado, and historically included western Texas and extreme northwestern Mexico. They travel south to winter ranges in Mexico, Central America, and northern South America.

Breeders arrive I southern California from late May to early June. Departure from breeding grounds occurs from August – September. However, nests with eggs have been observed as late as 30 August, with nestlings into mid-September. Southwestern willow flycatchers require moist microclimatic and vegetative conditions, and breed only in dense riparian vegetation near surface water or saturated soil. While wet conditions are uniformly required, the structure and species of vegetation in which they nest vary by region and availability. The birds frequently build nests in nonnative tamarisk (Tamarix spp.), as well as in native willow (Salix spp.), typically in vegetation stands of 4–7 m in height. Nesting habitat patches can range widely in size, from as small as 0.6 ha to as much as 200 ha, although the majority of patches tend towards the smaller end of the range. They typically avoid narrow, linear patches less than 10 m wide.

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 bumble bee 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 bumble bee. 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 bumble bee 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 bumble bee is not known, but it is believed that they have similar behaviors to other bumble bees 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, dusty maidens, 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.

Table 3.3
FLORA AND FAUNA WITH POTENTIAL TO OCCUR IN THE PROGRAM AREA
(*Source: CNDDB, January 2023*, Occurrence Potential Assessed)

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Amphibians	1	arroyo toad /Anaxyrus californicus	Endangered / SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	Medium potential to occur in the Study Area, dependent on shallow pools persisting due to higher flow conditions. Last known occurrence in the Study Area was in 1999 southeast of Frankish Peak in a catch basin along Cucamonga Creek.
Amphibians	1	Coast Range newt /Taricha torosa	None / SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.	Low potential to occur in the STUDY AREA, dependent on ponds, reservoirs, and slow moving streams. Last known occurrence in the Study Area was in the 1990's in Cobal Canyon (Claremont Hills Wilderness Park).
Amphibians	1	foothill yellow-legged frog /Rana boylii	None / Candidate Threatened	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Likely extirpated. Low occurrence potential due to disturbance level on future project sites.
Amphibians	1, 2, 3	San Gabriel slender salamander /Batrachoseps gabrieli	None / None	Known only from the San Gabriel Mtns. Found under rocks, wood, and fern fronds, and on soil at the base of talus slopes. Most active on the surface in winter and early spring.	Several individuals have been observed between 1998 and 2016, but outside the OBMPU area near Lytle Creek. Low occurrence potential.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Amphibians	1, 2, 3	southern mountain yellow-legged frog /Rana muscosa	Endangered / Endangered	Federal listing refers to populations in the San Gabriel, San Jacinto and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, Apr 2014, effective Jun 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2 - 4 yrs to complete their aquatic development.	Several individuals last observed in 1994, but outside the OBMPU area near Lytle Creek. Low occurrence potential; likely extirpated.
Amphibians	1, 2, 3, 4, 5	western spadefoot /Spea hammondii	None / None	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low potential to occur due to suitable habitat of vernal pools. Most recent observations in were in 2011 and 2014, outside of the Program area in isolated pools in the Chino Hills area.
Birds	2, 3, 4, 5	Bell's sage sparrow /Artemisiospiza belli belli	None / None	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6-18 inches above ground. Territories about 50 yds apart.	Medium to high potential to occur in the Study Area where dense chamise exists.
Birds	1	black swift /Cypseloides niger	None / SSC	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	Potential to occur on the Study Area is low to medium, with higher potential to occur along the montane area north of MZ 1. Potential for foraging individuals throughout the western boundaries of the STUDY AREA.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Birds	1, 2, 3, 4, 5	burrowing owl /Athene cunicularia	None / None	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 MZ's. Burrowing owl has been shown to adapt to urban areas and overwinter in drain pipes, abandoned tires and other cover sites.
Birds	1, 2, 3, 4, 5	California black rail /Laterallus jamaicensis coturniculus	None / Threatened	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Occurrence potential is low for this species although suitable habitat exists in more vegetated wetland areas. The most recent observation was in 1931. Adequate dense vegetation in wetland areas is suitable habitat in the southern portion of the Study Area
Birds	1, 2, 5	coastal cactus wren /Campylorhynchus brunneicapillus sandiegensis	None / SSC	Southern California coastal sage scrub. Wrens require tall opuntia cactus for nesting and roosting.	Low potential for occurrence. This species requires tall cactus for nesting found more inland or on coastal bluffs.
Birds	1, 2, 3, 4, 5	coastal California gnatcatcher /Polioptila californica californica	Threatened / SSC	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 Study Area. Potential for occurrence is concentrated in pockets of sage scrub habitat.
Birds	1, 2, 3, 4, 5	Cooper's hawk /Accipiter cooperii	None / None	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Occurrence potential for this species is medium to high, as the bird has adapted to semi-urban environments for foraging. Individuals have been observed recently in Chino Hills and Jurupa Valley.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Birds	1, 2, 5	golden eagle /Aquila chrysaetos	None / None	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Medium to high potential to occur in foothills to the north and west of the Study Area, but also in isolated rocky outcrops throughout the Study Area.
Birds	1, 2, 5	grasshopper sparrow /Ammodramus savannarum	None / SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Suitable habitat exists in pockets throughout the STUDY AREA, although occurrence potential is low to medium. Last recorded individual was in the Chino Hills in 2001.
Birds	4, 5	Lawrence's goldfinch /Spinus lawrencei	None / None	Nests in open oak or other arid woodland and chaparral, near water. Nearby herbaceous habitats used for feeding. Closely associated with oaks.	Occurrence potential is medium, although only one observation has been recorded near the Santa Ana River in 2015.
Birds	1, 2, 3, 4, 5	least Bell's vireo /Vireo bellii pusillus	Endangered / Endangered	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 STUDY AREA.	Occurrence potential for this species is high in riparian areas on the edges of the Study Area. Critical habitat overlaps with the Program Area in the south and individuals have been observed from 2003 through 2014 along the Santa Ana River.
Birds	1, 2, 5	long-eared owl /Asio otus	None / SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Occurrence potential is low to medium. Suitable habitat exists, but the last recorded observation was in 1925.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Birds	1	merlin /Falco columbarius	None / None	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.	Occurrence potential is medium along the Chino Hills and other fringe wildlife and urban habitat transition zones.
Birds	1, 2, 3, 4, 5	southern California rufous-crowned sparrow /Aimophila ruficeps canescens	None / None	Resident in Southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.	Occurrence potential is high for this species due to suitable sage scrub and mixed chaparral throughout the Program area.
Birds	1, 2, 3, 4, 5	southwestern willow flycatcher /Empidonax traillii extimus	Endangered / Endangered	Riparian woodlands in Southern California. Critical habitat extends along the southern portion of the STUDY AREA.	Occurrence potential for this species is medium to high in areas with willow or cottonwood riparian areas on the edges of the Study Area. 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.
Birds	1, 2, 3, 4, 5	Swainson's hawk /Buteo swainsoni	None / Threatened	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Occurrence potential is low to medium for this species, which adapts well to a variety of habitat, both in-tact and disturbed. However, no recently recorded observations have been made of this species in the Program area (Chino area in 1920).

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Birds	1, 2, 3, 4, 5	tricolored blackbird /Agelaius tricolor	None / Threatened	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.
Birds	1, 2, 3, 4, 5	western yellow-billed cuckoo /Coccyzus americanus occidentalis	Threatened / Endangered	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 STUDY AREA.	Occurrence potential for this species is low due to presumed low population numbers and the only one recent observation in the Study Area in 2001 along the Santa Ana River. This species could inhabit areas with willow or cottonwood riparian areas on the edges of the STUDY AREA. Critical habitat overlaps with the southern portions of the Program area.
Birds	1, 2, 5	white-tailed kite /Elanus leucurus	None / None	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Occurrence potential for this species is medium to high, particularly along the southwestern boundary of the Program area where more valley marginal habitat and deciduous forest is present. Individuals have been recorded in the area most recently in 2009.
Birds	1, 2, 3, 4, 5	yellow rail /Coturnicops noveboracensis	None / SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Occurrence potential is low due to lack of recent recorded observations (last observed in the area in 1914). The most likely area of potential occurrence is limited to the marshland in the southern portion of the Program area.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Birds	1, 2, 3, 4, 5	yellow warbler /Setophaga petechia	None / SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. 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.
Birds	1, 2, 3, 4, 5	yellow-breasted chat /Icteria virens	None / SSC	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.
Fish	1, 2, 3, 4, 5	arroyo chub /Gila orcuttii	None / None	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 Study Area in Covina, CA, 2013. All other occurrences were in the late 1990's and early 2000's.
Fish	2, 3, 4, 5	Santa Ana speckled dace /Rhinichthys osculus ssp. 3	None / None	Headwaters of the Santa Ana and San Gabriel rivers. May be extirpated from the Los Angeles River system. Requires permanent flowing streams with summer water temps of 17-20 C. Usually inhabits shallow cobble and gravel riffles.	Suitable habitat exists in the Santa Ana River. The only recent occurrence is found inside of the Study Area along the Santa Ana River in the Hidden Valley Wildlife Area.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Fish	1, 2, 3, 4, 5	Santa Ana sucker /Catostomus santaanae	Threatened / None	Endemic to Los Angeles Basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, and algae.	Occurrence potential is medium to high. Occurrences observed from 2002 through 2011 in the Santa Ana River and Chino Creek.
Fish	1, 2, 3, 4, 5	steelhead - southern California DPS /Oncorhynchus mykiss irideus pop. 10	Endangered / None	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	Occurrence potential is low in the Program area and no known occurrences have been recently recorded in the Santa Ana River.
Insects	1, 2, 3, 4, 5	Crotch bumble bee /Bombus crotchii	None / Candidate Endangered	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.
Insects	1, 2, 3, 4	Delhi Sands flower-loving fly /Rhaphiomidas terminatus abdominalis	Endangered / None	Found only in areas of the Delhi Sands formation in southwestern San Bernardino & northwestern Riverside counties. Requires fine, sandy soils, often with wholly or partly consolidated dunes & sparse vegetation. Oviposition req. shade.	Occurrence potential low in disturbed areas. The last known observance of this species was in 2010. Presumed extant is in the northeast portions of MZ's 2, 3, and 4.
Insects	2, 3, 4	greenest tiger beetle /Cicindela tranquebarica viridissima	None / None	Inhabits the woodlands adjacent to the Santa Ana River basin. Usually found in open spots between trees.	Low occurrence potential. This species was last observed in the area in 1987 in the eastern portion of MZ 4 along the Santa Ana River corridor.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Insects	4, 5	quino checkerspot butterfly /Euphydryas editha quino	Endangered / None	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants Plantago erecta, P. insularis, and Orthocarpus purpurescens.	Low potential for occurrence. Occurs primarily outside the immediate project vicinity.
Mammals	1	American badger /Taxidea taxus	None / SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low potential to occur in majority of the project area. Higher potential to occur where undeveloped land just outside project boundaries exists.
Mammals	1, 2	big free-tailed bat /Nyctinomops macrotis	None / SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Potential to occur on the Study Area is low to medium, with higher potential to occur along the montane area west of MZ 1 and 2.
Mammals	1, 2	desert bighorn sheep /Ovis canadensis nelsoni	None / None	Widely distributed from the White Mtns in Mono Co. to the Chocolate Mts in Imperial Co. Open, rocky, steep areas with available water and herbaceous forage.	Low potential for occurrence. This species will remain outside of urban areas, possibly descending hills to access water for drinking, although this will be temporary and the sheep will avoid human activity.
Mammals	1	hoary bat /Lasiurus cinereus	None / None	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	There is low potential for occurrence, although some may be found along habitat edges where water and large trees exist along the northern fringe of MZ 1.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Mammals	1, 2, 3, 4	Los Angeles pocket mouse /Perognathus longimembris brevinasus	None / SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	Low to medium occurrence potential. The most recent observations have been in 2017 along Cajon Wash. No recently observed occurrence within the 4 Management Zones.
Mammals	1, 2, 3, 4	northwestern San Diego pocket mouse /Chaetodipus fallax fallax	None / SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Low occurrence potential due to lack of specific habitat requirements.
Mammals	1, 2	pallid bat /Antrozous pallidus	None / None	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low occurrence potential. Suitable habitat exists in some rocky areas and scrub habitat, although no observations have been made since the 1950's in the project area.
Mammals	2, 3	pallid San Diego pocket mouse /Chaetodipus fallax pallidus	None / SSC	Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Low occurrence potential due to lack of specific habitat requirements.
Mammals	1, 2, 3, 4, 5	pocketed free-tailed bat /Nyctinomops femorosaccus	None / SSC	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	Low potential for occurrence in the project area. Some of this species was observed in habitat outside the project area along the Santa Ana River corridor in the mid-1980's.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Mammals	1, 2, 3, 4, 5	San Bernardino kangaroo rat /Dipodomys merriami parvus	Endangered / Candidate Endangered	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	There is a low potential for occurrence of this species. It is possibly extirpated and has not been observed recently in the project area.
Mammals	2, 3, 4, 5	San Diego black-tailed jackrabbit /Lepus californicus bennettii	None / SSC	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	There is low potential for occurrence, although observations as recently as the late 1990's have been made of this species in Jurupa Valley up to Fontana.
Mammals	1, 2, 3, 4	San Diego desert woodrat /Neotoma lepida intermedia	None / SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	Medium potential to occur, based on recent observations, 2010.
Mammals	1, 2, 3, 4, 5	Stephens' kangaroo rat /Dipodomys stephensi	Endangered / Threatened	Primarily annual & perennial grasslands, but also occurs in coastal scrub & sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.	Low occurrence potential due. Possibly extirpated.
Mammals	1, 2, 3, 4, 5	western mastiff bat /Eumops perotis californicus	None / None	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Medium potential to occur in the project area in all MZ's with suitable habitat (crevices of buildings). Their ability to roost in manmade structures, makes this essential for detection before initiating a new project.
Mammals	1, 2, 3, 4, 5	western yellow bat /Lasiurus xanthinus	None / SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly	Medium potential to occur in the project area in all MZ's with suitable habitat (desertic vegetation such as palm trees).

