

INITIAL STUDY

FOR THE

WEST VALLEY WATER DISTRICT

18-INCH TRANSMISSION MAIN INSTALLATION

PROJECT

Prepared for:

West Valley Water District
855 W. Baseline Road
Rialto, California 92376

Prepared by:

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TABLE OF CONTENTS

Introduction.....	1
Environmental Factors Potentially Affected	5
Determination	6
Evaluation of Environmental Impacts	7
I. Aesthetics	9
II. Agricultural and Forestry Resources	11
III. Air Quality	13
IV. Biological Resources	24
V. Cultural Resources	30
VI. Energy	33
VII. Geology and Soils.....	35
VIII. Greenhouse Gas Emissions	39
IX. Hazards and Hazardous Materials	42
X. Hydrology and Water Quality	45
XI. Land Use and Planning	48
XII. Mineral Resources	49
XIII. Noise	50
XIV. Population and Housing.....	54
XV. Public Services	55
XVI. Recreation.....	57
XVII. Transportation.....	58
XVIII. Tribal Cultural Resources	61
XIX. Utilities and Service Systems	65
XX. Wildfire	69
XXI. Mandatory Findings of Significance.....	71
Summary of Mitigation Measures	73
References.....	80

APPENDICES

Appendix 1 – Air Quality / GHG
Appendix 2 – Biology
Appendix 3 – Cultural
Appendix 4a – Geotechnical
Appendix 4b – Soils Maps

FIGURES

Figure 1	WVWD Service Area
Figure 2	Regional Location Map
Figure 3	Site Location Map
Figure 4	Site Plan
Figure I-1	Scenic Routes and Highways
Figure II-1	Agricultural Resources
Figure VII-1	Earthquake Fault Zones
Figure VII-2	Liquefaction & Landslides
Figure IX-1	GeoTracker
Figure IX-2	Airport Safety & Planning Areas Map
Figure IX-3	Fire Hazard Severity Zone
Figure IX-4	Fire Responsibility Areas
Figure X-1	Groundwater Basins Map
Figure X-2	Flood Hazards
Figure XII-1	Mineral Resource Zones
Figure XIII-1	Existing Noise Contours
Figure XIII-2	Future Noise Contours
Figure XV-1	Sheriff Operations
Figure XVII-1	Evacuation Routes

TABLES

Table III-1	Ambient Air Quality Standards	14
Table III-2	Health Effects of Major Criteria Pollutants.....	16
Table III-3	Project Area Air Quality Monitoring Summary (2015-2018)	17
Table III-4	Attainment Status of Criteria Pollutants in the SCAB.....	18
Table III-5	South Coast Air Basin Emissions Forecasts	19
Table III-6	Daily Emissions	20
Table III-7	Construction Activity Equipment Fleet.....	21
Table III-8	Construction Activity Emissions Maximum Daily Emissions	21
Table III-9	LST and Project Emissions	23
Table VIII-1	Construction Emissions	40

LIST OF ABBREVIATIONS AND ACROYNMS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACOE	Army Corps of Engineers
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BACMs	Best Available Control Measures
BMPs	Best Management Practices
BRA/JD	Biological Resources Assessment/Jurisdictional Delineation
BUOW	Burrowing Owl
CAA	Clean Air Act
CAAA	Clean Air Act Amendment
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CBC	California Building Code
CCAR	California Climate Action Registry
CDFW	California Department of Fish and Wildlife (formerly CDFG)
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Project
CNEL	Community Noise Equivalent Level
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOI	Department of Interior
DWR	Department of Water Resources
EO	Executive Orders
FEMA	Federal Emergency Management Agency
FGC	Fish & Game Code
FTA	Federal Transit Association
GCC	Global Climate Change
GHG	Greenhouse Gas
GSA	Groundwater Sustainability Agencies
GSP	Groundwater Sustainability Plans
LRA	Local Responsibility Area
LSA	Lake or Streambed Alteration
LST	Localized Significance Thresholds
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act

MCL	maximum contamination level
MLD	Most Likely Descendant
MM	Mitigation Measure
NAAQS	National Ambient Air Quality Standards
NBP	Nesting Bird Plan
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OS	Open Space
R-E	Residential Estates
R-MF	Multi-Family Residential
RMU	Regional Mixed Use
ROW	Rights-of-Way
R-PC	Residential Planned Community
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SBFD	San Bernardino County Fire Department
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMBMI	San Manuel Band of Mission Indians
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCR	Tribal Cultural Resources
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VdB	vibration-velocity decibel
VLDR	Very Low Density Residential
VMFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
WOTUS	Waters of the United States
WQMP	Water Quality Management Plan
WVWD	West Valley Water District

ENVIRONMENTAL CHECKLIST

1. Project Title: 18-inch Transmission Main Installation Project
2. Lead Agency Name: West Valley Water District
Address: 855 W. Baseline Road, Rialto, CA 92376
3. Contact Person: Rosa M. Gutierrez, Senior Engineer
Phone Number: (909) 644-0592
4. Project Location: The West Valley Water District (WVWD or District) service area is located in southern California within southwestern San Bernardino County with a small part in northern Riverside County. The District's service area is shown on Figure 1. The project will occur within the northern portion of the District within an easement between Lytle Creek Road to the north and Citrus Avenue to the south traversing under the Interstate-15 (I-15) Freeway within Unincorporated San Bernardino County and the City of Fontana. The project is located within the USGS Topo 7.5-minute map for Devore, CA, and is located in Section 18, Township 1 North and Range 5 West. The approximate GPS coordinates of the project area are 34.171502°, -117.453627°. Refer to Figures 2 and 3 for the regional and site location maps.
5. Project Sponsor Name: West Valley Water District
Address: 855 W. Baseline Road, Rialto, CA 92376
6. General Plan Designation: County of San Bernardino Designation: Very Low Density Residential (VLDR)
City of Fontana Designation: (RMU) Regional Mixed Use and Residential-Estates (R-E)
7. Zoning: County of San Bernardino Classification: Single Residential-1 acre minimum (RS-1)
City of Fontana Classification: Regional Mixed Use (R-MU) and Residential-Estates (R-E)
8. Project Description:

WVWD serves potable water to customers in the Cities of Rialto, Fontana, Colton, Jurupa Valley ("Riverside County") and unincorporated areas of San Bernardino County, serving over 80,000 residents within these jurisdictions. The District obtains water from both local and imported sources to serve its customers, including about 68% from Groundwater, 18% from surface water diversions from Lytle Creek, and 14% from the State Water Project. The service area consists of eight (8) pressure zones: Zone 2, 3, 3A, 4, 5, 6, 7 and 8, and is divided into Northern and Southern systems by the central portion of the City of Rialto.

Pressure Zone 7 is north of Pressure Zone 6 in WVWD's North System. Storage is provided by Reservoirs (R7-1, R7-2, R7-3, and R7-4) located on Lytle Creek Road. There is currently no

source of supply within Pressure Zone 7, as water is boosted from the Lower Pressure Zones (4, 5, and 6) to serve that area. As such, the District is proposing a new 650 LF 18-inch transmission main to facilitate supply to accommodate the increase in development that is projected to occur in Pressure Zone 7.

WVWD proposes to install approximately 650 linear feet (LF) of 18-inch transmission main within Pressure Zone 7. The proposed transmission main will connect to an existing 18-inch transmission main at Lytle Creek Road and bore under the Ontario I-15 freeway and terminate at Citrus Avenue in an unimproved area. Approximately 250 linear feet of 18-inch diameter pipe will be trenched in the unimproved area. The proposed pits for the jack and bore will be approximately 40 feet in length and 20 feet in width and will be located outside the Caltrans right-of-way. The pipeline that will traverse under the I-15 includes trenchless installation of approximately 325 LF of 18-inch diameter carrier pipe in a 30-inch diameter casing under the I-15 Freeway to connect to segments at either side of the freeway. The segments of pipeline will be installed mostly within undisturbed areas between Lytle Creek Road and Citrus Avenue (refer to Figure 4, site plan).

Construction Scenario:

Trenching:

It is assumed that an underground utility installation team can install approximately 200 LF of water pipeline per day. A team consists of the following:

- 200 feet of pipeline installed per day
- 1 Excavator
- 1 Backhoe
- 1 Paver
- 1 Roller
- 1 Water truck
- Traffic Control Signage and Devices
- 10 Dump/delivery trucks (80 miles maximum round trip distance)
- Employees (11 members per team)

The emissions calculations are based upon the above assumptions for each pipeline installation team. For air emission calculations it is further assumed that 1 team will be installing pipelines for a maximum total of 200 LF per day. It is assumed that installation of about 650 LF of water pipeline will occur over a period of no more than one month, though the anticipated number of construction days is about 15 working days.

Ground disturbance emissions assume roughly 0.1 acre of land would be actively excavated on a given day. The pipeline trenching depth would range between 6.54 ft and 13.41 ft. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine). The Contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

Jack/Bore across Caltrans I-15:

- 4-6 working days for preparation of pit digging, sheeting and shoring, setting of bore equipment.
- 5-7 working days of jack/bore operation
- 4-5 working days for pipe installation pipe in casing
- 2-3 working days for pits backfill, compaction and site restoration.

Total of 15-21 working day can be expected. The actual schedule is dictated by the Contractor and its boring sub.

9. Surrounding land uses and setting: (Briefly describe the project's surroundings)

The proposed project encompasses less than one acre within the City of Fontana and County of San Bernardino. The project is surrounded by mostly undeveloped land:

- The uses to the north of the project area includes undeveloped land and the foothills of the San Gabriel Mountains. The land use to the north is: VLDR.
- The uses to the east of the project area includes undeveloped land, the I-15 Freeway, and a few single-family residences to the northeast. The land uses to the east are: the City of Fontana Designations are R-E and RMU; the County of San Bernardino Designation is VLDR.
- The use to the south of the project area includes vacant land. The land uses to the south are: the City of Fontana Designation is RMU.
- The use to the west of the project area includes vacant land. The land uses to the west are: the City of Fontana Designations are Open Space (OS), Residential Planned Community (R-PC), Multi-Family Residential (R-MF).

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

- The California Department of Fish and Wildlife (CDFW) may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.
- Encroachment or other permits may be required from the Caltrans and/or other entities that have not yet been identified, such as, Southern California Edison, The Gas Company, etc.

11. Have California Native American tribes traditionally and cultural affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

Native American tribe consultation letters were sent to the following tribes on July 9, 2021: Torres Martinez Desert Cahuilla Indians, San Manuel Band of Mission Indians, Morongo Band of Mission Indians, Gabrieleño Band of Mission Indians – Kizh Nation. The San Manuel Band of Mission Indians responded with a request for the Project Plans, Geotechnical Report, and the Cultural Report. The Project Plans and Geotechnical Report were sent to the tribe on July 20, 2021, while the Cultural Report was sent on November 4, 2021. Additionally, the Gabrieleño Band of Mission Indians – Kizh Nation has also requested consultation under AB 52 in an email dated July 22, 2021. As of November 5, 2021, no specific requests have been made by the Gabrieleño Band of

Mission Indians, though the District has reached out via email to ascertain their interest in the project area several times between July 22, 2021 and November 10, 2021. The Gabrieleño Band of Mission Indians responded on May 13, 2022 that the Tribe has been very busy and was trying to respond back to everyone as soon as they can. As of June 22, 2022, the Tribe has not provided any subsequent responses or feedback regarding consultation. AB 52 stipulates that consultation is concluded when either of the following occurs:

- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists to a tribal cultural resource; or
- A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2, subd. (b)).