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
				palms. Forages over water and among trees.	
Plants	1, 2, 3, 4	aparejo grass /Muhlenbergia utilis	None / None	Meadows and seeps, marshes and swamps, chaparral, coastal scrub, cismontane woodland. Sometimes alkaline, sometimes serpentinite. 25-2325 m.	Low to medium potential to occur in the southern portion of the project site where more chaparral and marshland exist.. CRPR Plant Rank 2B.2
Plants	1, 2, 3, 4, 5	Brand's star phacelia /Phacelia stellaris	None / None	Coastal scrub, coastal dunes. Open areas. 3-370 m. (CNPS 2019)	Potential to occur in the Study Area is low to medium and only in open pockets of scrub shrub habitat.. CRPR Plant Rank 1B.1
Plants	1, 2, 5	Braunton's milk-vetch /Astragalus brauntonii	Endangered / None	Chaparral, coastal scrub, valley and foothill grassland. Recent burns or disturbed areas; usually on sandstone with carbonate layers. Soil specialist; requires shallow soils to defeat pocket gophers and open areas, preferably on hilltops, saddles or bowls between hills. 3-640 m. (CNPS 2011)	Potential to occur in the Study Area is low due to specific shallow soil type necessary for successful growth and avoidance of burrowing mammals. Observed occurrence was recorded southwest of the Program area in southern cottonwood willow riparian forest in 2010. CRPR Plant Rank 1B.1
Plants	1, 2, 3, 4	California saw-grass /Cladium californicum	None / None	Meadows and seeps, marshes and swamps (alkaline or freshwater). Freshwater or alkaline moist habitats. -20-2135 m. (CNPS 2017)	Occurrence potential medium in the southern portions of the Study Area. CRPR Plant Rank 2B.2
Plants	1, 2, 3, 4, 5	Chaparral sand-verbena	None / None	Chaparral, coastal scrub, desert dunes. Sandy areas. -60-1570 m. (CNPS 2011)	Low potential to occur. CRPR Plant Rank 1B.1

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
		/Abronia villosa var. aurita			
Plants	4, 5	Coulter's goldfields /Lasthenia glabrata ssp. coulteri	None / None	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1375 m. (CNPS 2014)	Low potential to occur. CRPR Plant Rank 1B.1
Plants	1, 2, 5	Coulter's saltbush /Atriplex coulteri	None / None	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 2-460 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1	Greata's aster /Symphyotrichum greatae	None / None	Chaparral, cismontane woodland, broadleafed upland forest, lower montane coniferous forest, riparian woodland. Mesic canyons. 335-2015 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.3
Plants	2	grey-leaved violet /Viola pinetorum ssp. grisea	None / None	Subalpine coniferous forest, upper montane coniferous forest, meadows and seeps. Dry mountain peaks and slopes. 1580-3700 m. (CNPS 2017)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1	Hall's monardella /Monardella macrantha ssp. hallii	None / None	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. Dry slopes and ridges in openings. 700-1800 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.3

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	1, 2, 5	intermediate mariposa-lily /Calochortus weedii var. intermedius	None / None	Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops. 60-1575 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2	Johnston's buckwheat /Eriogonum microthecum var. johnstonii	None / None	Subalpine coniferous forest, upper montane coniferous forest. Slopes and ridges on granite or limestone. 1795-2865 m (CNPS 2019)	Low potential to occur. CRPR Plant Rank 1B.3
Plants	1, 2, 5	Jokerst's monardella /Monardella australis ssp. jokerstii	None / None	Lower montane coniferous forest, chapparal. Steep scree or talus slopes between breccia. Secondary alluvial benches along drainages and washes. 210-1740 m. (CNPS 2014)	Low potential to occur. CRPR Plant Rank 1B.1
Plants	1, 2, 3	lemon lily /Lilium parryi	None / None	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows & seeps. 625-2930 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1, 2, 5	lucky morning-glory /Calystegia felix	None / None	Meadows and seeps, riparian scrub. Sometimes alkaline, alluvial. 9-205 m. (CNPS 2017)	Low potential to occur. CRPR Plant Rank 1B.1

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	1, 2, 3, 4, 5	many-stemmed dudleya /Dudleya multicaulis	None / None	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes. 1-910 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2, 3, 4	marsh sandwort /Arenaria paludicola	Endangered / Endangered	Marshes and swamps. Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 3-170 m.	Occurrence potential is low. This species seems to be all but extirpated and no recently recorded individuals have been detected in the Program area. CRPR Plant Rank 1B.1
Plants	1, 2, 3, 4	mesa horkelia /Horkelia cuneata var. puberula	None / None	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m. (CNPS 2012)	Low potential to occur. CRPR Plant Rank 1B.1
Plants	1, 2	Nevin's barberry /Berberis nevinii	Endangered / Endangered	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m. This species is also a California Native Plant Society S.1 critically imperiled species. (CNPS 2015)	Occurrence potential for this species is low due to historical disturbance in the Study Area. As recently as 2005, some of this species has been detected in the Study Area although this appears to be isolated to the north outside of the Program area. CRPR Plant Rank 1B.1
Plants	2, 3, 4	Parish's bush-mallow /Malacothamnus parishii	None / None	Chaparral, coastal sage scrub. In a wash. 305-455 m.	Low potential to occur. CRPR Plant Rank 1A
Plants	2, 3, 4	Parish's desert-thorn /Lycium parishii	None / None	Coastal scrub, Sonoran desert scrub. -3-570 m.	Low potential to occur. CRPR Plant Rank 2B.3

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	1, 2, 3, 4	Parry's spineflower /Chorizanthe parryi var. parryi	None / None	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.1
Plants	2	Peirson's spring beauty /Claytonia peirsonii ssp. peirsonii	None / None	Upper montane coniferous forest, subalpine coniferous forest. Granitic scree slopes, often with a sandy or fine soil component and granitic cobbles. 1510-2745 m.	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2, 3, 4	prairie wedge grass /Sphenopholis obtusata	None / None	Cismontane woodland, meadows and seeps. Open moist sites, along rivers and springs, alkaline desert seeps. 15-2625 m. (CNPS 2013)	Low potential to occur. CRPR Plant Rank 2B.2
Plants	2, 3, 4	Pringle's monardella /Monardella pringlei	None / None	Coastal scrub. Sandy hills. 300-400 m. (CNPS 2019)	Low potential to occur. CRPR Plant Rank 1A
Plants	1, 2, 3, 4	prostrate vernal pool navarretia /Navarretia prostrata	None / None	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m. (CNPS 2015)	Low potential to occur. CRPR Plant Rank 1B.2

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	1, 2	rigid fringepod /Thysanocarpus rigidus	None / None	Pinyon and juniper woodland. Dry, rocky slopes and ridges of oak and pine woodland in arid mountain ranges. 425-2165 m. (CNPS 2019)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1	Rock Creek broomrape /Orobanche valida ssp. valida	None / None	Chaparral, pinyon and juniper woodland. On slopes of loose decomposed granite; parasitic on various chaparral shrubs. 975-1985 m. (CNPS 2011)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2, 3, 4	salt marsh bird's-beak /Chloropyron maritimum ssp. maritimum	Endangered / Endangered	Marshes and swamps, coastal dunes. Limited to the higher zones of salt marsh habitat. 0-10 m.	This is a possibly extirpated species with no recently recorded individual plants in the Study Area. Occurrence potential low. CRPR Plant Rank 1B.2
Plants	1, 2, 5	salt spring checkerbloom /Sidalcea neomexicana	None / None	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m. (CNPS 2013)	Low potential to occur. CRPR Plant Rank 2B.2
Plants	1, 2, 3, 4, 5	San Bernardino aster /Symphyotrichum defoliatum	None / None	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m. (CNPS 2018)	Low potential to occur. CRPR Plant Rank 1B.2