Given that the District has not received feedback from the Tribe after multiple attempts to ascertain what mitigations would be amenable to the tribe to protect tribal cultural resources within the project site, the District has determined that consultation shall be considered concluded with no further input from the Tribe during the initial public review process. The District will provide the Gabrieleño Band of Mission Indians – Kizh Nation an opportunity to provide additional input through the public review process.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

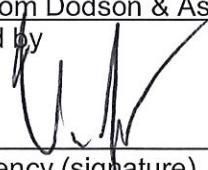
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Energy |
| <input checked="" type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials |
| <input checked="" type="checkbox"/> Hydrology & Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input checked="" type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation, the following finding is made:

<input type="checkbox"/>	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
<input type="checkbox"/>	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Tom Dodson & Associates
Prepared by 
Lead Agency (signature)

July 14, 2022
Date
7/27/22
Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project would install approximately 650 LF of water pipeline to facilitate supply to accommodate the increase in development that is projected to occur in WVWD Pressure Zone 7 within the City of Fontana and San Bernardino County within WVWD's existing service area. The construction of the transmission main alignment would require temporary ground-disturbance between two points within WVWD's system on undeveloped, undisturbed land from Lytle Creek Road to the north and Citrus Avenue to the south, including boring under the I-15 freeway. The dominant landscape within the project area is that of a relatively undeveloped area directly adjacent to both the I-15 Freeway; additionally, the project footprint is located at the foothills of the San Gabriel Mountains, which provide valuable background viewsheds.

The presence of construction equipment and related construction materials would be visible from public vantage points, such as open space areas, sidewalks, and streets, but it would not adversely affect any scenic views or vistas. Construction of the pipelines would not permanently affect views or scenic vistas. Thus, construction impacts to any scenic vistas would be less than significant. The entirety of the proposed project will be constructed below or at ground level. Once constructed, the area of disturbance—which mostly consists of vacant land currently covered with weeds and non-native vegetation—will be returned recompacted to the existing ground surface level, while the portion of the alignment that traverses across the I-15 will utilize jack and bore methods, thus resulting in very little ground disturbance. Given that the project would not degrade views to nearby scenic vistas and that the visual effects of pipeline installation and repaved sections of roadway would not substantially alter the views in the project footprint in the long-term, implementation of the proposed 18-inch Transmission Main Installation Project is not expected to cause any substantial adverse effects on any important scenic vistas. No impacts are anticipated and no mitigation is required.

- b. *Less Than Significant Impact* – The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. The proposed project would install a transmission main between Lytle Creek Road and Citrus Avenue, mostly within vacant, undisturbed land. Neither of these roadways are considered by the State to be scenic highways. Furthermore, the proposed project would cross below the I-15, and this freeway is not designated as a State scenic highway. The County's recently adopted General

Plan—the “Countywide Plan”¹—identifies several county scenic routes as shown on Figure I-1, but none are in close proximity to the proposed project. No historic buildings are located within the area proposed to be disturbed as part of the proposed project. No rock outcroppings would be impacted by the proposed project. As stated under issue I(a), above, the proposed project consists of native vegetation and weeds, with no trees on site that would fall under the County of San Bernardino or City of Fontana tree ordinance. No other scenic resources have been identified on the site. Therefore, the project would have a less than significant potential to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

- c. *No Impact* – The proposed project would install approximately 650 LF of water pipeline to facilitate supply to accommodate the increase in development that is projected to occur in WVWD Pressure Zone 7 within the City of Fontana and San Bernardino County within WVWD’s existing service area. The proposed transmission main would be placed underground or at ground level and would not be visible once construction is complete. As the transmission main will be located belowground, and the areas within which the transmission main is installed will be recompact as each segment of the transmission main is completed, construction and operation of the proposed transmission main will have no potential to conflict with applicable zoning or other regulations governing scenic quality. No impacts are anticipated to occur under this issue and no mitigation is required.
- d. *No Impact* – There will be no new lighting associated with the proposed project. The transmission main will be constructed underground, mostly within existing roadways. No reflective materials or coatings are associated with this project. The construction activities are generally limited to daylight hours unless an emergency occurs. Further, the amount of security lighting needed during construction will be minimal. Therefore, with no permanent aboveground features, it is not anticipated that the site would create any new permanent sources of light or glare. No significant impact associated with lighting or glare can be identified and no mitigation is required.

¹ <http://countywideplan.com/theplan/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The 18-Inch Transmission Main Installation Project is located in an area that does not support agricultural uses. Neither the project site nor the adjacent and surrounding properties are designated for agricultural use; no agricultural activities exist in the project area; and there is no potential for impact to any agricultural uses or values as a result of project implementation. According to the San Bernardino Countywide Plan Agricultural Resources Map (Figure II-1), the proposed project has not been designated for agricultural use; no prime farmland, unique farmland, or farmland of statewide importance exists within the vicinity of the proposed project. No adverse impact to any agricultural resources would occur from implementing the proposed project. No mitigation is required.
- b. *No Impact* – There are no agricultural uses currently within the project footprint or on adjacent properties. The proposed transmission main traverses through the following land use designations: the County of San Bernardino Designation is Very Low Density Residential (VLDR) and the City of

Fontana Designations are (R-MU) Regional Mixed Use and Residential-Estates (R-E). The proposed transmission main traverses through the following zoning classifications the County of San Bernardino zoning classification is Single Residential-1 acre minimum (RS-1) and the City of Fontana zoning classifications are Regional Mixed Use (R-MU) and Residential-Estates (R-E). No potential exists for a conflict between the proposed project and agricultural zoning or Williamson Act contracts within the project area. No mitigation is required.

- c. *No Impact* – Please refer to issues II(a) and II(b) above. The project site is in a relatively urbanized area located adjacent to the I-15. The proposed transmission main traverses through the following land use designations: the County of San Bernardino Designation is VLDR and the City of Fontana Designations are R-MU and R-E. The proposed transmission main traverses through the following zoning classifications the County of San Bernardino zoning classification is RS-1 and the City of Fontana zoning classifications are R-MU and R-E. Neither the land use designations nor zoning classifications supports forest land or timberland uses or designations. No potential exists for a conflict between the proposed project and forest/timberland zoning. No mitigation is required.
- d. *No Impact* – There are no forest lands within the project area, which is because the project area is urbanized and removed from nearby mountains, where much of the County's forestland is located. No potential for loss of forest land would occur if the project is implemented. No mitigation is required.
- e. *No Impact* – Because the project footprint and surrounding area do not support either agricultural or forestry uses and, furthermore, because the project footprint and environs are not designated for such uses, implementation of the proposed project would not cause or result in the conversion of farmland or forest land to alternative use. No adverse impact would occur. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the following technical study: *Air Quality and GHG Impact Analyses, West Valley Water District, Transmission Main Project, San Bernardino, California* prepared by Giroux & Associates dated July 12, 2021. This technical study is provided as Appendix 1 to this document.

Background

Climate

The climate of the eastern San Bernardino Valley, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high-pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity levels. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The project will be situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Air Quality Standards

Existing air quality is measured at established South Coast Air Quality Management District (SCAQMD) air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table III-1. Because the State of California had established Ambient Air Quality Standards (AAQS) several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table III-1. Sources and health effects of various pollutants are shown in Table III-2.

**Table III-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3) ⁸	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	–	–	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15.0 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	–	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO2) ¹⁰	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO2) ¹¹	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	–	Ultraviolet Flourescence; Spectrophotometry (Paraosaniline Method)
	3 Hour	–		–	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ¹¹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ¹¹	–	
Lead 8 ^{12,13}	30-Day Average	1.5 µg/m³	Atomic Absorption	–	–	–
	Calendar Quarter	–		1.5 µg/m³ (for certain areas) ¹²	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Avg	–		0.15 µg/m³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Footnotes

- 1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM₁₀, PM_{2.5}, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- 2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year, with a 24-hour average concentration above 150 µg/m³, is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.
- 3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- 4 Any equivalent procedure which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
- 5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- 6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- 7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- 8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- 9 On December 14, 2012, the national PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- 10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- 11 On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- 12 The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- 13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 j.tg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
- 14 In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

**Table III-2
HEALTH EFFECTS OF MAJOR CRITERIA POLLUTANTS**

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Baseline Air Quality

Existing and probable future levels of air quality around the proposed project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Upland monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide, PM-10, and nitrogen oxides. The Ontario monitoring station near Route 60 monitors PM-2.5. Table III-3 provides a 4-year summary of the monitoring data for the major air pollutants compiled from these air monitoring stations. From these data the following conclusions can be drawn:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of 12 percent of all days in the last four years near Upland. The federal 8-hour

standard has been exceeded an average of 14 percent of all days within the same period and the state 8-hour standard has been exceeded approximately 19 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.

2. PM-10 levels have exceeded the state 24-hour standard on approximately four percent of all measurement days. The three times less stringent federal 24 hour-standard has not been exceeded once in the last four years.
3. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Both the frequency of violations of particulate standards, as well as high percentage of PM-2.5, are air quality concerns in the project area. However, PM-2.5 readings very infrequently exceed the federal 24-hour PM-2.5 ambient standard on approximately one percent of the measured days.
4. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site because background levels throughout western San Bernardino County never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table III-3
AIR QUALITY MONITORING SUMMARY
(Days Standards were Exceeded and Maximum Observed Concentrations 2015-2018)

Pollutant/Standard	2016	2017	2018	2019
Ozone ^a				
1-Hour > 0.09 ppm (S)	53	66	25	31
8-Hour > 0.07 ppm (S)	88	87	52	52
8- Hour > 0.075 ppm (F)	65	72	32	34
Max. 1-Hour Conc. (ppm)	0.156	0.150	0.133	0.131
Max. 8-Hour Conc. (ppm)	0.116	0.127	0.111	0.107
Carbon Monoxide ^b				
1-hour > 20. ppm (S)	0	0	0	0
8- Hour > 9. ppm (S,F)	0	0	0	0
Max 8-hour Conc. (ppm)	1.3	1.4	1.2	1.1
Nitrogen Dioxide ^b				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max 1-hour Conc. (ppm)	0.07	0.06	0.06	0.06
Respirable Particulates (PM-10) ^a				
24-hour > 50 µg/m ³ (S)	5/363	26/320	14/322	7/306
24-hour > 150 µg/m ³ (F)	0/353	0/320	0/322	0/306
Max. 24-Hr. Conc. (µg/m ³)	72.	106.	73.	125.
Ultra-Fine Particulates (PM-2.5) ^a				
24-Hour > 35 µg/m ³ (F)	0/55	7/359	5/357	5/364
Max. 24-Hr. Conc. (µg/m ³)	28.4	44.800	47.9	41.3

(S) = state standard, (F) = federal standard

Source: South Coast AQMD

Upland Monitoring Station (5175) , ^a Ontario Monitoring (near CA-60) Station for PM-2.5

Air Quality Planning

The United State Environmental Protection Agency (U.S. EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for O₃, CO, NO_x, SO₂, PM₁₀, PM_{2.5}, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the California Air Resources Board (CARB).

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance. The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

Air pollution contributes to a wide variety of adverse health effects. The U.S. EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O₃, particulate matter (PM₁₀ and PM_{2.5}), NO₂, and SO₂ which are known as criteria pollutants. The South Coast Air Quality Management District (SCAQMD) monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district. On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table III-4 for attainment designations for the South Coast Air Basin (SCAB).

**Table III-4
ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB**

Criteria Pollutant	State Designation	Federal Designation
O ₃ – 1-hour standard	Nonattainment	--
O ₃ – 8-hour standard	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb ²	Attainment	Unclassifiable/Attainment

The project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAB emissions forecasts are shown on Table III-5 below. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

² The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

**Table III-5
SOUTH COAST AIR BASIN EMISSIONS FORECASTS (EMISSIONS IN TONS/DAY)**

Pollutant	2020	2025	2030
NOx	289	266	257
VOC	393	393	391
PM-10	165	170	172
PM-2.5	68	70	71

With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of Air Quality

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plan (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly to reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy more effectively.

In March 2017, the SCAQMD released the Final 2016 AQMP (2016 AQMP). The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (2016-2040 RTP/SCS), a planning document that supports the integration of land use and transportation to help the region meet the federal Clean Air Act requirements. Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook.