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	4, 5	San Diego ambrosia /Ambrosia pumila	Endangered / None	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m. (CNPS 2011)	This is a presumed extirpated species with no recently recorded individual plants in the Study Area. Occurrence potential low. CRPR Plant Rank 1B.1
Plants	1, 2	San Gabriel linanthus /Linanthus concinnus	None / None	Lower montane coniferous forest, upper montane coniferous forest, chaparral. Dry rocky slopes, often in Jeffrey pine/canyon oak forest. 1310-2560 m. (CNPS 2012)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1, 2	San Gabriel manzanita /Arctostaphylos glandulosa ssp. gabrielensis	None / None	Chaparral. Rocky outcrops; can be dominant shrub where it occurs. 960-2015 m. (CNPS 201)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2	Sanford's arrowhead /Sagittaria sanfordii	None / None	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. (CNPS 2012)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1, 2, 3, 4, 5	Santa Ana River woollystar /Eriastrum densifolium ssp. sanctorum	Endangered / Endangered	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m. This species is also a California Native Plant Society S.1 critically imperiled species. (CNPS 2016)	Occurrence potential for this species is low to medium due to historical disturbance in the Study Area, although some individuals have been recorded as recently as 2014 in the eastern portion of the Study Area. CRPR Plant Rank 1B.1

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Plants	2, 3	short-joint beavertail /Opuntia basilaris var. brachyclada	None / None	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Sandy soil or coarse, granitic loam. 425-2015 m. (CNPS 2011)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	2, 3	singlewhorl burrobrush /Ambrosia monogyra	None / None	Chaparral, Sonoran desert scrub. Sandy soils. 5-475 m. (CNPS 2013)	Low potential to occur. CRPR Plant Rank 2B.2
Plants	1	slender mariposa-lily /Calochortus clavatus var. gracilis	None / None	Chaparral, coastal scrub, valley and foothill grassland. Shaded foothill canyons; often on grassy slopes within other habitat. 210-1815 m. (CNPS 2015)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1, 2, 3	slender-horned spineflower /Dodecahema leptoceras	Endangered / Endangered	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m. This species is also a California Native Plant Society S.1 critically imperiled species. Many historical examples have been lost by development and stream channelization. (CNPS 2010)	Occurrence potential for this species is low due to historical disturbance in Study Area. Individual plants have been recorded as recently as 2013 in Cajon Wash north of the Program area. CRPR Plant Rank 1B.1
Plants	1, 2, 3, 4, 5	smooth tarplant /Centromadia pungens ssp. laevis	None / None	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. Many historical occurrences may be extirpated. Frequently confused with other Centromadia species such as C. parryi ssp.	Low potential to occur. CRPR Plant Rank 1B.1

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
				australis in ORA, LAX, and SDG cos., and C. pungens ssp. Pungens. (CNPS 2016)	
Plants	1, 2, 3, 5	Southern California black walnut /Juglans californica	None / None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; alluvial. (CNPS 2015)	Occurrence potential of this fragmented species is low due to its historic fragmentation, possible hybridization with horticultural varieties of walnut.. CRPR Plant Rank 4.2
Plants	1	Watson's amaranth /Amaranthus watsonii	None / None	Mojavean desert scrub, Sonoran desert scrub. (CNPS 2017)	Occurrence potential is low. One occurrence northwest of the STUDY AREA on foothills of Mt. Baldy. (Calflora 2023).. CRPR Plant Rank 4.3
Plants	1, 2, 3, 4, 5	white rabbit-tobacco /Pseudognaphalium leucocephalum	None / None	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 35-515 m. (CNPS 2016)	Low potential to occur. CRPR Plant Rank 2B.2
Plants	2, 3	white-bracted spineflower /Chorizanthe xanti var. leucotheca	None / None	Mojavean desert scrub, pinyon and juniper woodland, coastal scrub (alluvial fans). Sandy or gravelly places. 365-1830 m. (CNPS 2010)	Low potential to occur. CRPR Plant Rank 1B.2
Plants	1, 2	woolly mountain-parsley /Oreonana vestita	None / None	Subalpine coniferous forest, upper montane coniferous forest, lower montane coniferous forest. High ridges; on scree, talus, or gravel. 800-3370 m. (CNPS 2011)	Low potential to occur. CRPR Plant Rank 1B.3

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Reptiles	1, 2, 3, 4, 5	California glossy snake /Arizona elegans occidentalis	None / SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	Occurrence potential is low to medium for this species in all areas of the Study Area where loose or sandy soils in scrub or grassland patches of habitat occur. The California glossy snake has adapted to a range of shrub and grassland habitats that exist to varying degree in all MZ's. The most recently recorded observations occur outside of the Program area in 2016.
Reptiles	1, 2, 3, 4, 5	coast horned lizard /Phrynosoma blainvillii	None / None	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Occurrence potential is medium, although potential is higher outside of the immediate Program area, where more undisturbed suitable habitat occurs. Recent observations have been in Santa Ana Canyon in 2005 and Cajon Canyon Creek in 2008 and 2009.
Reptiles	1, 4, 5	coastal whiptail /Aspidoscelis tigris stejnegeri	None / SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland & riparian areas. Ground may be firm soil, sandy, or rocky.	Occurrence potential is low to medium in the riparian areas of the Program area, although there have been no recorded observations past 2006 in the Study Area.
Reptiles	1, 2, 3, 4, 5	orange-throated whiptail /Aspidoscelis hyperythra	None / None	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food: termites.	Occurrence potential is low to medium in the scrub brush and chaparral areas of the Program area. Recently recorded observations in 2010 place this species most likely in the Mockingbird Canyon area in the southern portion of the Program area.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Reptiles	1, 2, 3, 4, 5	red-diamond rattlesnake /Crotalus ruber	None / SSC	Chaparral, woodland, grassland, & desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Occurrence potential is low to medium in the central Program area, and more likely to occur in the rocky, densely vegetated areas, in particular west and outside of MZ-1 in the Puente Hills, where the species was most recently observed in 2017.
Reptiles	2, 3, 4, 5	San Diego banded gecko /Coleonyx variegatus abbotti	None / SSC	Coastal & cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.	Occurrence potential is low in the central Program area, and more likely to occur in the rocky, chaparral habitat areas, in particular in the eastern portion of MZ-5 and west and outside of MZ-1 in the Puente Hills, where the species was most recently observed in 2003.
Reptiles	1, 2, 3, 4, 5	southern California legless lizard /Anniella stebbinsi	None / SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Occurrence potential is medium to high. Several individuals have been observed as recently as 2018 throughout the Study Area. This species has been observed in semi-urbanized areas and can be expected to survive in these areas and adapt to development, while remaining on the fringe habitat that exists in the Program area.
Reptiles	1, 2	two-striped gartersnake /Thamnophis hammondii	None / None	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	Low Occurrence potential in MZ's 2, 3, 4 and 5. Slightly higher potential in the northwest fringe of MZ 1, due to more suitable habitat requirements.

Taxonomic Group	Management Zone with Potential to Occur	Common Name / Scientific Name	Status Federal / State	Typical Habitat	Occurrence Potential
Reptiles	1, 2, 3, 4, 5	western pond turtle /Emys marmorata	None / SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Occurrence potential is medium. As recently as 2011, western pond turtles have been observed in the Santa Ana River corridor within MZ 5.

Chapter 4. Discussion of Impacts and Mitigation

4.1 Discussion of Project Impacts

The construction and operation of the infrastructure required to support the OBMPU may result in direct impacts 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 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. These habitat disturbances within the program 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 mortality or injury 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 environmental review once a location or site has been selected and the 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 of the program 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 often described qualitatively and will be quantitatively addressed in subsequent tiered environmental documents once specific aspects of the program is proposed for implementation and designed.

Construction of any of the program alternatives 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 this activity. All facilities would impact only barren, urban, or agricultural areas and thus construction would potentially impact only the special-status wildlife species that use mostly urban area (e.g., special-status bird species, special-status mammal species, special-status bat species or species present in wetland or streambed habitats within urban areas).

During ongoing operations or maintenance activities requiring ground disturbance, clearing, or grubbing that could cause erosion and sedimentation or that 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 OBMPU right-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 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.

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 improvement as design and

potential impact areas are established. Once a particular facility area of potential impact 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 below will occur, no further biological resource impact analysis may be necessary within a second-tier analysis. Further, where potentially significant impacts may occur, but specific mitigation outlined below can reduce such impacts to a less than significant level, future documentation may rely upon the procedures outlined in Sections 15162 and 15168 of the State CEQA Guidelines to determine the required level of CEQA documentation for future infrastructure projects. OBMP program proponents will perform these analyses at the time individual infrastructure improvements are considered for funding.

- Each resource will be evaluated for its presence or absence, and for the presence of habitat that could support the resource or provide habitat for the resource. Suitable habitat was determined based on background review and identification of species-specific life-history requirements.
- Potential impacts on special-status wildlife species will be determined using a habitat-based approach where the presence of the species was assumed in suitable habitat. Habitats in the project footprint and vicinity were determined through a combination of background review, habitat mapping during field surveys, and aerial photograph interpretation.
- Potential impacts on designated critical habitat will be based on the location of the critical habitat relative to the project footprint and the presence of primary constituent elements (PCEs) associated with the critical habitat designation.

In determining the potential direct and indirect impacts associated with construction and operation impacts on biological resources, a number of assumptions and limitations are identified:

- Construction and operation impacts will be considered temporary if they can be fully restored to pre-disturbance conditions following construction. Temporary impacts would include construction staging areas, construction laydown areas, relocation of underground utilities, and other work space that would not be occupied by permanent facilities during project operation.
- Impacts will be considered permanent when they have lasting effects beyond the project construction period, or cannot be fully restored following construction. Permanent impacts would include new right-of-way for new or expanded facility or water conveyance systems, road crossings, electrical substations, maintenance and operations facilities, and monitoring stations.
- Certain jurisdictional waters types (wetlands) are especially sensitive to disturbance; therefore, impacts on these features will be considered permanent where these features cannot be restored to their pre-project condition due to the permanent loss by new infrastructure.

4.2 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, and 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 appropriate, when the impact being mitigated will be caused by such project.

To reduce or prevent activities that may adversely affect sensitive species, the following mitigation measures shall be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.

4.2-1 Where future project-related impacts will affect undeveloped land, 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 shall 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, pre-construction surveys for special-status plant communities and special-status plant species shall be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species.

4.2-2 Biological Resources Management Plan: During final design, a BRMP shall be prepared to assemble the biological resources mitigation measures for each specific infrastructure improvement in the future. The BRMP shall include terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility. The BRMP shall also 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 shall be formed with the mitigation measures from the project-level EIR/EIS, including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.

To reduce or prevent activities that may adversely affect rivers, streambeds or wetlands, the following mitigation measures shall be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.

4.2-3 Prior to discharge of fill or streambed alteration of jurisdictional areas, the project proponent shall obtain regulatory permits from the U.S. Army Corps of Engineers, local Regional Water Quality Control Board and the California Department of Fish and Wildlife. 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 shall 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.

A Habitat Mitigation and Monitoring Proposal shall be prepared and reviewed and approved by the appropriate regulatory agencies. The project proponent shall also obtain permits from the regulatory 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) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but project proponents will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

4.2-4 Jurisdictional Water Preconstruction Surveys: A jurisdictional water preconstruction survey shall be conducted at least six months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and if possible within a 250-foot buffer. The purpose of this survey is to confirm the extent of jurisdictional waters in areas where permission to enter was not previously granted and where aerial photograph interpretation was used to estimate the extent of these features. 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.

Regarding active bird nests, the following mitigation measure shall be applied to this program.

4.2-5 It is illegal to "take" active bird nests of native birds, and if such nests are present at a project site, no take is allowed. To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal shall be conducted outside of the State identified nesting season (nesting season is approximately from February 15 through September 1 of a given calendar year). Alternatively, coordination with the CDFW to conduct nesting bird surveys shall be completed, and methodology of surveys will be agreed upon. All nesting bird surveys shall be conducted by a qualified biologist prior to initiation of ground disturbance to demonstrate that no bird nests will be disturbed by project construction activities.

The following mitigation can reduce the impact to burrowing owl to a less than significant level.

4.2-6 Prior to commencement of construction activity in locations that are not fully developed, protocol burrowing owl survey shall 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 following mitigation can ensure consistency with any HCP or MSHCP.

4.2-7 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.

Implementation of the above measures is protective of the environment. Should the regulatory agencies determine an alternative, equivalent mitigation program during acquisition of regulatory permits, such measure shall be deemed equivalent to the above measures and no additional environmental documentation shall be required to implement a measure different than outlined above. Note that if impacts cannot be mitigated or avoided in the manner outlined in the measures above, then subsequent environmental documentation would have to be prepared in accordance with procedures outlined in Section 15162 of the State CEQA Guidelines.

Implementation of the following mitigation measures will ensure that project design and site selection reduce impacts to sensitive biological resources to the extent feasible.

4.2.8 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 facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific facilities improvement.

4.2.9 Require facility designs and maintenance activities 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, 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 an measurable reduction in the reproductive capacity of sensitive biotic resources.

c. Within habitats of plants listed by the CNDDB 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.

4.2-10 Maximize the preservation of individual oak, sycamore and walnut trees within proposed development sites.

4.2-11 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.

Implementation of the following mitigation measures will ensure that project construction impacts to sensitive biological resources, including the potential effects of invasive species, are reduced to the extent feasible.

4.2-12 Following construction activities 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 qualified biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.

4.2-13 Clean Construction Equipment. During construction, equipment shall be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials shall 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.

4.2-14 Contractor Education and Environmental Training.

Personnel who work onsite shall attend a Contractor Education and Environmental Training session. The environmental training is likely to be required by the regulatory agencies and shall cover general and specific biological information on the special-status plant species, 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 shall 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 shall be performed during the daily safety ("tailgate") meeting. All personnel who attend the training shall be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training.

4.2-15 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) shall 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 (qualified 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) shall 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) shall 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.

4.2-16 Food and Trash: All food-related trash items (e.g., wrappers, cans, bottles, food scraps) shall be disposed of in closed containers and removed at least once a week from the construction site.

4.2-17 Rodenticides and Herbicides: Use of rodenticides and herbicides in the project footprint shall be restricted. 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.

4.2-18 Wildlife Exclusion Fencing: Exclusion barriers (e.g., silt fences) shall be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas to restrict special-status species from entering the construction area. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW. Clearance surveys shall be conducted for special-status species after the exclusion fence is installed. If necessary, clearance surveys will be conducted daily.

4.2-19 Equipment Staging Areas: Staging areas for construction equipment shall be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors, to the maximum extent possible.

4.2-20 Plastic mono-filament netting (erosion-control matting) or similar material shall not be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds shall be used as substitutes.

4.2-21 Vehicle Traffic. During ground-disturbing activities, project-related vehicle traffic shall be restricted within the construction area to established roads, construction areas, and other designated areas to

prevent avoidable impacts. Access routes shall be clearly flagged, and off-road traffic shall be prohibited.

4.2-22 Entrapment Prevention: All excavated, steep-sided holes or trenches more than 8 inches deep shall 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 shall be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals.

All culverts or similar enclosed structures with a diameter of 4 inches or greater shall be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material shall be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.

4.2-23 Weed Control Plan: A Weed Control Plan shall be prepared and implemented to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics shall be addressed:

- *Schedule for noxious weed surveys.*
- *Weed control treatments, including permitted herbicides, and manual and mechanical methods for application; herbicide application shall be restricted in Environmentally Sensitive Areas.*
- *Timing of the weed control treatment for each plant species.*
- *Fire prevention measures.*

4.2-24 Dewatering/Water Diversion: Open or flowing water may be present during construction. If construction occurs where there is open or flowing water, a strategy that is approved by the resource agencies (e.g., USACE, SWRCB/RWQCB, and CDFW), such as the creation of cofferdams, shall be used to dewater or divert water from the work area. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures is recommended 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 shall 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 shall be periodically removed from the catch basins.*

Implementation of the above 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.

4.3 Regulatory Compliance

Impacts on biological resources shall be permitted or authorized through consultation with the various natural resource regulatory agencies (USFWS, USACE, SWRCB/RWQCB, and CDFW). Both formal and informal consultation with these agencies may result in additional project-specific avoidance and minimization measures.

4.3.1 Regulatory Agency Access

If requested, before, during, or on completion of ground-disturbing activities, access to the construction site will be provided to USFWS, USACE, SWRCB/RWQCB, and CDFW staff. Because of safety concerns, agency personnel will check in with the Contractor before accessing the construction site. If agency personal access the construction site, the biological monitor will prepare a memorandum within 1 day of the visit that documents agency access and issues raised during any field meeting.

4.4 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. One example is the critical habitat designated for the Southwestern willow flycatcher along the Santa Ana River to the south of the Program area. The specific locations of pertinent critical habitat areas are shown in maps contained in Chapter 6 - Figures. The primary mitigation for potential impacts to critical habitat will be avoidance. Where avoidance is not feasible, mitigation measures 4.2-1 and 4.2-7 will be implemented. It is rare that critical habitat extends directly within the property owned by project proponents because these areas are generally maintained to support the OBMP operations, not protect habitat. However, where either permanent or temporary disturbances will occur within critical habitat, full mitigation will be provided to offset impacts to such habitat. 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 the new projects are identified, and location, engineering and designs 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.

4.4.1 Wetlands and Other Waters Coordination Summary

Wetlands and other waters in the project vicinity, including waters of the U.S., waters of the state, and state streambeds, are regulated by the federal government (USACE) and the State of California (RWRCB 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 USACE, SWRCB, and CDFW for purposes of this discussion. The jurisdictional status of these waters will be confirmed by the USACE, SWRCB, and CDFW when the regulatory permitting process is conducted. Further definitions are presented below.

- **Wetlands**: According to the USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and the recently published Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008b), three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation), (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils), and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).
- **Waters of the U.S.**: The CWA defines waters of the U.S. as follows: (1) all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U.S.; (5) tributaries to the foregoing types of waters; and (6) wetlands adjacent to the foregoing waters (33 CFR 328.3[a]). Current status of the Waters of the US Rule continues to change. Any regulatory environment must be reassessed for each future project 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 (Section 1305[e]). Under this definition, isolated wetlands that may not be subject to regulations under

federal law are considered waters of the state. On March 9, 2012, the California Water Boards released a preliminary draft of their Wetland Area Protection Policy, which includes a proposed wetland definition. Under their proposed definition, an area is a wetland if, under normal circumstances, it (1) is continuously or recurrently inundated with shallow water or saturated within the upper substrate; (2) has anaerobic conditions within the upper substrate caused by such hydrology; and (3) either lacks vegetation or the vegetation is dominated by hydrophytes (SWRCB 2012).

- **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 for the OBMP. Many of the jurisdictional waters (built waterways) are heavily managed by local flood control districts, which serve public water needs and flood protection. 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 (hydro-modification), 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.

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.

4.5 Cumulative Impacts

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 4.2 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.

These 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 subsequent tier document.

However, 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 final site selection and 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.

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Chapter 6. Figures

FIGURE 1-1 – Regional Map of Chino Basin Recharge Facilities

Main Map Features

- Recharge Basins in the Recycled Water Groundwater Recharge Program
- Non-Program Basins
- Rivers and Streams

Chino Basin Recycled Water Groundwater Recharge Program

Basin Locations

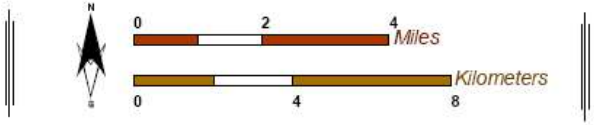

Figure 1-1

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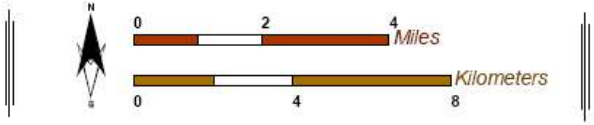
- Rivers and Streams

Chino Basin Recycled Water Groundwater Recharge Program

Basin Locations



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- Rivers and Streams

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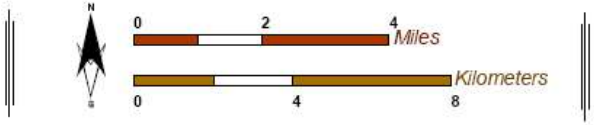
Basin Locations



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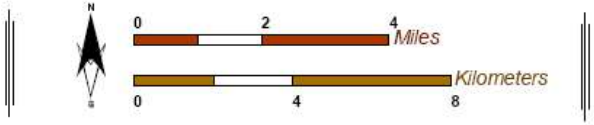