The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.). The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 µg/m ³)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NOx control measures are adopted and implemented, ozone attainment goals may not be met.

CEQA Standards of Significance

The SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table III-6
DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Impact Analysis

- a. *Less Than Significant Impact* – Projects such as the proposed installation of an 18-inch transmission main do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general infrastructure development. This makes sense since, once installed, pipelines do not generate new emissions. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use are the primary yardsticks by which impact significance of planned growth is determined. Based on the analysis of the City and County's General Plan Land Use sections, the proposed project is consistent with the infrastructure needs identified in adopted General Plans. Thus, the proposed project is consistent with regional planning forecasts maintained by the SCAG regional plans. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant only because of consistency with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis. As the analysis of project-related emissions provided below indicates, the proposed project will not cause or be exposed to significant air pollution, and is, therefore, consistent with the applicable air quality plan.
- b. *Less Than Significant With Mitigation Incorporated* – Air pollution emissions associated with the proposed project would occur over both a short and long-term time period. Short-term emissions include fugitive dust from construction activities (i.e., site prep, demolition, grading) and exhaust emissions at the project site. Long-term emissions generated by future operation of the proposed transmission main are negligible as additional operation will not require a new source of energy to operate. Energy is not anticipated to be required, though the proposed operations and maintenance activities in the future include energy consumption and trips generated by the future development. It is anticipated that existing conveyance systems (lift stations and/or other appurtenances) will require greater energy to accommodate the water conveyed by the new transmission main, but this increase in energy demand would be minimal.

The proposed 650 lineal feet of 18-inch transmission main pipeline in the Lytle Creek area which will bore under the Interstate 15 freeway and terminate at Citrus Avenue, is located in an undeveloped area. The nearest residential use is more than 700 feet to the northeast.

Construction Emissions

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The following equipment fleet and durations were modeled as provided by the project engineer:

**Table III-7
CONSTRUCTION ACTIVITY EQUIPMENT FLEET (650 LF TRANSMISSION MAIN)**

Demo Roadway and Trench 2 weeks	2 Loader/Backhoes
	1 Excavator
	1 Concrete Saw
	3 Signal Boards
Install Pipe 2 weeks	2 Forklifts
	1 Crane
	2 Loader/Backhoes
	3 Signal Boards
Backfill and Pave 60 days	1 Compactor
	1 Paver
	1 Loader/Backhoe
	1 Roller
	3 Signal Boards

Utilizing the indicated equipment fleet and durations the following worst-case daily construction emissions are calculated by CalEEMod (version CalEEMod2016.3.2):

**Table III-8
CONSTRUCTION ACTIVITY EMISSIONS MAXIMUM DAILY EMISSIONS (POUNDS/DAY)**

Maximal Construction Emissions	ROG	NOx	CO	SO₂	PM-10	PM-2.5
2021	1.0	8.2	9.4	0.0	0.7	0.4
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation. Though construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin. As such, the following mitigation measure shall be implemented:

AQ-1 Fugitive Dust Control. The following measures shall be incorporated into project plans and specifications for implementation during construction:

- **Apply soil stabilizers to inactive areas.**
- **Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds exceed 25 mph.**
- **Stabilize previously disturbed areas if subsequent construction is delayed.**
- **Apply water to disturbed surfaces 3 times/day.**
- **Replace ground cover in disturbed areas quickly.**
- **Reduce speeds on unpaved roads to less than 15 mph.**
- **Trenches shall be left exposed for as short a time as possible.**
- **Identify proper compaction for backfilled soils in construction specifications.**

This measure shall be implemented during construction, and shall be included in the construction contract as a contract specification.

Similarly, ozone precursor emissions (ROG and NO_x) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

AQ-2 *Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation:*

- ***Utilize off-road construction equipment that has met or exceeded the maker's recommendations for vehicle/equipment maintenance schedule.***
- ***Contactors shall utilize Tier 4 or better heavy equipment.***
- ***Enforce 5-minute idling limits for both on-road trucks and off-road equipment.***

With the above mitigation measures, any impacts related to construction emissions are considered less than significant. No further mitigation is required.

Operational Impacts

A transmission main installation project will not have any associated operational impacts. It is anticipated that existing conveyance systems (lift stations and/or other appurtenances) will require some additional energy to accommodate the water conveyed by the new transmission main, though the source of the supply to the new transmission main is currently anticipated to flow by gravity; regardless, this increase in energy demand can be accommodated by existing systems. Therefore, no significant operational air quality emissions are anticipated to be generated by the proposed project.

Conclusion

With the incorporation of mitigation measures **AQ-1** and **AQ-2**, the development of the 18-Inch Transmission Main Installation Project would have a less than significant potential to result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

- c. *Less Than Significant With Mitigation Incorporated* – The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, the nearest residential use is more than 700-feet to the northeast such that the 200- meter distance was used.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites. For this project, the most stringent standards for a 1-acre disturbance area were used.

The following thresholds and emissions are therefore determined (pounds per day):

Table III-9
LST AND PROJECT EMISSIONS (pounds/day)

LST 1 acre/200 meters Central San Bernardino County	CO	NOx	PM-10	PM-2.5
LST Threshold	5,356	334	74	23
Max On-Site Emissions	10	8	<1	<1

LSTs were compared to the maximum daily construction activities. As seen in Table III-9, LST impacts are less than significant.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure. With the incorporation of mitigation measures **AQ-1** and **AQ-2**, the development of the 18-Inch Transmission Main Installation Project would have a less than significant potential the proposed project would have a less than significant potential to expose sensitive receptors to substantial pollutant concentrations.

- d. *Less Than Significant Impact* – Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts particularly given that the water transmission pipeline will be located belowground. Project operations (pumping) are an essentially closed system with negligible odor potential. Therefore, impacts under this issue are considered less than significant. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION: The project is not located in the any of the County's Biological Overlays. The following information is provided based on a study titled "*West Valley Water District 18-Inch Transmission Main Installation Project Biological Resource Assessment and Jurisdictional Delineation Report*" (BRA) prepared by Jacobs Engineering Group, Inc. dated September 2021 and provided as Appendix 2.

General Site Conditions

The Project Area is situated near the northern end of the broad alluvial fan that lies to the southwest of Lytle Creek, northwest of the Lytle Creek Wash/Cajon Wash confluence, and south of the eastern end of the San Gabriel Mountain foothills. The topography of the Project site consists of a flat, graded landscape, comprised of existing transportation corridor and adjacent disturbed landscape. The elevation of the Project site ranges from approximately 1,865 feet above mean sea level (amsl) at the north end of the Project alignment, to 1,845 feet amsl at the south end of the Project alignment.

The proposed impact area is completely disturbed, consisting of existing transportation corridor (I-15), paved roadways (Lytle Creek Road and Citrus Avenue), and the disturbed, vacant land between Lytle Creek Road and Citrus Avenue. Surrounding land uses consist of transportation corridor, paved roadways, and disturbed, vacant land.

The proposed impact area no longer supports any native habitat, but there is some non-native grassland within and adjacent the proposed impact area. Vegetation in the Project Area is dominated by non-native

species including non-native brome grasses (*Bromus* spp.), tocalote (*Centaurea melitensis*), and shortpod mustard (*Hirschfeldia incana*). Scattered native species present within the Project Area are mostly ruderal species including Turkey-mullein (*Croton setiger*), jimsonweed (*Datura wrightii*), and common sunflower (*Helianthus annuus*), as well as several California buckwheat (*Eriogonum fasciculatum*).

Birds were the only observed wildlife group during survey and species observed or otherwise detected in the Project Area during the reconnaissance-level survey included:

- Rock pigeon (*Columba livia*)
- American kestrel (*Falco sparverius*)
- House finch (*Haemorhous mexicanus*)
- Black phoebe (*Sayornis nigricans*)
- European starling (*Sturnus vulgaris*)
- Cassin's kingbird (*Tyrannus vociferans*)

Conclusion

Sensitive Biological Resources

No sensitive species were observed within the Project Area during the reconnaissance-level field survey and due to the environmental conditions on site, none are expected to occur. The Project Area is completely disturbed, consisting of existing transportation corridor (I-15), paved roadways (Lytle Creek Road to the north and Citrus Avenue to the south), and disturbed, vacant land comprised of non-native grassland and unvegetated (disked) bare ground. The Project Area no longer supports any native habitats that would be suitable to support any of the state or federally listed species, or other special status species documented in the Project vicinity. Therefore, the proposed Project is not likely to adversely affect any state or federally listed species, or other special status species, and the potential for any of the sensitive species identified in Appendix A of the BRA to occur within the Project Area is low. Furthermore, although the Project Area is within United States Fish and Wildlife Service (USFWS) designated Critical Habitat for the federally listed SBKR, and the Project will not result in any loss or adverse modification of Critical Habitat.

Burrowing Owl

A burrowing owl (BUOW) habitat suitability assessment was conducted by Jacobs biologists in August 2021 that included 100 percent visual coverage of the Project Area, wherever potentially suitable BUOW habitat was present. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including castings, feathers or whitewash were observed and BUOW are considered absent from the Project Area at the time of survey. Although the Project is not likely to adversely affect this species, there is still a potential for the Project Area to become occupied by BUOW between the time the survey was conducted and the commencement of Project-related construction activities. Therefore, precautionary avoidance measures are recommended to ensure the Project does not result in any impacts to BUOW.

The BUOW is a state and federal species of special concern (SSC) and is also protected under the MBTA and by state law under the California Fish and Game Code (FGC, #3513 & #3503.5). In general, impacts to BUOW can be avoided by conducting work outside of their nesting season (peak BUOW breeding season is identified as April 15th to August 15th). However, if all work cannot be conducted outside of nesting season, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations. Regardless of survey results and conclusions given herein, BUOW are protected by applicable state and federal laws. As such, if a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report is intended to authorize any form of disturbance to BUOW. Such authorization must come from the appropriate regulatory agencies, including California Department of Fish and Wildlife (CDFW) and/or USFWS.

Nesting Birds

There is habitat within the Project Area that is suitable to support nesting birds, including both vegetation and man-made structures. Most native bird species are protected from unlawful take by the MBTA (Appendix C). In December 2017, the Department of the Interior (DOI) issued a memorandum concluding that the Migratory Bird Treaty Act's (MBTA) prohibitions on take apply "[...] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Then in April 2018, the USFWS issued a guidance memorandum that further clarified that the take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA.

However, the State of California provides additional protection for native bird species and their nests in the Fish and Game Code (FGC). Bird nesting protections in the FGC include the following (Sections 3503, 3503.5, 3511, 3513 and 3800):

- 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), and 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.
- Section 3800 prohibits the take of any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally March 15th through September 1st. However, if all work cannot be conducted outside of nesting season, mitigation is recommended.

Jurisdictional Waters

In addition to the BRA and focused botanical field survey, Jacobs also assessed the project APE for the presence of any state and/or federal jurisdictional waters. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland waters of the United States (WOTUS) or waters of the State potentially subject to regulation by the United States Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and/or Porter Cologne Water Quality Control Act, or the California Department of Fish and Wildlife (CDFW) under Section 1602 of the FGC, respectively. Therefore, the project will not impact and jurisdictional waters and no state or federal jurisdictional waters permitting will be required.