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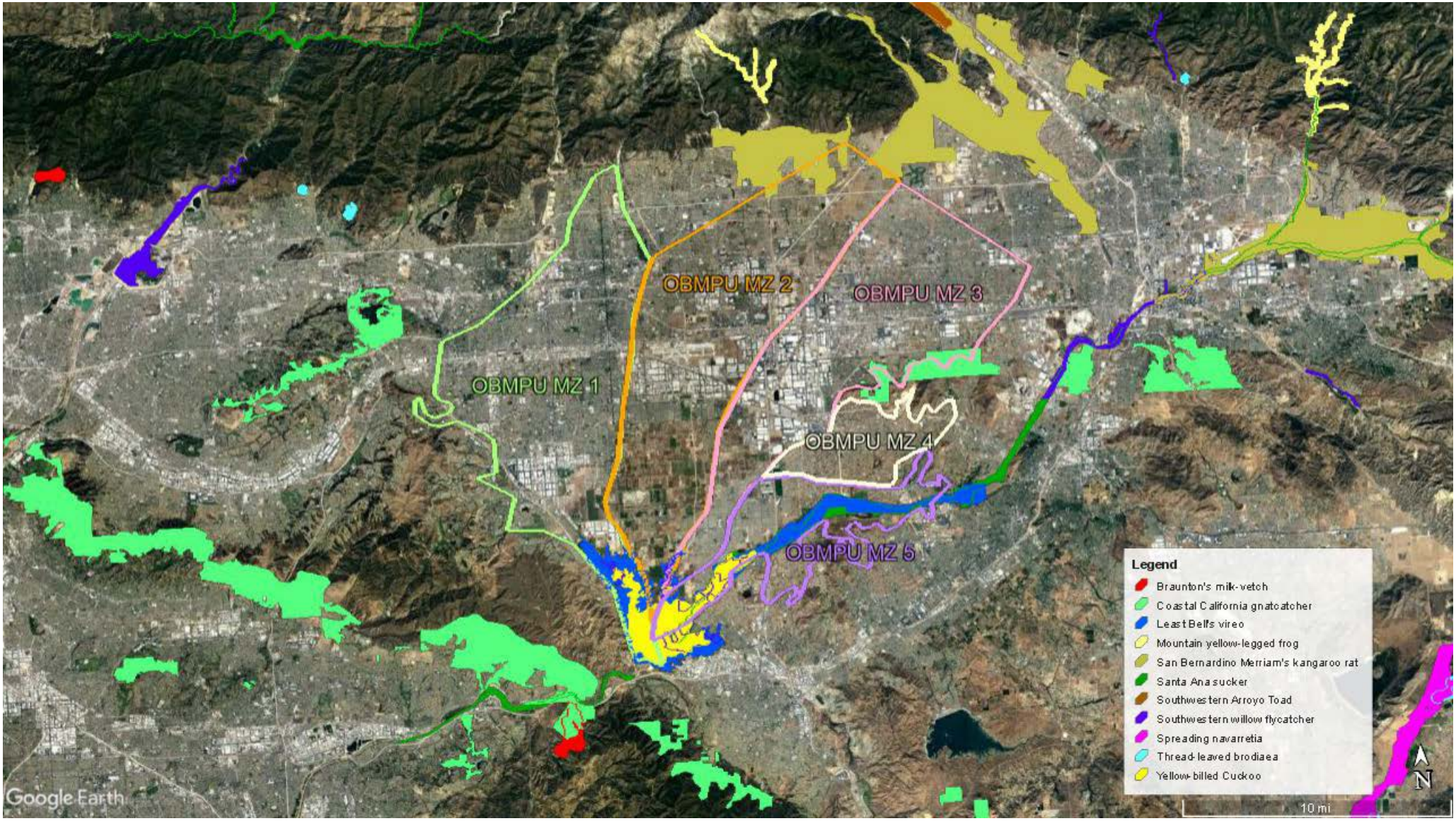
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Braunton's milk-vetch
Coastal California gnatcatcher
Least Bell's vireo
Mountain yellow-legged frog
San Bernardino Merriam's kangaroo rat
Santa Ana sucker
Southwestern Arroyo Toad
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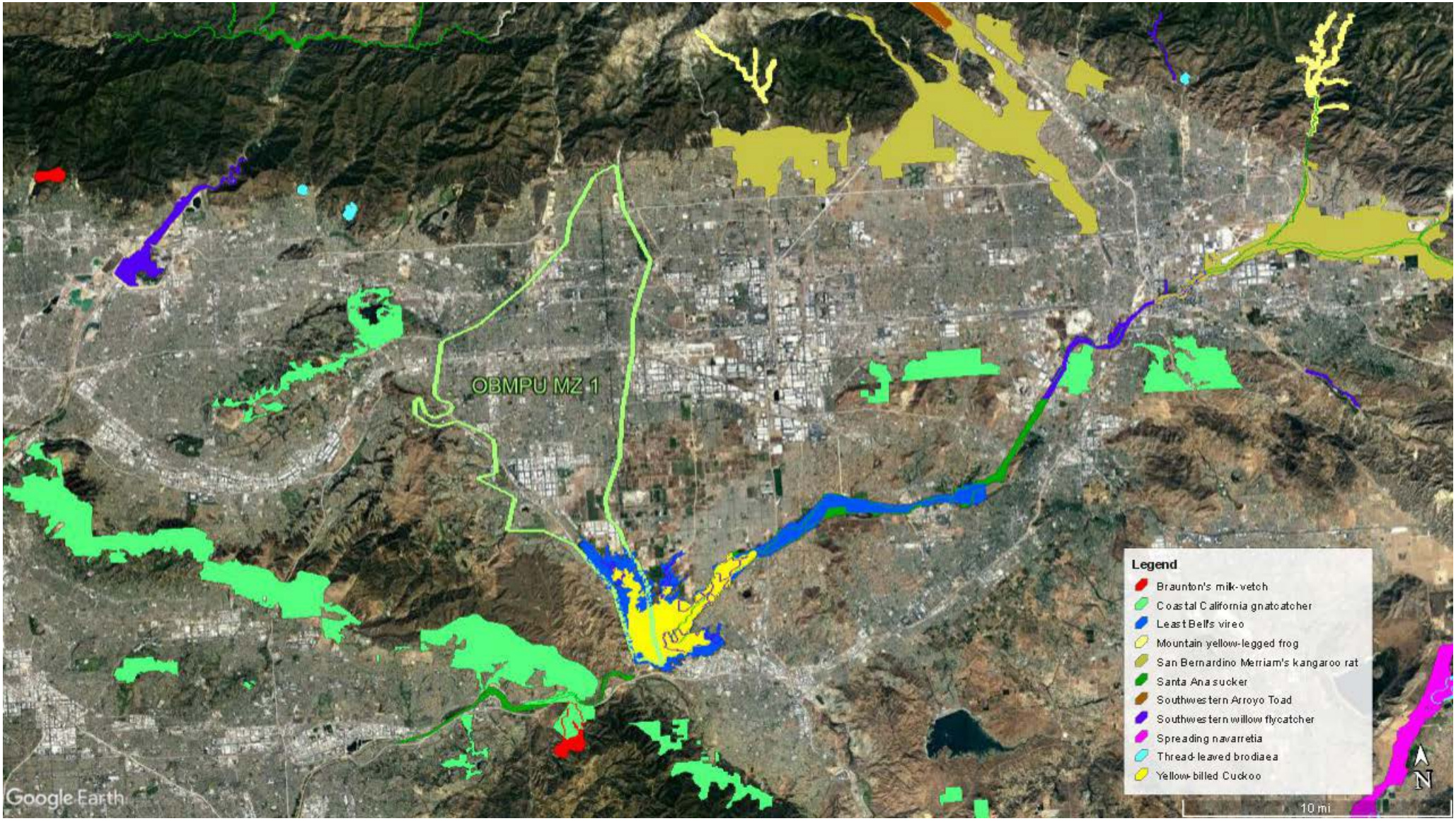
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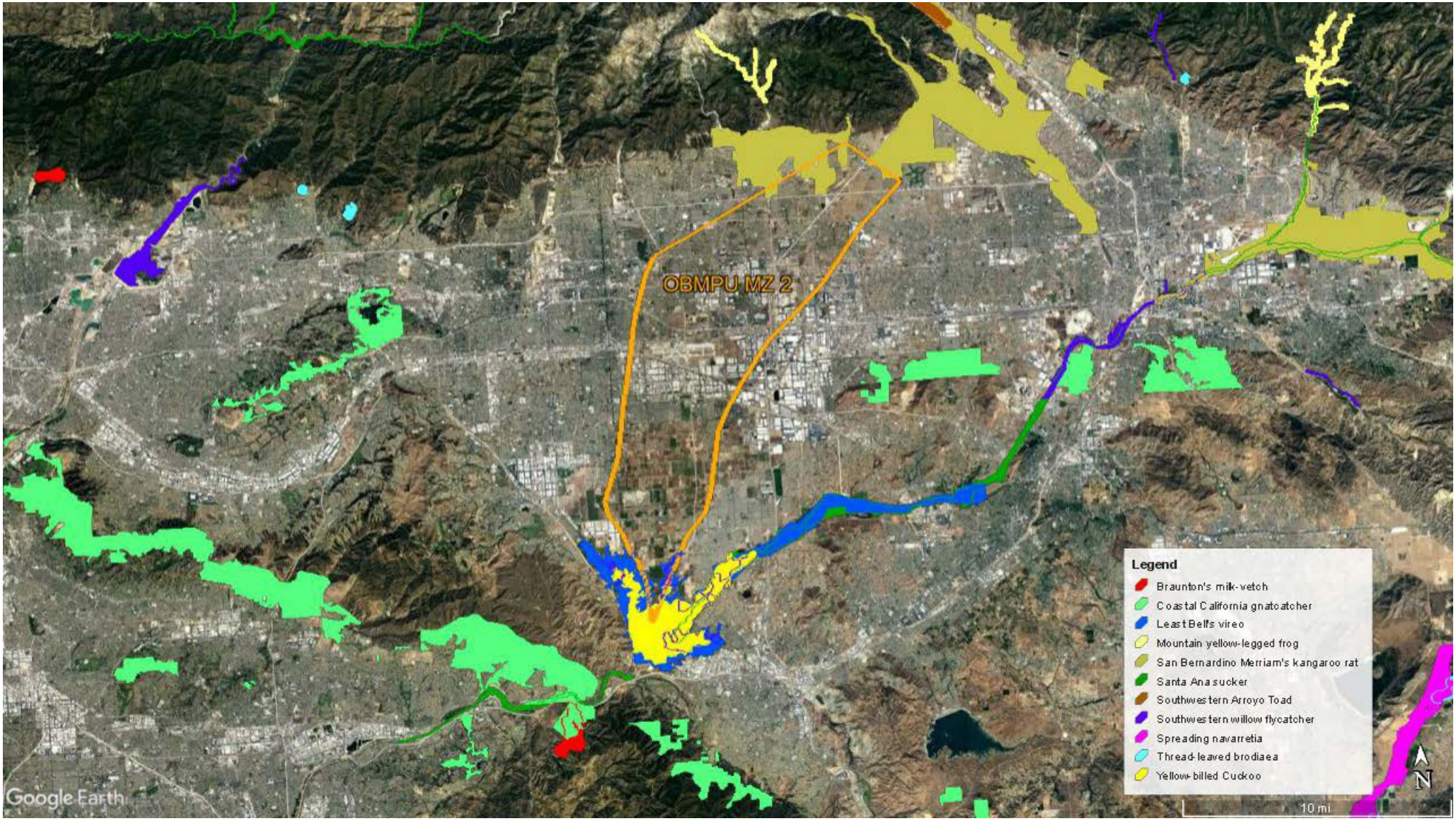
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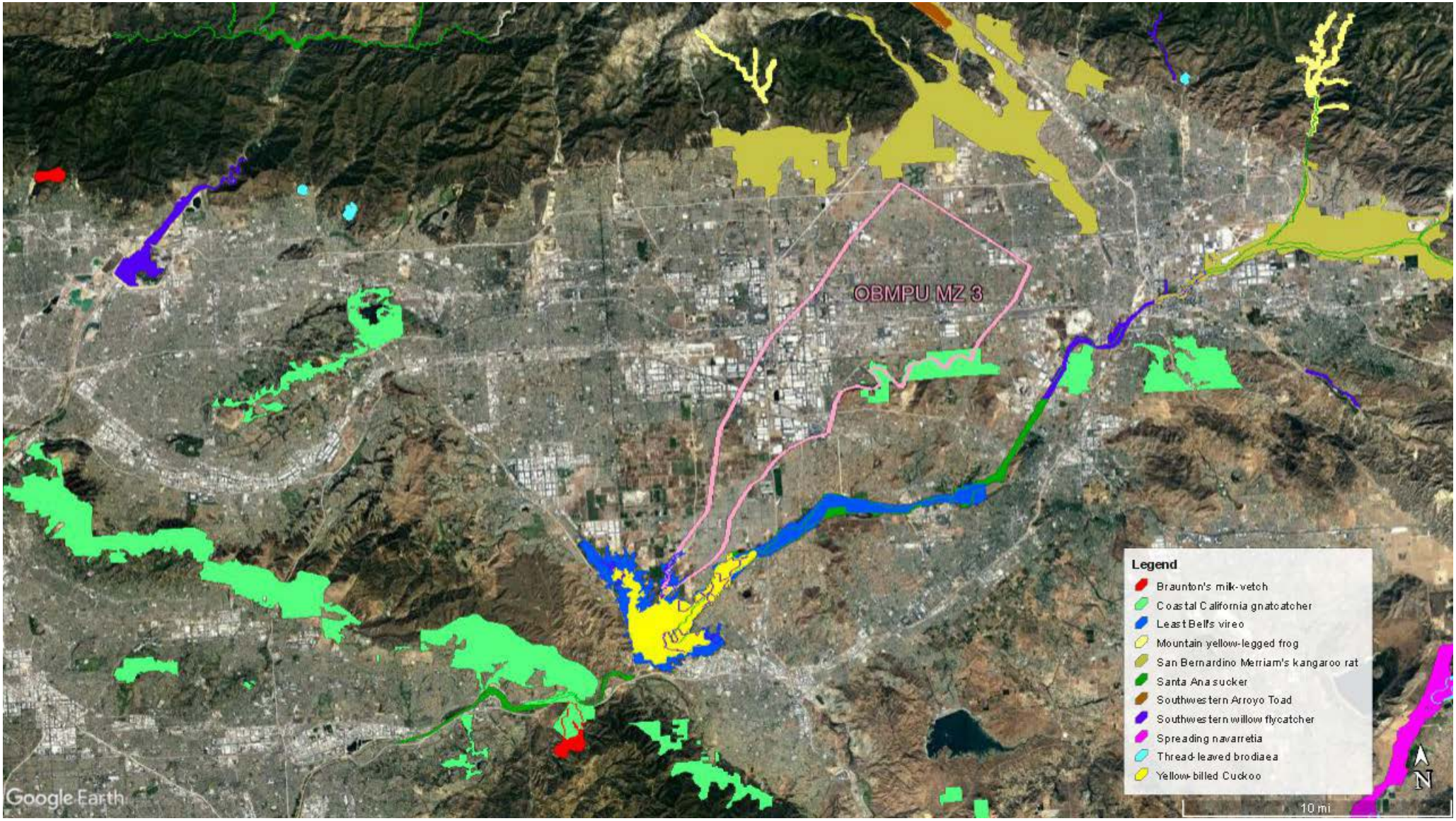
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Southwestern willow flycatcher
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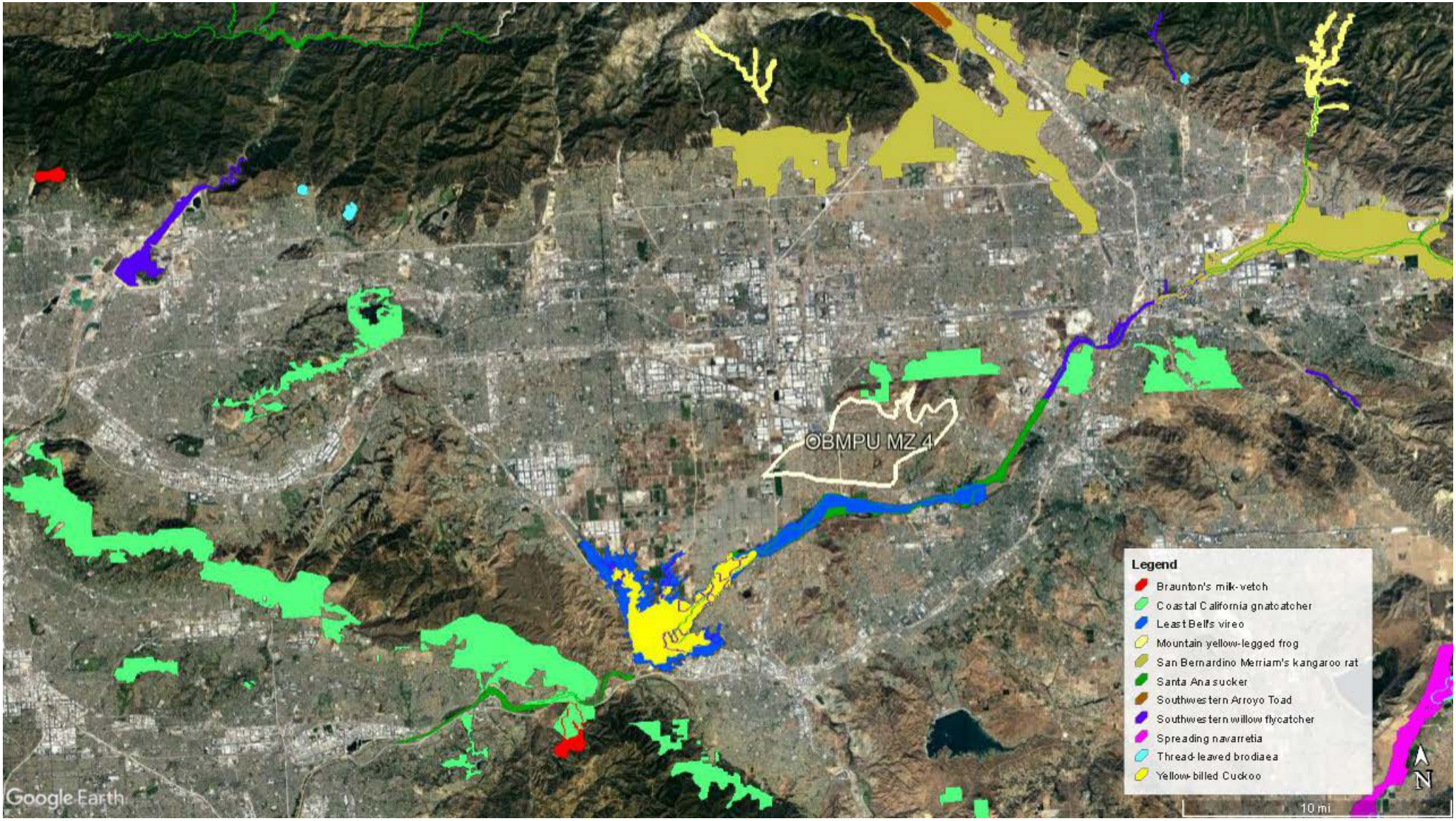
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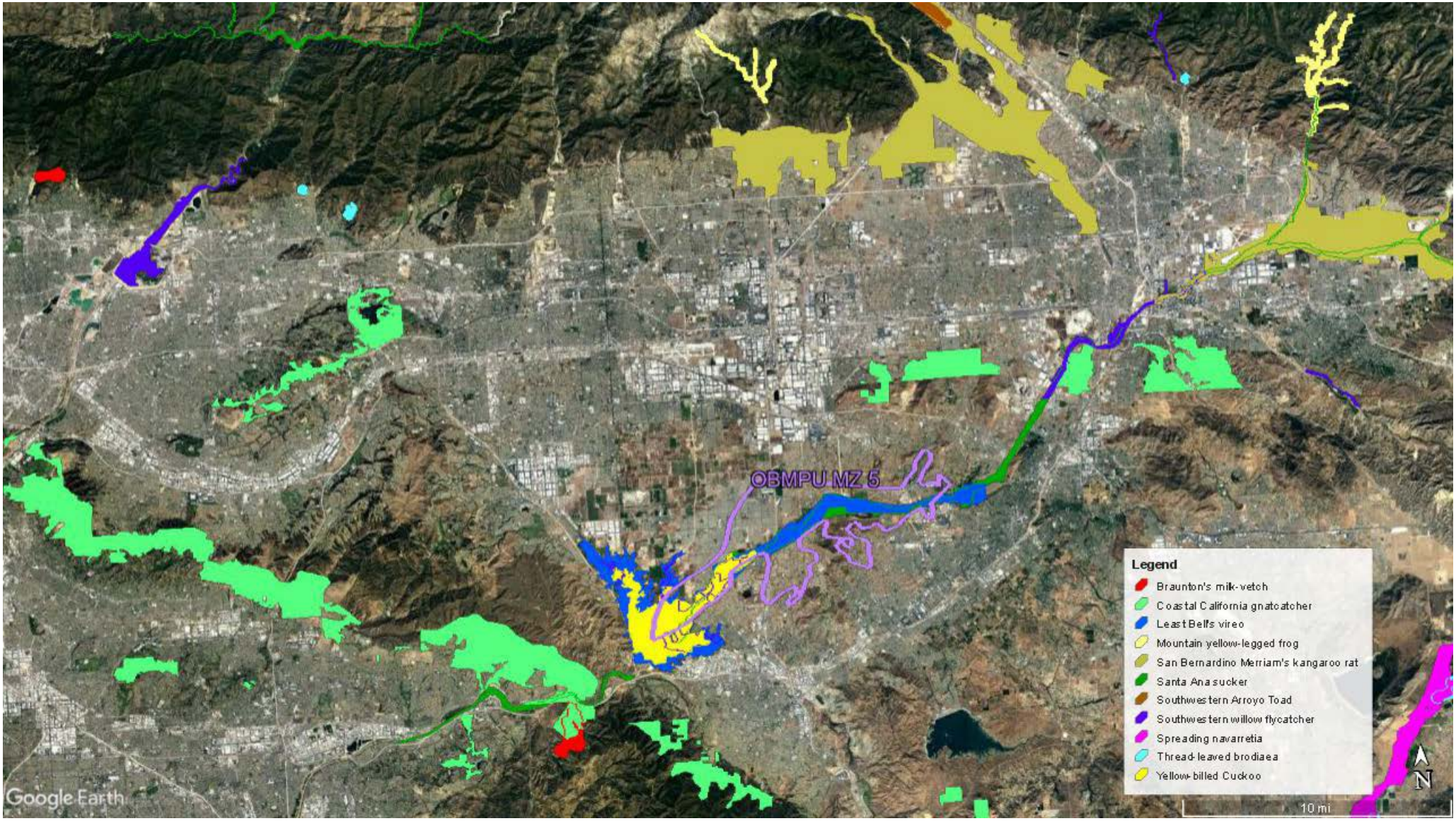
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Mountain yellow-legged frog
San Bernardino Merriam's kangaroo rat
Santa Ana sucker
Southwestern Arroyo Toad
Southwestern willow flycatcher
Spreading navarretia
Thread-leaved brodiaea
Yellow-billed Cuckoo
Google Earth
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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Corona North (3311785) OR Cucamonga Peak (3411725) OR Devore (3411724) OR Fontana (3411714) OR Guasti (3411715) OR Mt. Baldy (3411726) OR Ontario (3411716) OR Prado Dam (3311786) OR Riverside West (3311784) OR San Dimas (3411717))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Abronia villosa var. aurita chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Aimophila ruficeps canescens southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
Ambrosia monogyra singlewhorl burrobrush	PDAST50010	None	None	G5	S2	2B.2
Ambrosia pumila San Diego ambrosia	PDAST0C0M0	Endangered	None	G1	S1	1B.1
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Anaxyrus californicus arroyo toad	AAABB01230	Endangered	None	G2G3	S2	SSC
Anniella stebbinsi Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aphyllon validum ssp. validum Rock Creek broomrape	PDORO040G2	None	None	G4T2	S2	1B.2
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arctostaphylos glandulosa ssp. gabrielensis San Gabriel manzanita	PDERI042P0	None	None	G5T3	S3	1B.2
Arenaria paludicola marsh sandwort	PDCAR040L0	Endangered	Endangered	G1	S1	1B.1
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Artemisiospiza belli belli Bell's sparrow	ABPBX97021	None	None	G5T2T3	S3	WL
Asio otus long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
Aspidoscelis hyperythra orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Aspidoscelis tigris stejnegeri coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
Astragalus brauntonii Braunton's milk-vetch	PDFAB0F1G0	Endangered	None	G2	S2	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex coulteri Coulter's saltbush	PDCHE040E0	None	None	G3	S1S2	1B.2
Batrachoseps gabrieli San Gabriel slender salamander	AAAAD02110	None	None	G2G3	S2S3	
Berberis nevinii Nevin's barberry	PDBER060A0	Endangered	Endangered	G1	S1	1B.1
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S4	
California Walnut Woodland California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
Callophrys mossii hidakupa San Gabriel Mountains elfin butterfly	IILEPE2206	None	None	G4T1T2	S1S2	
Calochortus clavatus var. gracilis slender mariposa-lily	PMLIL0D096	None	None	G4T2T3	S2S3	1B.2
Calochortus plummerae Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
Calochortus weedii var. intermedius intermediate mariposa-lily	PMLIL0D1J1	None	None	G3G4T3	S3	1B.2
Calystegia felix lucky morning-glory	PDCON040P0	None	None	G1Q	S1	1B.1
Campylorhynchus brunneicapillus sandiegensis coastal cactus wren	ABPBG02095	None	None	G5T3Q	S2	SSC
Canyon Live Oak Ravine Forest Canyon Live Oak Ravine Forest	CTT61350CA	None	None	G3	S3.3	
Catostomus santaanae Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
Centromadia pungens ssp. laevis smooth tarplant	PDAST4R0R4	None	None	G3G4T2	S2	1B.1
Ceratochrysis longimala Desert cuckoo wasp	IIHYM71040	None	None	G1	S1	
Chaetodipus fallax fallax northwestern San Diego pocket mouse	AMAFD05031	None	None	G5T3T4	S3S4	SSC
Chaetodipus fallax pallidus pallid San Diego pocket mouse	AMAFD05032	None	None	G5T3T4	S3S4	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Chloropyron maritimum ssp. maritimum salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
Chorizanthe parryi var. parryi Parry's spineflower	PDPGN040J2	None	None	G3T2	S2	1B.1
Chorizanthe xanti var. leucotheca white-bracted spineflower	PDPGN040Z1	None	None	G4T3	S3	1B.2
Cicindela tranquebarica viridissima greenest tiger beetle	IICOL02201	None	None	G5T1	S1	
Cladium californicum California saw-grass	PMCYP04010	None	None	G4	S2	2B.2
Claytonia peirsonii ssp. peirsonii Peirson's spring beauty	PDPOR03121	None	None	G2G3T2	S2	1B.2
Coastal and Valley Freshwater Marsh Coastal and Valley Freshwater Marsh	CTT52410CA	None	None	G3	S2.1	
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Coleonyx variegatus abbotti San Diego banded gecko	ARACD01031	None	None	G5T5	S1S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Crotalus ruber red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
Cypseloides niger black swift	ABNUA01010	None	None	G4	S2	SSC
Diplectrona californica California diplectronan caddisfly	IITRI23010	None	None	G1G2	S1	
Dipodomys merriami parvus San Bernardino kangaroo rat	AMAFD03143	Endangered	Candidate Endangered	G5T1	S1	SSC
Dipodomys stephensi Stephens' kangaroo rat	AMAFD03100	Threatened	Threatened	G2	S2	
Dodecahema leptoceras slender-horned spineflower	PDPGN0V010	Endangered	Endangered	G1	S1	1B.1
Dudleya multicaulis many-stemmed dudleya	PDCRA040H0	None	None	G2	S2	1B.2
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Empidonax traillii extimus southwestern willow flycatcher	ABPAE33043	Endangered	Endangered	G5T2	S3	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eriastrum densifolium ssp. sanctorum Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eriogonum microthecum var. johnstonii Johnston's buckwheat	PDPGN083W5	None	None	G5T2	S2	1B.3
Eugnosta busckana Busck's gallmoth	IILEM2X090	None	None	G1G3	S2S3	
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Euphydryas editha quino quino checkerspot butterfly	IILEPK405L	Endangered	None	G5T1T2	S1S2	
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Gila orcuttii arroyo chub	AFCJB13120	None	None	G2	S2	SSC
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S2	
Horkelia cuneata var. puberula mesa horkelia	PDROS0W045	None	None	G4T1	S1	1B.1
Icteria virens yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lasiurus xanthinus western yellow bat	AMACC05070	None	None	G4G5	S3	SSC
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3T1	S2	FP
Lepidium virginicum var. robinsonii Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
Lepus californicus bennettii San Diego black-tailed jackrabbit	AMAEB03051	None	None	G5T3T4	S3S4	
Lilium parryi lemon lily	PMLIL1A0J0	None	None	G3	S3	1B.2
Linanthus concinnus San Gabriel linanthus	PDPLM090D0	None	None	G2	S2	1B.2
Lycium parishii Parish's desert-thorn	PDSOL0G0D0	None	None	G4	S1	2B.3
Malacothamnus parishii Parish's bush-mallow	PDMAL0Q0C0	None	None	GXQ	SX	1A
Monardella australis ssp. jokerstii Jokerst's monardella	PDLAM18112	None	None	G4T1?	S1?	1B.1
Monardella breweri ssp. glandulifera Brown's Flat monardella	PDLAM180B1	None	None	G5T1	S1	1B.2