Impact Analysis

- a. *Less Than Significant Impact* – Implementation of the project has minimal potential for a significant adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. The project site is vacant and no longer supports any native habitat, but there is some non-native grassland within and adjacent the proposed impact area. The BRA provided as Appendix 2 to this Initial Study determined that the project site does not contain suitable habitat for the following species with a potential to occur in the project area:
- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
 - Slender-horned spineflower (*Dodecahema leptoceras*)
 - Coastal California gnatcatcher (*Poliophtila californica californica*)
 - Least Bell's vireo (*Vireo bellii pusillus*)

No State- and/or federally listed threatened or endangered species, or other sensitive species were observed on site during the field survey. However, although no BUOW were observed during the

survey of the site, habitat for this species exists within the project site. As such, although the project is not likely to adversely affect this species, there is still a potential for the Project Area to become occupied by BUOW between the time the survey was conducted and the commencement of Project-related construction activities. Therefore, the following precautionary avoidance measures are recommended to ensure the Project does not result in any impacts to BUOW:

BIO-1 *Preconstruction presence/absence surveys for burrowing owl shall be conducted no more than 3 days prior to any onsite ground disturbing activity by a qualified biologist, including prior to each phase of new ground disturbance. The burrowing owl surveys shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife in the "California Department of Fish and Wildlife 2012 Staff Report on Burrowing Owl Mitigation." In the event this species is not identified within the project limits, no further mitigation is required, and a letter shall be prepared by the qualified biologist documenting the results of the survey. The letter shall be submitted to CDFW prior to commencement of project activities. If during the preconstruction survey, the burrowing owl is found to occupy the site, Mitigation Measure BIO-2 shall be required.*

BIO-2 *If burrowing owls are identified during the survey period, the District shall take the following actions to offset impacts prior to ground disturbance:*

The District shall notify CDFW within three business days of determining that a burrowing owl is occupying the site to discuss the observed location, activities and behavior of the burrowing owl(s) and appropriate avoidance and minimization measures.

Active nests within the areas scheduled for disturbance or degradation shall be avoided until fledging has occurred, as confirmed by a qualified biologist. Following fledging, owls may be passively relocated by a qualified biologist, as described below.

If impacts on occupied burrows are unavoidable, onsite passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows provided by the District outside of the impact area.

If relocation of the owls is approved for the site by CDFW, CDFW shall require the District to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site and conduct an impact assessment. A qualified biologist shall prepare and submit a passive relocation program in accordance with Appendix E (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 Staff Report on Burrowing Owl Mitigation (CDFG 2012) to the CDFW for review/approval prior to the commencement of disturbance activities onsite.

The relocation plan must include all of the following and as indicated in Appendix E:

- *The location of the nest and owls proposed for relocation.*
- *The location of the proposed relocation site.*
- *The number of owls involved and the time of year when the relocation is proposed to take place.*
- *The name and credentials of the biologist who will be retained to supervise the relocation.*
- *The proposed method of capture and transport for the owls to the new site.*

- ***A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).***

The District shall conduct an impact assessment, in accordance with the Staff Report on Burrowing Owl Mitigation prior to commencing project activities to determine appropriate mitigation, including the acquisition and conservation of occupied replacement habitat at no less than a 2:1 ratio.

Prior to passive relocation, suitable replacement burrows site(s) shall be provided at a ratio of 2:1 and permanent conservation and management of burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owl impacts are replaced consistent with the Staff Report on Burrowing Owl Mitigation including its Appendix A within designated adjacent conserved lands identified through coordination with CDFW and the District. A qualified biologist shall confirm the natural or artificial burrows on the conservation lands are suitable for use by the owls. Monitoring and management of the replacement burrow site(s) shall be conducted and a reporting plan shall be prepared. The objective shall be to manage the replacement burrow sites for the benefit of burrowing owls (e.g., minimizing weed cover), with the specific goal of maintaining the functionality of the burrows for a minimum of 2 years.

A final letter report shall be prepared by the qualified biologist documenting the results of the passive relocation. The letter shall be submitted to CDFW.

This is a contingency mitigation measure since the site does not contain any evidence of burrowing owls at present. This measure will ensure that any burrowing owl that may come to inhabit the site between the date of the BRA survey and the start of construction will be protected. Given that no other State- and/or federally-listed threatened or endangered species, or other sensitive species are anticipated to occur within the project site based on the results of the BRA, the proposed project would have a less than significant potential to have a substantial adverse effect on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS with implementation of MMs **BIO-1** and **BIO-2**.

- b. ***Less Than Significant Impact*** – Implementation of the proposed project has a potential to have an adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS. The project footprint does not contain suitable habitat for any of the sensitive species with a potential to occur in the project APE, and it does not contain any known riparian habitat or any other sensitive natural community identified by any agency. The project area of potential effects (APE) does not contain any sensitive habitats, including any USFWS designated Critical Habitat for any federally listed species, and the project will not result in any loss or adverse modification of Critical Habitat. Therefore, with implementation of the above mitigation, there is a less than significant potential for implementation of this project to have an adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.
- c. ***No Impact*** – According to the data gathered by Jacobs in the BRA, no federally protected wetlands occur within the project footprint. Jacobs assessed the project APE for the presence of any state and/or federal jurisdictional waters. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland WOTUS or waters of the State potentially subject to regulation by the USACE under Section 404 of the CWA, the RWQCB under Section 401 of the CWA and/or Porter Cologne Water Quality Control Act, or the CDFW under Section 1602 of the FGC, respectively. Therefore, the project will not impact and jurisdictional waters and no state or federal jurisdictional waters permitting will be required. Therefore, implementation of the proposed project will have no

potential to impact any federally protected wetlands through direct removal, filling, hydrological interruption, or other means. No mitigation is required.

- d. *Less Than Significant With Mitigation Incorporated* – Based on the field survey of the project site, the project will not substantially interfere with or impede the use of native nursery sites. In light of the project's location between two transportation corridors (Lytle Creek Road and the I-15 Freeway), thus separating any wildland interfaces from the project site, the proposed project would have a less than significant potential to restrict movement of any native resident or migratory species or conflict with established native or migratory wildlife corridors. Once constructed, the project area will generally be returned to its original state as the proposed transmission main would be installed belowground. The State protects all migratory and nesting native birds. Several bird species were identified as potentially occurring in the project area, and the proposed project site contains suitable habitat for nesting birds within the site. To avoid impacting nesting birds as required by the MBTA and California FGC, the following mitigation measure shall be implemented:

BIO-3 *Nesting bird surveys shall be conducted by a qualified avian biologist no more than three (3) days prior to vegetation clearing or ground disturbance activities. Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair's behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity. To avoid impacts to nesting birds, any grubbing or vegetation removal should occur outside peak breeding season (typically February 1 through September 1).*

Thus, with implementation of the above measure, any effects on wildlife movement or the use of wildlife nursery sites can be reduced to a less than significant impact.

- e. *Less Than Significant Impact* – Based on the field survey, there are no species that are specifically protected by a local policy or ordinance specific to the proposed project site. As no biological resources located within the project footprint are protected under local policies or ordinances, impacts under this issue are considered less than significant.
- f. *No Impact* – Please refer to the discussion under response IV(a) above. The Biological Resources Assessment provided as Appendix 2 concluded that the project, is not located in an area within a Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, and implementation of the project will therefore not result in a significant impact to any such plans. No further mitigation is necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information is provided based on a Historical/Archaeological resources Survey Report of the Project site. The report was conducted by CRM TECH dated November 3, 2021 and is titled "*Identification and Evaluation of Historic Properties: West Valley Water District 18-inch Transmission Main Installation Project, in and near the City of Fontana, San Bernardino County, California*" (Appendix 3). The following information is abstracted from this report. It provides an overview and findings regarding the cultural resources found within the project area.

Background

The purpose of the cultural report is to provide the WVWD and other responsible agencies with the necessary information and analysis to determine whether the project would have an effect on any "historic properties," as defined by 36 CFR 800.16(l), or "historical resources," as defined by PRC §5020.1(j), that may exist in or near the APE. In order to accomplish this objective, CRM TECH initiated a historical/archaeological resources records search, pursued historical and geoarchaeological background research, consulted with Native American representatives, and conducted an intensive-level field survey.

During the survey, the small segment of Lytle Creek Road at the northern end of the APE was recorded into the California Historical Resources Inventory and assigned the temporary designation of Site 3755-1H, pending assignment of an official identification number once the California Historical Resources Information System resumes normal operation. The site represents the southwestern end of the portion of Lytle Creek Road that still follows its pre-1970s alignment, which dated at least to the 1930s. Further to the southwest, the road was completely realigned as a result of the construction of I-15 in the 1970s, and the original alignment, extending south along a portion of the APE, has been removed and has left no discernable physical remains today. Due to the lack of any distinguished aspects of significance and of sufficient historic integrity, Site 3755-1H does not appear eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. Therefore, it does not meet the definition of a "historic property" or a "historical resource."

No other potential "historic properties"/"historical resources" were encountered within or adjacent to the APE, and the subsurface sediments in the vertical APE appear to be relatively low in sensitivity for potentially significant archaeological deposits of prehistoric origin. Based on these findings, and pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1, CRM TECH recommends to the WVWD and other responsible agencies a conclusion that *no "historic properties" or "historical resources" will be affected by the proposed undertaking*. No further cultural resources investigation is recommended for the undertaking unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during earth-moving operations associated with the undertaking, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

Impact Analysis

- a&b. *Less Than Significant With Mitigation Incorporated* – CEQA establishes that "a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment" (PRC §21084.1). "Substantial adverse change," according to PRC §5020.1(q), "means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired."

Per the above discussion and definition, no archaeological sites or isolates were recorded within the project boundaries. However, during the site survey, the small segment of Lytle Creek Road at the northern end of the APE was recorded into the California Historical Resources Inventory and assigned the temporary designation of Site 3755-1H, pending assignment of an official identification number once the California Historical Resources Information System resumes normal operation. It does not meet the definition of a "historic property" or a "historical resource." Thus, no archaeological or historical isolates requires further consideration during this study. In light of this information and pursuant to PRC §21084.1, the following conclusions have been reached for the project:

- No historical resources within or adjacent to the project area have any potential to be disturbed as they are not within the proposed area in which the facilities will be constructed and developed, and thus, the project as it is currently proposed will not cause a substantial adverse change to any known historical resources.
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.

However, if buried cultural materials are discovered during any earth-moving operations associated with the project, the following mitigation measure shall be implemented:

CUL-1 *Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.*

Additionally, the San Manuel Band of Mission Indians provided mitigation that the Tribe would like to see incorporated in the environmental documentation to protect potential tribal cultural resources. As such, the following mitigation measure that applies to cultural resources shall be implemented to protect such resources:

CUL-2 **Archaeological Monitoring**
Due to the heightened cultural sensitivity of the proposed project area, an archaeological monitor with at least 3 years of regional experience in archaeology shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the District for dissemination to the San Manuel Band of Mission Indians

Cultural Resources Department (SMBMI). Once all parties review and approve the plan, it shall be adopted by the District – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

With the above mitigation measure, the potential for impacts to cultural resources will be reduced to a less than significant level. No additional mitigation is required.

- c. *Less Than Significant With Mitigation Incorporated* – As noted in the discussion above, no available information suggests that human remains may occur within the Area of Potential Effect (APE) and the potential for such an occurrence is considered very low. Human remains discovered during the project will need to be treated in accordance with the provisions of HSC §7050.5 and PRC §5097.98, which is mandatory. State law (Section 7050.5 of the Health and Safety Code) as well as local laws requires that the Police Department, County Sheriff and Coroner's Office receive notification if human remains are encountered. Compliance with these laws is considered adequate mitigation for potential impacts. However, at the request of the San Manuel Band of Mission Indians, MM **TCR-3** shall be implemented, as it addresses the treatment of human remains and funerary objects should they be discovered within the project footprint. As such, the potential for discovery and treatment of human remains will be reduced to a less than significant level. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a&b. *Less Than Significant With Mitigation Incorporated* – Energy consumption encompasses many different activities. For example, construction can include the following activities: delivery of equipment and material to a site from some location (note it also requires energy to manufacture the equipment and material, such as harvesting, cutting and delivering wood from its source); employee trips to work, possibly offsite for lunch (or a visit by a catering truck), travel home, and occasionally leaving a site for an appointment or checking another job; use of equipment onsite (electric or fuel); and sometimes demolition and disposal of construction waste. For the proposed project the number of employees will be limited to about 11 persons at a given time during construction with no new employees anticipated to be required once construction has concluded. The project would require removal of existing pavement within roadways, and ground disturbance in undeveloped areas in places where trenching is required along the transmission main alignment. To minimize energy costs of construction debris management, laws are in place that require diversion of all material subject to recycling. During construction, the proposed project will utilize construction equipment that is CARB approved, minimizing emissions generated and electricity required to the extent feasible (through MM **AQ-2** provided under Section III, Air Quality, above). As stated in Section III, Air Quality, the construction of the proposed 18-Inch Transmission Main Installation Project would require mitigation to minimize emissions impacts from construction equipment use. This mitigation measure also applies to energy resources as they require equipment not in use for 5 minutes to be turned off, and for electrical construction equipment to be used where available. This measure would prevent a significant impact during construction due to wasteful, inefficient, or unnecessary consumption of energy resources, and would also conform to the CARB regulations regarding energy efficiency.

Southern California Edison Company (SCE) is the primary distributor of electricity in the project area. However, the operation of the transmission line will not require a new source of energy to operate. This is because the transmission line will connect to WVWD's existing system, and as such are not creating a new demand on the electrical system to deliver water within the District's service area. No new pumping facilities are required to accommodate the proposed transmission line, particularly given that the supply of water to the new transmission main is anticipated to flow by gravity from an existing reservoir. In the future, the District's existing systems may utilize some additional energy to transmit a greater amount of water to this Pressure Zone to accommodate future development; any additional facilities that may be required to meet future demand would be contemplated in a subsequent CEQA document, as the energy that the proposed project would demand beyond that which the District presently utilizes would be nominal. No additional energy demand is anticipated and no natural gas would be required to operate the proposed project, and trips to the project footprint would occur only on an as needed basis for maintenance purposes. As such, petroleum consumption associated with implementation of the 18-Inch Transmission Main Installation Project would not be considered unnecessary, inefficient, or wasteful.

According to SCE's website³, SCE is committed to delivering power reliably and to meet demand; SCE is expanding and upgrading the transmission and distribution networks to meet the region's growing demand for electricity, and improve grid performance, while meeting California's ambitious renewable-power goals. As such, it is anticipated that SCE will continue to have ample power supply to serve the construction of the project without the need for additional electrical capacity. Therefore, given the lack of energy required to operate the proposed project, it is not anticipated that the project would either result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operations, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts under these issues are considered less than significant.

³ <https://www.sce.com/about-us/reliability/meeting-demand>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the following technical study: *Geotechnical Report Proposed 18-Inch Transmission Main Waterline, Fontana, CA* prepared by LandMark Geo-Engineers and Geologists dated April 23, 2021. This technical study is provided as Appendix 4a to this document. This section also utilizes data gathered from the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Service, which offers site specific soil data for the project site. This report is provided as Appendix 4b to this document.

a. i. Ground Rupture

Less Than Significant Impact – The project footprint is located in San Bernardino County in the unincorporated area and within the City of Fontana. The nearest Alquist-Priolo fault zones are the San Andreas Fault to the north and the Cucamonga Fault, which traverses through the northern portion of the project footprint; this is depicted on Figure VII-1, the San Bernardino Countywide Plan Earthquake Fault Zones Map. Therefore, the proposed transmission pipeline would cross through

an active fault zone. Underground pipelines are not typically susceptible to severe damage from fault rupture, depending on the severity of a seismic event. In the event that a strong earthquake were to occur, the proposed water conveyance pipeline could burst, causing water to leak. While damage to pipelines can occur, pipelines can be repaired and placed back into operation with no loss of human life. Therefore, the proposed project would have a less than significant potential to expose people or structures to rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map.

ii. Strong Seismic Ground Shaking

Less Than Significant Impact – As stated in the discussion above, several faults run through the County, and as with much of southern California, the proposed transmission pipeline will be subject to strong seismic ground shaking impacts should any major earthquakes occur in the future, particularly due to the site's location within two fault zones, as shown in Figure VII-1. As a result, and like all other development projects in the City, County, and throughout the southern California region, the proposed project will be required to comply with all applicable seismic design standards contained in the 2019 California Building Code (CBC). Compliance with the CBC and the use of best management design practices will enable maximum structural integrity of the pipelines to be maintained in the event of an earthquake. As stated above, mitigation to prevent impacts from pipeline rupture will be implemented. However, generally, underground pipelines are not typically susceptible to severe damage from ground shaking. Many such facilities exist and function within areas susceptible to strong ground shaking effects. Therefore, given that the proposed project consists of a transmission pipeline alignment that will be constructed underground and that no structures will be developed in support of the proposed project, there is a less than significant potential for people or structures to be exposed to strong seismic ground shaking.

iii. Seismic-Related Ground Failure Including Liquefaction

Less Than Significant Impact – The three factors determining whether a site is likely to be subject to liquefaction include seismic shaking, type and consistency of earth materials, and groundwater level. Liquefaction of saturated cohesionless soils can be caused by strong ground motion resulting from earthquakes. Soil liquefaction is a phenomenon in which saturated, cohesionless soils lose their strength due to the build-up of excess pore water pressure during cyclic loading such as that induced by earthquakes. According to the map prepared for the County of San Bernardino Countywide Plan Liquefaction & Landslides Map (Figure VII-2), the project site is not located in an area known to be susceptible to liquefaction. As with other ground failure potential, pipelines are not susceptible to significant adverse effects associated with liquefaction. Damage to pipelines can occur, but can be repaired and placed back into operation with no loss of human life. Therefore, potential impacts associated with seismic-related ground failure would be considered less than significant. No mitigation is required.

iv. Landslide

Less Than Significant Impact – Landslides in the project area are generally known to occur around the foothills of the San Gabriel Mountains. The proposed project footprint is located in the valley region of San Bernardino County, and generally is not located in an area that would be susceptible to landslide. According to the map prepared for the San Bernardino Countywide Plan Liquefaction & Landslides Map (Figure VII-2), the project site is not located in an area that is considered susceptible to landslides. Pipelines are not typically susceptible to significant adverse effects associated with landslides. Damage to pipelines can occur, but can be repaired and placed back into operation with no loss of human life. Therefore, potential impacts associated with landslides are considered less than significant. No mitigation is required.

- b. *Less Than Significant With Mitigation Incorporated* – The proposed transmission line will traverse a relatively undeveloped area between Lytle Creek Road and Citrus Avenue, with some jack and bore techniques required to enable transmission main to cross under the I-15 freeway. The proposed

transmission main project will result in land disturbance in the areas that will require construction within roadways and adjacent rights-of-way to accommodate the trenching required to install the transmission pipeline. Adequate drainage facilities exist to accommodate existing drainage flows, and no change in drainage will result once the roadways are repaved, land is recompact, and the transmission line is in place belowground. Implementation of BMPs in conjunction with Mitigation Measure (MM) **HYD-1** in the Hydrology and Water Quality section to control erosion is considered adequate to mitigate potential impacts associated with the water-related erosion of soil. Please refer to the detailed discussion and mitigation measures addressing wind-related soils erosion (fugitive dust) in the Air Quality section.

GEO-1 *Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup such that erosion does not occur.*

GEO-2 *Excavated areas shall be backfilled and compacted such that erosion does not occur. Paved areas disturbed by this project shall be repaved in such a manner that roadways and other disturbed areas are returned to the pre-project conditions or better.*

GEO-3 *All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the pipelines are being installed.*

GEO-4 *The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.*

With implementation of the above mitigation measures, any impacts are considered less than significant. No further mitigation is necessary.

- c. *Less Than Significant With Mitigation Incorporated* – As stated under issues VII(a[iii]) and VII(a[iv]) above, the project footprint traverses through areas that are not susceptible to landslides and liquefaction. As discussed under issue VII(a) above, compliance with Uniform Building Code design requirements is considered significant seismic protection for this uninhabited well facility. Additionally, according to the United States Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Service (Appendix 4b), the soils in the site vicinity are mostly Tujunga gravelly loamy sand. This soil class is somewhat excessively drained soils that formed in alluvium from granitic sources with negligible to low runoff; high saturated hydraulic conductivity⁴. The Geotechnical Investigation prepared for the project (Appendix 4a) evaluated systematic settlements at the project site and determined that where systematic settlements are higher than the maximum one quarter inch allowed for surface in traffic vehicular lanes or one half inch at the surface with no traffic, they can be controlled by limiting the radial overcut and by filling the annulus with bentonite lubricant during tunneling, and with cement grout after tunneling is completed. This shall be enforced by the following mitigation measure:

GEO-5 *Based upon the geotechnical investigation (Appendix 4a of this document), all of the recommended design and construction measures identified in Appendix 4a (listed on Pages 4-7) shall be implemented by the District. Implementation of these specific measures will address all of the identified geotechnical constraints identified at project site, including soil stability on future project-related structures.*

⁴ https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TUJUNGA.html

Therefore, due to the nature of the proposed project, and the type of soil unit underlying the project site, the proposed project has a less than significant potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse with the implementation of MM **GEO-5**. Furthermore, the proposed project consists of the installation of a transmission main mostly within existing roadways and on undeveloped, undisturbed land, with some jack and bore techniques required to enable the transmission main to cross under the I-15 freeway, and pipelines are generally not susceptible to significant adverse effects associated with unstable soils. As stated under issues VII(a[iii]) and VII(a[iv]) above, damage to pipelines can occur, but can be repaired and placed back into operation with no loss of human life. Based on the analysis above, the project footprint is anticipated to be underlain by generally stable soils, and given the type of project proposed, impacts to structures or humans would be minimal.

- d. *Less Than Significant Impact* – The majority of the proposed project will be located underground. As stated throughout the Geology and Soils section of the Initial Study, pipelines are generally not subject to experiencing significant effects of soil instability or in this case, expansive soils. According to the USDA Natural Resources Conservation Service Web Soil Survey (Appendix 4b), the majority of the project area is underlain by Tujunga gravelly loamy sands, which are not considered expansive soils. Expansive soils are typically in the clay soil family, which are not known to be present within the project footprint; however, as previously stated, while damage to pipelines can occur, damaged pipelines can be repaired and placed back into operation with no loss of human life. Further, the transmission main will be installed on engineered fill and cover material that will minimize potential damage. Given the above, the proposed project would have a less than significant potential to be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- e. *No Impact* – The proposed project proponent is WVWD, and the overall purpose of the proposed project is to expand WVWD's water system to accommodate future demand by development in the project area. No septic systems or alternative wastewater disposal systems are proposed as part of the project. Thus, no impacts related to the use of septic tanks or alternative water disposal systems will occur.
- f. *Less Than Significant With Mitigation Incorporated* – The potential for discovering paleontological resources during development of the project is considered unlikely due to the past disturbance and extent of ground disturbance within disturbed areas of the project site; however, given that some undisturbed area would be disturbed by the proposed project, there are portions of the transmission main alignment that may contain paleontological resources. The vast majority of the pipeline alignments are contained within the rights-of-way of existing public roadways, where typically the top five to six feet of soils are practically engineered fill that has been greatly disturbed by road construction and the installation of subsurface utility lines. In other cases, such as where jack and bore techniques would be utilized, much of the soils/sediment will be well underground with little potential for disturbance of subsurface paleontological resources. While no unique geologic features are known or suspected to occur on or beneath the sites, because these resources are located beneath the surface and can only be discovered as a result of ground disturbance activities, the following contingency mitigation measure shall be implemented:

GEO-6 *Should any paleontological resources be accidentally encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with WVWD's onsite inspector. The paleontological professional shall assess the find, determine its significance, and determine appropriate mitigation measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.*

With incorporation of this contingency mitigation, the potential for impact to paleontological resources will be reduced to a less than significant level. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION: The following information utilized in this section of the Initial Study was obtained from the following technical study: *Air Quality and GHG Impact Analyses, West Valley Water District, Transmission Main Project, San Bernardino, California* prepared by Giroux & Associates dated July 12, 2021. This technical study is provided as Appendix 1 to this document.

GHG Background

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statutes and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07. AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions, are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 continues. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e., company owned) and indirect sources (i.e., not company owned).