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Monardella macrantha ssp. hallii Hall's monardella	PDLAM180E1	None	None	G5T3	S3	1B.3
Monardella pringlei Pringle's monardella	PDLAM180J0	None	None	GX	SX	1A
Muhlenbergia californica California muhly	PMPOA480A0	None	None	G4	S4	4.3
Muhlenbergia utilis aparejo grass	PMPOA481X0	None	None	G4	S2S3	2B.2
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Neolarra alba white cuckoo bee	IIHYM81010	None	None	GH	SH	
Neotoma lepida intermedia San Diego desert woodrat	AMAFF08041	None	None	G5T3T4	S3S4	SSC
Nyctinomops femorosaccus pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
Nyctinomops macrotis big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	AFCHA0209J	Endangered	Candidate Endangered	G5T1Q	S1	
Opuntia basilaris var. brachyclada short-joint beavertail	PDCAC0D053	None	None	G5T3	S3	1B.2
Oreonana vestita woolly mountain-parsley	PDAPI1G030	None	None	G3	S3	1B.3
Ovis canadensis nelsoni desert bighorn sheep	AMALE04013	None	None	G4T4	S3	FP
Perognathus longimembris brevinasus Los Angeles pocket mouse	AMAFD01041	None	None	G5T2	S1S2	SSC
Phacelia stellaris Brand's star phacelia	PDHYD0C510	None	None	G1	S1	1B.1
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G4	S4	SSC
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
Pseudognaphalium leucocephalum white rabbit-tobacco	PDAST440C0	None	None	G4	S2	2B.2
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	AAABH01056	Proposed Endangered	Endangered	G3T1	S1	
Rana muscosa southern mountain yellow-legged frog	AAABH01330	Endangered	Endangered	G1	S1	WL
Rhaphiomidas terminatus abdominalis Delhi Sands flower-loving fly	IIDIP05021	Endangered	None	G1T1	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rhinichthys osculus ssp. 8	AFCJB3705K	None	None	G5T1	S1	SSC
Santa Ana speckled dace						
Riversidian Alluvial Fan Sage Scrub	CTT32720CA	None	None	G1	S1.1	
Riversidian Alluvial Fan Sage Scrub						
Sagittaria sanfordii	PMALI040Q0	None	None	G3	S3	1B.2
Sanford's arrowhead						
Senecio aphanactis	PDAST8H060	None	None	G3	S2	2B.2
chaparral ragwort						
Setophaga petechia	ABPBX03010	None	None	G5	S3S4	SSC
yellow warbler						
Sidalcea neomexicana	PDMAL110J0	None	None	G4	S2	2B.2
salt spring checkerbloom						
Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
Southern California Arroyo Chub/Santa Ana Sucker Stream						
Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
Southern Coast Live Oak Riparian Forest						
Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
Southern Cottonwood Willow Riparian Forest						
Southern Riparian Forest	CTT61300CA	None	None	G4	S4	
Southern Riparian Forest						
Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
Southern Sycamore Alder Riparian Woodland						
Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
Southern Willow Scrub						
Spea hammondii	AAABF02020	None	None	G2G3	S3S4	SSC
western spadefoot						
Sphenopholis obtusata	PMPOA5T030	None	None	G5	S2	2B.2
prairie wedge grass						
Spinus lawrencei	ABPBY06100	None	None	G3G4	S4	
Lawrence's goldfinch						
Streptanthus bernardinus	PDBRA2G060	None	None	G3G4	S3S4	4.3
Laguna Mountains jewelflower						
Symphyotrichum defoliatum	PDASTE80C0	None	None	G2	S2	1B.2
San Bernardino aster						
Symphyotrichum greatae	PDASTE80U0	None	None	G2	S2	1B.3
Greata's aster						
Taricha torosa	AAAAF02032	None	None	G4	S4	SSC
Coast Range newt						
Taxidea taxus	AMAJF04010	None	None	G5	S3	SSC
American badger						
Thamnophis hammondii	ARADB36160	None	None	G4	S3S4	SSC
two-striped gartersnake						