Thresholds of Significance

In response to the requirements of SB 97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of Project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to “select the model or methodology it considers most appropriate.” The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

Impact Analysis

- a. *Less Than Significant Impact* – On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent per year (CO₂e/year). In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the 10,000 MT guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level. As such, should the project emit over 10,000 MT CO₂e/year, it would result in a significant impact under this issue.

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO₂ emissions identified in Table VIII-1.

**Table VIII-1
CONSTRUCTION EMISSIONS (MT CO₂e)**

	MT CO₂e
Project GHG Emissions	45.7
Amortized	1.5

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided and given that the proposed project would not generate GHG emissions in excess of 10,000 MT CO₂e/year, GHG impacts from construction are considered individually less than significant. Total project GHG emissions would be substantially below the proposed significance threshold of 10,000 MT suggested by the SCAQMD as operation of the proposed transmission main would require minimal additional electricity from existing booster pumps serving WVWD's service area. Hence, neither project operation nor construction would not result in generation of a significant level of greenhouse gases. As such, the proposed project would have a less than significant potential to generate GHG emissions, directly or indirectly, that may have a significant impact on the environment.

b. *Less Than Significant Impact –*

Consistency with GHG Plans, Programs and Policies

In March 2014, the San Bernardino Associated Governments and Participating San Bernardino County Cities Partnership (Partnership) created a final draft of the San Bernardino County Regional Greenhouse Gas Reduction Plan (Reduction Plan). This Reduction Plan was created in accordance to AB 32, which established a greenhouse gas limit for the state of California. The Reduction Plan seeks to create an inventory of GHG gases and develop jurisdiction specific GHG reduction measures and baseline information that could be used by the 21 Partnership Cities of San Bernardino County, including the County of San Bernardino.

Projects that demonstrate consistency with the strategies, actions, and emission reduction targets contained in the Reduction Plan would have a less than significant impact on climate change. The project will generate GHG emissions below the 10,000 MT CO₂e significance threshold, as shown in Table VIII-1, and as such, it is consistent with the Reduction Plan. As such, the proposed project would have a less than significant potential to conflict with an applicable plan, policy or regulation adopted to reduce GHG emissions.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Neither construction nor operation of the proposed transmission main are anticipated to require any routine use of hazardous materials. Additionally, roadways adjacent to and within the project footprint are public roads that can be used by any common carrier to or from the local area. For such transporters, the existing regulatory mandates ensure that the hazardous materials and any hazardous wastes transported to and from the project site will be properly managed. These regulations are codified in Titles 8, 22, and 26 of the California Code of Regulations. For example, maintenance trucks for construction equipment must transport their hazardous materials in appropriate containers, such as tanks or other storage devices. In addition, the haulers must comply with all existing applicable federal, state and local laws and regulations regarding transport, use, disposal, handling and storage of hazardous wastes and material, including storage, collection and disposal. Compliance with these laws and regulations related to transportation will minimize potential exposure of humans or the environment to significant hazards from transport of such materials and wastes.

The proposed project will install about 650 LF of water transmission main pipeline. The proposed pipeline will be constructed underground within existing roadways, within undeveloped easements, or underground by way of jack and bore techniques; once constructed, the roadways will be repaved to their original condition, undisturbed area will be recompact, and the disturbance at jack and bore pit locations will be recompact. Thus, once constructed, the transmission main will not require or result in transport, use, or disposal of hazardous materials. Therefore, impacts under this issue would be less than significant.

- b. *Less Than Significant With Mitigation Incorporated* – During construction or maintenance activities in support of the proposed project, treatment system, fuels, oils, solvents, and other petroleum materials classified as "hazardous" will be used to support these operations. Mitigation designed to reduce, control or remediate potential accidental releases must be implemented to prevent the creation of new contaminated areas that may require remediation in the future and to minimize exposure of humans to public health risks from accidental releases. The following mitigation measure reduce such accidental spill hazards to a less than significant level:

HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

By implementing this measure, potentially substantial adverse environmental impacts from accidental releases associated with installation of the proposed well can be reduced to a less than significant level.

- c. *Less Than Significant Impact* – The project site is not located within one quarter mile of a school; the nearest school is Kordyak Elementary School, located about a mile east of the project site at 4580 Mango Avenue, Fontana, CA 92336. The proposed project is not anticipated to emit hazardous emissions or handle large quantities of hazardous materials or substances that would cause a significant impact to a local school. Furthermore, the District will develop further safety standards and operational procedures and continue to enforce existing safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous. As such, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste during construction or operation in a quantity that would pose any danger to people adjacent to, or in the general vicinity of, the project site. Therefore, the impacts of the proposed project to this issue area would be considered less than significant.
- d. *Less Than Significant Impact* – The proposed project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment. None of the proposed actions related to the development of the proposed transmission main would be near to or impact a site known to have hazardous materials or a site under remediation for hazardous materials or associated issues. A review of the California State Water Resources Control Board GeoTracker database indicates that no open hazardous materials cleanup sites are located within a 2,500-foot radius of the proposed pipeline development site (Figure IX-1). Therefore, the proposed project is not forecast to result in a significant hazard to the public or the environment associated with this issue area. No mitigation is required.
- e. *No Impact* – The project site is located at a great distance from any nearby airport. As shown on the Airport Safety & Planning Areas map prepared for the San Bernardino Countywide Plan (Figure IX-2), the proposed project is not located within an Airport Safety Review Area at any of the area airports shown on the Map (Ontario International Airport, San Bernardino International Airport, and Redlands Airport). Therefore, there is no potential safety hazard for people residing or working in the project area as a result of proximity to a public airport or private airstrip. No mitigation is required.

- f. *Less Than Significant With Mitigation Incorporated* – The construction of the transmission main alignment would require temporary ground-disturbance between two points within WVWD's system on undeveloped, undisturbed land from Lytle Creek Road to the north and Citrus Avenue to the south, including boring under the I-15 freeway. At no time during the installation of the transmission main will the entirety of the above roadways be closed, and no impact to I-15 traffic will occur when the District constructs the segment of the transmission main that will jack and bore under the freeway. The project would require one lane to be closed, which would allow for through-traffic so long as a traffic management plan is developed and implemented. As such, please refer to the Transportation/Traffic Section of this document, Section XVII. MM **TRAN-1** and **TRAN-2** would be implemented to address any potential traffic disruption and emergency access issues on area roadways. Furthermore, much of the proposed project would occur within undeveloped land outside of roadways; the only construction within the roadways would occur at the pipeline to which the transmission main will connect. With implementation of these measures requiring construction traffic control and that roadways are returned to their original or better condition; impacts are reduced to a less than significant. No additional mitigation is required.
- g. *Less Than Significant Impact* – The proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The proposed project area is located adjacent to the San Gabriel Mountains, as such, the project is located within to a very high fire hazard severity zone (Figure IX-3). The proposed project footprint is located within both a Local Responsibility Area (LRA) and a State Responsibility Area (SRA) (Figure IX-4). However, the project will not construct any habitable structures. The proposed project will install 650 LF of new transmission pipeline within existing roadways or otherwise underground. Pipelines and transmission mains are not susceptible to wildfire hazards once installed and the development of the proposed pipeline will not increase the risk of wildland fires to nearby residences and structures. Furthermore, the potential for loss of life during construction is considered lessened because the proposed project site is located in an area with an emergency route that leads away from the project area, I-15, as well as access to Lytle Creek Road and Citrus Avenue, which ultimately leads away from the fire hazard zones when traveling south of the project site. Based on past experience with wildfires in the area, the Valley Region does not experience the same level of wildfire hazards as do the mountain areas where fuel loads are greater, and as such, this part of the project area can be successfully evacuated and life preserved, even if property is damaged. The transmission main, however, would remain functional in the event of a wildland fire, as it will operate belowground. Therefore, though the proposed project is located within an area considered susceptible to wildfire hazards, because the entirety of the project will be installed belowground, the proposed project would have a less than significant expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* – The project proposes to install 650 LF of transmission main. The construction of the transmission main alignment would require temporary ground-disturbance between two points within WVWD's system on undeveloped, undisturbed land from Lytle Creek Road to the north and Citrus Avenue to the south, including boring under the I-15 freeway. Three main sources of potential violation of water quality standards or waste discharge requirements are as follows: from generation of municipal wastewater; from stormwater runoff; and potential discharges of pollutants, such as accidental spills. The proposed project may result in some soil erosion during construction activities because the proposed project would be developed within some undisturbed areas. However, due to the small size of the proposed project (less than one acre), a Storm Water Pollution Prevention Plan (SWPPP), which would typically address means by which to control potential sources of water pollution that could violate any standards or discharge requirements during construction is not required. The District shall instead implement Best Management Practices (BMPs) during construction, which will be enforced by the following mitigation measure:

- HYD-1** *The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the District include the following:*
- *The use of silt fences or coir rolls;*
 - *The use of temporary stormwater desilting or retention basins;*
 - *The use of water bars to reduce the velocity of stormwater runoff;*
 - *The use of wheel washers on construction equipment leaving the site;*
 - *The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;*
 - *The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and*
 - *Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.*

Once constructed, the proposed transmission main will operate underground within existing road rights-of-way that will be repaved to their original or better condition, as will the area of compacted dirt within which a portion of the alignment will be installed. Therefore, with no anticipated operational impacts or substantial change in the environment from implementation of the proposed project, implementation of these mandatory plans and their BMPs, as well as MMs **HYD-1** and **HAZ-1** above, will prevent a violation of any water quality standards or waste discharge.

- b. *Less Than Significant Impact* – The project does not propose the installation of any water wells that would directly extract groundwater and the proposed project would not impact the amount of pervious area within the project footprint. Furthermore, the proposed project would not encounter groundwater during construction, as the groundwater level is between 705 feet to 732 feet below ground surface (bgs). The project proposes to install a transmission main to facilitate supply of water to accommodate the increase in development that is projected to occur in Pressure Zone 7. There is currently no source of supply within Pressure Zone 7, as water is boosted from the Lower Pressure Zones (4, 5, and 6) to serve that area. The construction of this project will provide WVWD with increased circulation of water by connecting the existing 18" transmission main on Lytle Creek Road and to the future 18" transmission main connection on Citrus Avenue as part of a planned tract development that has been analyzed in a separate CEQA document (the Monarch Hills Residential Development Environmental Impact Report [EIR]; State Clearinghouse Number [SCH#] 2016101065). The transmission main will give WVWD the ability to gravity flow water, provided by the existing reservoir, through the transmission main from one side of the I-15 to the other side. The volume capacity of the transmission main once constructed will be approximately 7,649 gallons per day (gpd). The impacts of delivering this volume of water were analyzed in the WVWD 2020 Water Facilities Master Plan⁵ and the environmental impacts have been identified by the CEQA document prepared for the tract home development that will be served by the project; the District determined that sufficient capacity would be available to support the demand created by the development the proposed transmission main would serve. As such, the installation of the proposed transmission main would have a less than significant potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin.

⁵ <https://wvwd.org/wp-content/uploads/2020/07/2020-Water-Facilities-Master-Plan.pdf>

- c.
- (i-iii). *Less Than Significant Impact* – No substantial impact to drainage patterns or structures will result from implementing this project. The roadways within which the pipeline will be installed will be returned to their original condition upon completion of the installation of the transmission main, as will the area of compacted dirt within which a portion of the alignment will be installed. The roadways will generate essentially the same amount of stormwater as they do at present because no expansion of roadway or change in drainage patterns are anticipated. Conveyance of stormwater to drainage alignments and storm drains within these roadways and within the undeveloped areas within which the transmission main will be installed will remain intact and unchanged once construction has been completed. No substantial change to the existing drainage pattern will result from project implementation. Adequate drainage facilities exist to accommodate pre- and post-project drainage flows, and will therefore result in a less than significant impact. Based on the data outlined above, this project will not substantially alter the existing drainage pattern of the site or area; will not substantially alter the course of a stream or river in such a manner that will result in substantial erosion or siltation either on or off the project footprint; or contribute runoff water that could exceed the capacity of the existing drainage facilities. No additional sources of polluted runoff will result and impacts are considered less than significant. No additional mitigation is required.
- c.
- (iv). *No Impact* – According to the County of San Bernardino General Plan 100-Year Floodplain Map (Figure X-2), the proposed project is not located in a 100-year or 500-year flood hazard area. The project is located within Zone X and is therefore not delineated as being within a FEMA or Department of Water Resources (DWR) flood plain. The proposed project would install pipeline underground within existing roadways or within the area of compacted dirt within which a portion of the alignment will be installed. This project will not substantially alter the existing drainage pattern of the site or area because the roadway and compacted alignment will be returned to their original condition once the transmission main has been installed. As such, once installed underground, the existing drainage pattern will be maintained, and given that no project components will be installed aboveground, the proposed project would have no potential to impede or redirect flows. No mitigation is required.
- d. *Less Than Significant Impact* – As stated above under issue X(c[iv]), the proposed project is located within Zone X and is therefore not delineated as being within a FEMA or Department of Water Resources (DWR) flood plain. The project site is not located near any large bodies of water, so impacts associated with seiche or tsunami cannot occur. Mudflow typically occurs on hillsides and the proposed project is not located on a hillside or in an area exposed to significant mudflow. Once the proposed transmission main is installed belowground, the roadways and area of compacted dirt within which a portion of the alignment will be installed, will be returned to their original condition or better. With no aboveground structures proposed, the development of the proposed 18-Inch Transmission Main Installation Project would not risk release of pollutants due to project inundation. Impacts under this issue are considered less than significant. No mitigation is required.
- e. *Less Than Significant Impact* – The project site is located in the Upper Santa Ana Valley Basin (shown on Figure X-1, the Countywide Plan Groundwater Basins Map) and the Upper Santa Ana River Watershed, which has been designated very low priority by the Sustainable Groundwater Management Act (SGMA). The SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins and requires GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California. The SGMA “requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline.”⁶ Given that the project is located within a basin that is considered very low priority, no conflict or obstruction of a water quality control plan or sustainable groundwater management plan is anticipated. As such, the project would not conflict with a sustainable groundwater management plan. Water consumption and effects in the basin indicates that the proposed project’s water demand is considered to be minimal.

⁶ <https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>

By controlling water quality during construction and operations through implementation of both short- and long-term best management practices at the site, no potential for conflict or obstruction of the Regional Board's water quality control plan has been identified.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – The 18-Inch Transmission Main Installation Project footprint is located within the City of Fontana and the unincorporated San Bernardino County and will occur within developed roadway segments and within a portion of compacted dirt area within which a portion of the alignment will be installed. The project footprint traverses through the County of San Bernardino land use designation of Very Low Density Residential (VLDR) and the City of Fontana land use designations (RMU) Regional Mixed Use and Residential-Estates (R-E). Generally, as the proposed pipelines would be located belowground, pipelines are considered land use independent as they are considered essential infrastructure. Once in operation the project will not encroach on developed land surrounding the project footprint as the new transmission main will be located underground. The proposed project is considered a benefit to the District's service area because it would accommodate anticipated future growth and demand for water in the area. Therefore, the project would not result in physically dividing an established community, particularly because the entirety of the project will occur within existing road rights-of-way or otherwise below ground, and once constructed, the roadways and compacted dirt area will continue to function as they do at present. No impacts are anticipated and no mitigation is required.
- b. *No Impact* – Please refer to the discussion under issue X(a) above. The project footprint traverses through the County of San Bernardino land use designation of Very Low Density Residential (VLDR) and the City of Fontana land use designations (RMU) Regional Mixed Use and Residential-Estates (R-E). The project will install a new water transmission main within the District's service area in the City of Fontana and the unincorporated San Bernardino County. The project footprint consists of existing road rights-of-way and an alignment of compacted dirt that will be returned to their original condition and function as they do at present once the new transmission main has been installed. Thus, the development of the proposed project within the proposed alignment will be compatible with existing land uses and land use plan, and no conflict or impact to land use can be identified. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

a&b. *No Impact* – The 18-Inch Transmission Main Installation Project footprint is located within the City of Fontana and unincorporated San Bernardino County and will occur within developed roadway segments and within a portion of compacted dirt area within which a portion of the alignment will be installed. The project is located adjacent to the San Gabriel Mountains, and much of the land adjacent to the footprint is vacant and undeveloped. The San Bernardino Countywide Plan Mineral Resource Zones map indicates that the proposed project is located within the MRZ-3 zone—a moderate potential or possible location for mineral resources to occur—for aggregate resources (Figure XII-1). Additionally, the proposed project is not within an area designated by the State Mining and Geology Board in 1987 or 2013 as a Regional Significant Construction Aggregate Resource Areas in the San Bernardino Production-Consumption Region. Given that the proposed project is not located on a delineated state or regionally significant site, and that no mineral extraction currently occurs or is known to have ever occurred on the property, it is anticipated that the development of the site would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impacts are anticipated under this issue and no mitigation is required

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

Background

Noise is generally described as unwanted sound. The proposed 18-Inch Transmission Main Installation Project would install 650 LF of transmission main within the City of Fontana and Unincorporated San Bernardino County. The proposed project is located within a site adjacent to the I-15 freeway, and is therefore located in a high background noise level environment. For this project, the nearest sensitive use is a residential use is more than 700-feet to the northeast of the project site. Traffic along Lytle Creek Road and Citrus Avenue is minimal to moderate in the vicinity of the project site; however, the background noise is dominated by the I-15 freeway located between these two roadways.

The unit of sound pressure ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over one million times within the range of human hearing. A logarithmic loudness scale, similar to the Richter scale for earthquake magnitude, is therefore used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all sound frequencies within the entire spectrum. Noise levels at maximum human sensitivity from around 500 to 2,000 cycles per second are factored more heavily into sound descriptions in a process called "A-weighting," written as "dBA."

Leq is a time-averaged sound level; a single-number value that expresses the time-varying sound level for the specified period as though it were a constant sound level with the same total sound energy as the time-varying level. Its unit of measure is the decibel (dB). The most common averaging period for Leq is hourly.

Because community receptors are more sensitive to unwanted noise intrusion during more sensitive evening and nighttime hours, state law requires that an artificial dBA (A-weighted decibel) increment be added to quiet time noise levels. The State of California has established guidelines for acceptable community noise levels that are based on the Community Noise Equivalent Level (CNEL) rating scale (a 24-hour integrated noise measurement scale). The guidelines rank noise land use compatibility in terms of "normally acceptable," "conditionally acceptable," and "clearly unacceptable" noise levels for various land use types. The State Guidelines, Land Use Compatibility for Community Noise Exposure, single-family homes are "normally acceptable" in exterior noise environments up to 60 dB CNEL and "conditionally acceptable" up to 70 dB CNEL based on this scale. Multiple family residential uses are "normally acceptable" up to 65 dB CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries and churches are "normally acceptable" up to 70 dB CNEL, as are office buildings and business, commercial and professional uses with some structural noise attenuation.

City of Fontana Noise Standards

Chapter 17, Article II of this City of Fontana Municipal Code addresses noise. Section 18-63 states the following regarding construction noise.

(b) The following acts, which create loud, excessive, impulsive or intrusive sound or noise that annoys or disturbs persons of ordinary sensibilities from a distance of 50 feet or more from the edge of the property, structure or unit in which the source is located, are declared to be in violation of this article, but such enumeration shall not be deemed to be exclusive, namely:

(7) Construction or repairing of buildings or structures. The erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or structure or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for such work to be done on weekdays within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

County of San Bernardino Noise Standards

Temporary construction noise is exempt from the County Noise Performance Standards between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays. The San Bernardino County Development Code Section 83.01.080 establishes standards for mobile noise sources by limiting construction to the daytime hours between 7 a.m. to 7 p.m. on Monday through Friday and 9 a.m. to 6 p.m. on Saturday, with construction mobile noise sources prohibited on Sundays.

Impact Analysis

- a. *Less Than Significant With Mitigation Incorporated* – The 18-Inch Transmission Main Installation Project footprint is located within the City of Fontana and the Unincorporated San Bernardino County and will occur within developed roadway segments and within a portion of compacted dirt area of within which a portion of the alignment will be installed. However, once installed, the transmission main will be located underground; no above ground features are proposed, and no noise sources will affect adjacent land uses. The background noise in the vicinity of the project is high due to the proximity of the I-15 freeway, under which the project will jack and bore a segment of the new transmission main. As shown on the San Bernardino County General Plan Existing and Future Noise Contour Map showing Existing Noise Contours in the vicinity of the project (Figures XIII-1 and XIII-2), nearly the entire project footprint is located within the 70 CNEL noise contour.

Short Term Construction Noise

Short-term construction noise impacts associated with the proposed project will occur over a period of a maximum of 30 days and may impact nearby residential dwellings, churches, schools, or other sensitive receptors. For this project, the nearest sensitive use is a residential use is more than 700-feet to the northeast of the project site. These activities will include noise generated by construction activities, movement of construction materials to and from the site, and grading, paving, trenching, and excavation within the road rights-of-way. Temporary construction noise is exempt from the County Noise Performance Standards between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays. Furthermore, the San Bernardino County Development Code Section 83.01.080 establishes standards for mobile noise sources by limiting construction to the daytime hours between 7 a.m. to 7 p.m. on Monday through Friday and 9 a.m. to 6 p.m. on Saturday, with construction mobile

noise sources prohibited on Sundays. The City of Fontana prohibits the erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 6:00 p.m. and 7:00 a.m. on weekdays and between the hours of 5:00 p.m. and 8:00 a.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector. The proposed project would be constructed in compliance with the City and County's noise standards, and construction of the project would be less than significant. However, to minimize the noise generated on the site to the extent feasible, the following mitigation measures shall be implemented:

- NOI-1 All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.***
- NOI-2 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.***
- NOI-3 No construction activities shall occur during the hours of 6 PM through 7 AM, Monday through Friday, or 5 PM through 8 AM on Saturdays for temporary construction noise sources or 5 PM through 9 AM for mobile noise sources during construction and at no time shall construction activities occur on Sundays or holidays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector.***
- NOI-4 Equipment not in use for five minutes shall be shut off.***
- NOI-5 Equipment shall be maintained and operated such that loads are secured from rattling or banging.***
- NOI-6 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.***
- NOI-7 WVWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by WVWD.***

Long-Term Operational Noise

The proposed project will not cause any measurable permanent increase in ambient noise levels in the vicinity of the project above levels existing without the project, in particular because this project would install transmission main below ground. Operating the water main in the transmission main alignment will not generate any new sources of operational noise within the project footprint. Therefore, through the implementation of the mitigation measures identified above, neither operation or construction of the proposed project would violate noise standards outlined in the City of Fontana Municipal Code or San Bernardino County Code of Ordinances. Impacts under this issue are considered less than significant with mitigation incorporated.

- b. *Less Than Significant Impact* – Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by vibration of room surfaces is called structure borne noises. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous or transient. Vibration is often described in units of velocity (inches per second), and discussed in vibration decibel (VdB) units in order to compress the range of numbers required to describe vibration. Vibration impacts related to human development are generally associated with activities such as train operations, construction, and heavy truck movements.

The Federal Transportation Administration (FTA) Assessment states that in contrast to airborne noise, ground-borne vibration is not a common environmental problem. Although the motion of the ground may be noticeable to people outside structures, without the effects associated with the shaking of a structure, the motion does not provoke the same adverse human reaction to people outside. Within structures, the effects of ground-borne vibration include noticeable movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. FTA Assessment further states that it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. However, some common sources of vibration are trains, trucks on rough roads, and construction activities, such as blasting, pile driving, and heavy earth-moving equipment. The FTA guidelines identify a level of 80 VdB for sensitive land uses. This threshold provides a basis for determining the relative significance of potential project related vibration impacts. This threshold provides a basis for determining the relative significance of potential project related vibration impacts.