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Thysanocarpus rigidus rigid fringepod	PDBRA2Q070	None	None	G2	S2	1B.2
Viola pinetorum ssp. grisea grey-leaved violet	PDVIO04431	None	None	G4G5T3	S3	1B.2
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	
Walnut Forest Walnut Forest	CTT81600CA	None	None	G1	S1.1	

Record Count: 127

United States Department of the Interior

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In Reply Refer To: January 07, 2020
Consultation Code: 08ECAR00-2020-SLI-0426
Event Code: 08ECAR00-2020-E-01015
Project Name: OBMP PEIR Update MZ1

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0426

Event Code: 08ECAR00-2020-E-01015

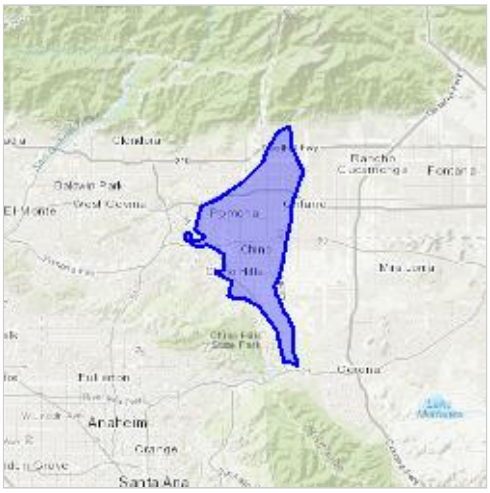
Project Name: OBMP PEIR Update MZ1

Project Type: WATER SUPPLY / DELIVERY

Project Description: Optimum Basin Management Plan PEIR Update - MZ1

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.02331759100005N117.69534835335432W



Counties: Los Angeles, CA | Riverside, CA | San Bernardino, CA

Endangered Species Act Species

There is a total of 12 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3762	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Braunton's Milk-vetch *Astragalus brauntonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5674	Endangered
Nevin's Barberry *Berberis nevinii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There are 3 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Least Bell's Vireo *Vireo bellii pusillus* https://ecos.fws.gov/ecp/species/5945#crithab	Final
Southwestern Willow Flycatcher *Empidonax traillii extimus* https://ecos.fws.gov/ecp/species/6749#crithab	Final
Yellow-billed Cuckoo *Coccyzus americanus* For information on why this critical habitat appears for your project, even though Yellow-billed Cuckoo is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/3911#crithab	Proposed

United States Department of the Interior

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In Reply Refer To: January 07, 2020
Consultation Code: 08ECAR00-2020-SLI-0427
Event Code: 08ECAR00-2020-E-01019
Project Name: OBMP PEIR Update MZ2

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

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Attachment(s):

- Official Species List

Official Species List

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This species list is provided by:

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Project Summary

Consultation Code: 08ECAR00-2020-SLI-0427

Event Code: 08ECAR00-2020-E-01019

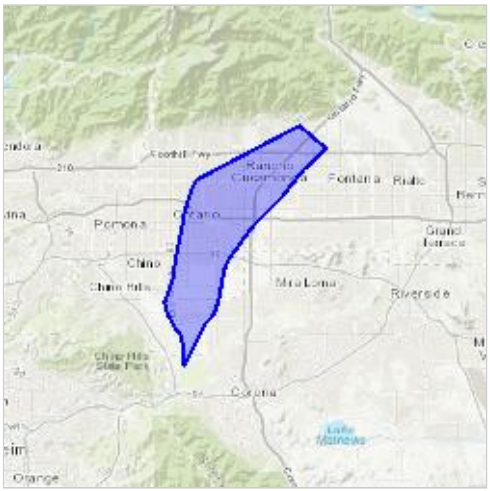
Project Name: OBMP PEIR Update MZ2

Project Type: WATER SUPPLY / DELIVERY

Project Description: Optimum Basin Management Plan PEIR Update - MZ2

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.037629519000035N117.60389695221778W



Counties: Riverside, CA | San Bernardino, CA

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3762	Endangered
Mountain Yellow-legged Frog *Rana muscosa* Population: Southern California DPS There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8037	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Braunton's Milk-vetch *Astragalus brauntonii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5674	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Slender-horned Spineflower *Dodecahema leptoceras* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4007	Endangered
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There are 4 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Least Bell's Vireo *Vireo bellii pusillus* https://ecos.fws.gov/ecp/species/5945#crithab	Final
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* https://ecos.fws.gov/ecp/species/2060#crithab	Final
Southwestern Willow Flycatcher *Empidonax traillii extimus* https://ecos.fws.gov/ecp/species/6749#crithab	Final
Yellow-billed Cuckoo *Coccyzus americanus* For information on why this critical habitat appears for your project, even though Yellow-billed Cuckoo is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/3911#crithab	Proposed

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
http://www.fws.gov/carlsbad/

In Reply Refer To: January 07, 2020
Consultation Code: 08ECAR00-2020-SLI-0428
Event Code: 08ECAR00-2020-E-01022
Project Name: OBMP PEIR Update MZ3

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0428

Event Code: 08ECAR00-2020-E-01022

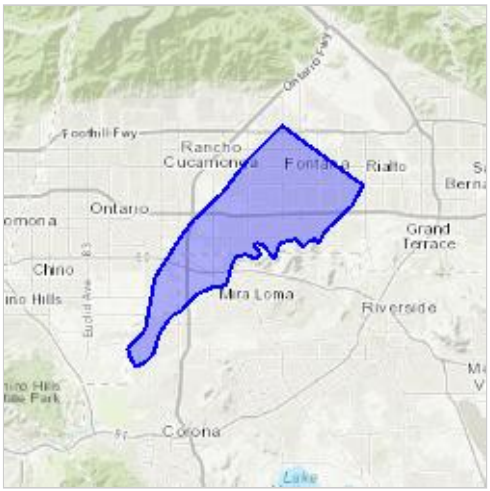
Project Name: OBMP PEIR Update MZ3

Project Type: WATER SUPPLY / DELIVERY

Project Description: Optimum Basin Management Plan PEIR Update - MZ3

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.039474964500045N117.52218800533493W



Counties: Riverside, CA | San Bernardino, CA

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Amphibians

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3762	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Gambel's Watercress *Rorippa gambellii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4201	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Slender-horned Spineflower *Dodecahema leptoceras* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4007	Endangered
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* https://ecos.fws.gov/ecp/species/8178#crithab	Final

United States Department of the Interior

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http://www.fws.gov/carlsbad/

In Reply Refer To: January 07, 2020
Consultation Code: 08ECAR00-2020-SLI-0429
Event Code: 08ECAR00-2020-E-01024
Project Name: OBMP PEIR Update MZ4

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0429

Event Code: 08ECAR00-2020-E-01024

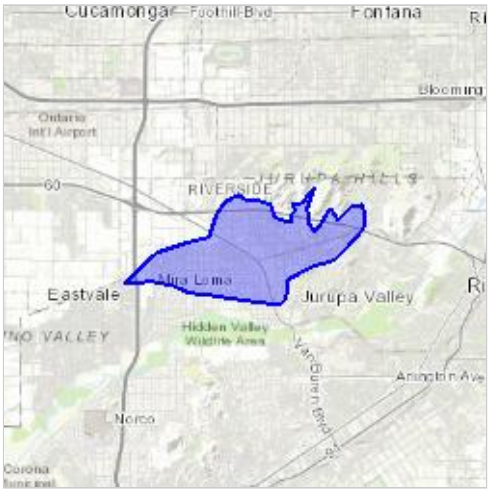
Project Name: OBMP PEIR Update MZ4

Project Type: WATER SUPPLY / DELIVERY

Project Description: Optimum Basin Management Plan PEIR Update - MZ4

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/34.003541719000054N117.48346827371635W



Counties: Riverside, CA

Endangered Species Act Species

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Nevin's Barberry *Berberis nevinii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* https://ecos.fws.gov/ecp/species/8178#crithab	Final

United States Department of the Interior

FISH AND WILDLIFE SERVICE
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http://www.fws.gov/carlsbad/

In Reply Refer To: January 07, 2020
Consultation Code: 08ECAR00-2020-SLI-0430
Event Code: 08ECAR00-2020-E-01026
Project Name: OBMP PEIR Update MZ5

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0430

Event Code: 08ECAR00-2020-E-01026

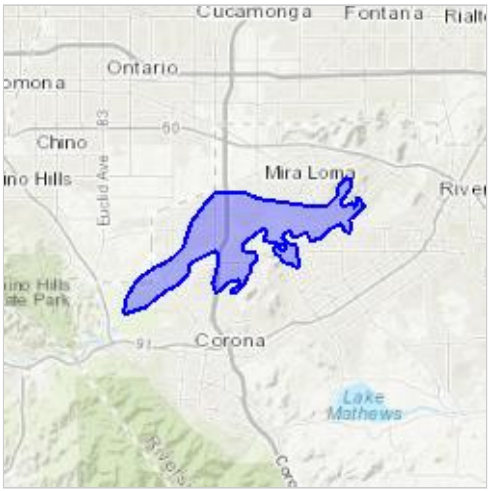
Project Name: OBMP PEIR Update MZ5

Project Type: WATER SUPPLY / DELIVERY

Project Description: Optimum Basin Management Plan PEIR Update - MZ5

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.949007230000035N117.5593827708134W



Counties: Riverside, CA | San Bernardino, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Endangered

Birds

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Fishes

NAME	STATUS
Santa Ana Sucker *Catostomus santaanae* Population: 3 CA river basins There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3785	Threatened

Insects

NAME	STATUS
Delhi Sands Flower-loving Fly *Rhaphiomidas terminatus abdominalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1540	Endangered

Flowering Plants

NAME	STATUS
Nevin's Barberry *Berberis nevinii* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
Santa Ana River Woolly-star *Eriastrum densifolium ssp. sanctorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6575	Endangered
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

Critical habitats

There are 4 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Least Bell's Vireo *Vireo bellii pusillus* https://ecos.fws.gov/ecp/species/5945#crithab	Final
Santa Ana Sucker *Catostomus santaanae* https://ecos.fws.gov/ecp/species/3785#crithab	Final
Southwestern Willow Flycatcher *Empidonax traillii extimus*	Final

NAME	STATUS
https://ecos.fws.gov/ecp/species/6749#crithab	
Yellow-billed Cuckoo *Coccyzus americanus* For information on why this critical habitat appears for your project, even though Yellow-billed Cuckoo is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/3911#crithab	Proposed