In the short term, it is possible that groundbreaking construction equipment and other equipment required to construct the whole of the project may have some potential to create some vibration at the nearest sensitive receptors at some sites within the project footprint. Background vibration within project footprint that traverses through the City of Fontana or San Bernardino County would generally be moderate to high given the heavy traffic along the I-15. Groundborne vibration is normally perceptible to humans at approximately 65 VdB, while 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible. Construction activity can result in varying degrees of groundborne vibration; in the short term, construction from installing the transmission main has the potential to create some groundborne vibration, though no nearby sensitive receptors exist at which the vibration would cause a nuisance. The San Bernardino County Development Code offers guidance on Vibration. San Bernardino County Development Code 83.01.090 provides guidance regarding how vibration should be measured and offers the following Standard:

(a) Vibration standard. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal to two-tenths (0.2) inches per second measured at or beyond the lot line.

Additionally, according to the San Bernardino County Development Code, construction is exempt from vibration regulations during the hours of 7 AM and 7 PM. As such, vibration related to construction activities will be less than significant because the project is required to and therefore will limit construction to these hours (as enforced through MM **NOI-3**). Any short-term impacts to the nearest sensitive receptors would be considered less than significant due to the 700-foot distance between the proposed project footprint and the nearest sensitive receptor. Operational vibration is anticipated to be less than significant given that there are no sensitive receptors within 700 feet of the proposed project site and the pipelines will operate below ground, where no above ground vibration would be noticeable. No mitigation is required.

- c. *No Impact* – The project site is located at a great distance from any nearby airport. As shown on the Airport Safety & Planning Areas map prepared for the San Bernardino Countywide Plan (Figure IX-2), the proposed project is not located within an Airport Safety Review Area at any of the area airports shown on the Map (Ontario International Airport, San Bernardino International Airport, and Redlands Airport), and therefore is not located within the noise contours for the Airport. Therefore, there is no potential for the project expose people residing or working in the project area to excessive noise levels as a result of proximity to a public airport or private airstrip. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – Implementation of the project will not induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). The project is considered a vital infrastructure project because it proposes to install a transmission main that would provide WVWD with increased circulation of water by connecting the existing 18” transmission main on Lytle Creek Road and to the future 18” transmission main connection on Citrus Avenue as part of a planned tract development that has been analyzed in a separate CEQA document (the Monarch Hills Residential Development Environmental Impact Report [EIR]; State Clearinghouse Number [SCH#] 2016101065). The proposed project will require a temporary work force; however, this is short-term and with a maximum of about 11 employees will not induce substantial population growth. Furthermore, according to the Southern California Association of Governments (SCAG), the total population of Unincorporated San Bernardino County in 2018 was 311,659 persons⁷, while the 2018 population of the City of Fontana was 212,000 persons.⁸ The SCAG Connect SoCal Demographics and Growth Forecast⁹ notes that the Unincorporated San Bernardino County population is anticipated to grow to 353,100 residents by 2045 and the City of Fontana is anticipated to grow to 286,700 residents by 2045. This indicates that the City and County have room for population growth in the future. As such, given that no additional employees will be required once the transmission main is in operation, the proposed project would have a less than significant potential to induce substantial population growth in an area, either directly or indirectly. No mitigation is required.
- b. *No Impact* – The proposed 18-Inch Transmission Main Installation Project will occur within roadways or otherwise below ground. No housing is proposed as part of the project and no housing exists and no persons reside within the project footprint. Therefore, implementation of the project as a whole will not displace any existing housing or displace a substantial number of people that would necessitate the construction of replacement housing elsewhere. No impacts will occur as a result of project implementation. No mitigation is required.

⁷ https://scag.ca.gov/sites/main/files/file-attachments/unincareasanbernardinocounty_0.pdf?1606013790

⁸ https://scag.ca.gov/sites/main/files/file-attachments/fontana_localprofile.pdf?1606014851

⁹ https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf?1606001579

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The City of Fontana and County of San Bernardino are currently served by the San Bernardino County Fire Department (SBFD). The nearest SBFD station nearest to the project site is Fire Station 79, located at 5075 Coyote Canyon Road, Fontana, CA 92336. Medic Engine 79 and Brush Engine 79 provide paramedic and fire services to northern Fontana residents and business owners. The station also responds to the urban / wildland interface of the Front Country, including Lytle Creek and the I-15 corridor. The project will not include the use or storage of highly flammable materials. The proposed project would install 650 LF of transmission main pipeline belowground within existing roadways and within an undeveloped area containing some native and non-native vegetation. Though there may be some need for fire protection services during construction of the transmission main, existing fire protection services within the area are considered adequate protection in such instances. Once construction of the transmission main has been completed there will be no potential for the operation of the transmission main to require fire protection services it will be located belowground. Therefore, any impact to the existing fire protection system is considered random and less than significant. No additional mitigation is required.
- b. *Less Than Significant Impact* – The proposed project receives police services through the San Bernardino County Sheriff's Department and the Fontana Police Department. These Departments enforces local, state, and federal laws within the project area; performs investigations and makes arrests; administer emergency medical treatment; and responds to emergencies. The project site is served by the Sheriff Service Agency – Fontana and by the Fontana Police Department as shown on Figure XV-1, which depicts the service area of Sheriff Operations and Police Department Operations delineated by the San Bernardino Countywide Plan. The Sheriff's Station is located at 17780 Arrow Blvd, Fontana, CA 92335, which is approximately 10 miles to the south of the project site, the Police Department is located at 17005 Upland Ave, Fontana, CA 92335, which is about 10 miles to the south of the project site, just west of the Sheriff Department, and the project is located within existing patrol routes. The project is not anticipated to generate growth within the project area that would create a new demand for police protection because no additional employees will be required once the pipeline is installed and is in operation. The construction of the transmission main will require only a temporary work force. The proposed project will not include the kind of use that would likely attract criminal activity, except for random trespass and theft; however, construction equipment will be stored in such a manner that public will not have access to it, and once in operation, the project will not include any aboveground components. Thus, due to the type of project proposed, no new or expanded police or sheriff facilities would need to be constructed as a result of the project. Therefore, impacts to police

protection resources from implementation of the proposed project are considered less than significant; no mitigation measures are required.

- c. *Less Than Significant Impact* – The proposed project is located within the Fontana Unified School District, which consists of 45 schools. The nearest school is Kordyak Elementary School, located about a mile east of the project site at 4580 Mango Avenue, Fontana, CA 92336. As discussed under Chapter XIV, Population and Housing, above, the project would not induce population growth within the City or County, as it will neither construct housing, nor result in a growth in employment opportunities within the area. Because the project would install new infrastructure through the development of 650 LF of transmission main and would not develop any aboveground facilities that are commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to school facilities. Thus, the proposed project will not generate an increase in elementary, middle, or high school population. Therefore, any impacts under this issue are considered less than significant. No mitigation is required.
- d. *No Impact* – Because the project would develop infrastructure through the development of 650 LF of transmission main and would not develop any aboveground facilities that are commercial, residential, or industrial in nature, the proposed project is not required to pay any fees to offset impacts to park facilities. As stated in the preceding sections, the proposed project is not anticipated to create a substantial increase in population because it does require additional WVWD staff to operate this new transmission main. Implementation of the proposed project will not impact any current or planned park use, as it will be constructed within existing roadways and within an area containing compacted dirt and vegetation. Thus, implementation of the proposed project would not cause a substantial adverse physical impact to any parks within the County or City. No impacts are anticipated, and no mitigation is required.
- e. *No Impact* – Other public facilities include library and general municipal services. The library system in the County of San Bernardino is operated by the San Bernardino County Library System. Since the project will not directly induce substantial population growth, it is not forecast that the use of such facilities will increase as a result of the proposed project. As a result, the implementation of the project will not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts in order to maintain acceptable service ratios, response times or other performance objectives for public services to include other public facilities. Thus, no impacts are anticipated under this issue and no mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SUBSTANTIATION

- a. *No Impact* – As previously discussed in Section XIV, Population and Housing and Section XV, Public Services, this project will not contribute to an increase in the population beyond that already allowed or planned for by local and regional planning documents. Therefore, this project will not result in an increase in the demand for parks and other recreational facilities and implementation of the proposed project would not increase the use of any parks within the area, nor would it result in the physical deterioration of other surrounding facilities. No impacts are anticipated. No mitigation is required.
- b. *No Impact* – The proposed project does not include recreational facilities, nor does it require the construction or expansion of recreational facilities. The proposed project will install 650 LF of new transmission main within WVWD's service area in the Unincorporated San Bernardino County and the City of Fontana. The 18-Inch Transmission Main Installation Project will occur mostly within existing roadways and does not include the construction or expansion of recreational facilities. Thus, there will be no adverse effects on the recreational facilities from implementing this project. No mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant With Mitigation Incorporated* — The proposed project would install 650 LF of transmission main between Lytle Creek Road and Citrus Avenue in the City of Fontana and the County of San Bernardino, crossing under the I-15 via jack and bore methods. The entirety of the project will occur within the alignment between these two roadways outlined in the project description, mostly within undeveloped segments of land. The majority of the project will occur outside of the roadway, but connections to Lytle Creek Road and Citrus Avenue are required. These segments of roadway are local/modestly traveled roadways, and any lane closure required to install the proposed transmission main would not impact major routes of circulation within the area. The transmission main installation will require one lane to be closed to complete the installation of the connections to the existing transmission main. The closure of only one lane will ensure that each roadway can still operate during construction. However, the project will require implementation of a traffic management plan in order to ensure adequate traffic flow. The installation of new transmission main would temporarily reduce the capacity of roadways along the pipeline alignment(s) due to open-trenching within existing roadway rights-of-way (ROWs) and the resulting temporary lane closures on the affected roadways. The impact of the lane closures would vary based on the number of lanes needed to be closed (a function of pipeline diameter and trench width) and the width (number of lanes) of the affected roads. Two lane roads such as Lytle Creek and Citrus Avenue would likely require active traffic control (flaggers) to allow alternate one-way traffic flow on the available road width, and could possibly require full road closure (with detour routing around the construction work zone). MM **TRAN-1**—addressed below—would be required to reduce potential impacts to traffic and transportation conditions. Implementation of this measure, in conjunction with the temporary character of the construction impacts, is considered sufficient to ensure adequate flow of traffic in a safe manner for pipeline installation.

TRAN-1 *WVWD shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:*

- *Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.*
- *To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.*
- *Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.*

- ***For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.***
- ***Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.***

During construction, an estimated 11 roundtrips from construction workers per day will occur to install the proposed new transmission main. An average of 10 roundtrips per day would occur to support construction efforts (i.e., delivery or removal of construction materials). Once constructed, no traffic would be generated by this project other than visits to the transmission main alignment by WVWD personnel to inspect and maintain facilities where necessary, resulting in minimal vehicle miles traveled once the transmission main is in operation. Implementation of the project has the potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. However, with implementation of the above mitigation measure requiring a construction traffic management plan, and the following MM **TRAN-2** requiring disturbances within public roadways to be returned to their original or better condition, the proposed project would result in a less than significant impact pertaining to the circulation system, particularly given that impacts to transit, bicycle, and pedestrian facilities will be temporary, and will not permanently disrupt circulation thereof.

TRAN-2 ***WVWD shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of San Bernardino or City of Fontana standard design requirements.***

- b. ***Less Than Significant Impact*** – The proposed project would install 650 LF of transmission main within the City of Fontana and the County of San Bernardino in WVWD's service area. The proposed project will require minimal vehicle miles traveled to accomplish once constructed. In the short term, construction of the proposed facilities will result in the generation of about 21 roundtrips per day on the adjacent roadways by construction personnel and trucks removing any excavated materials and remains of the structures on site. The total number of truck roundtrips per day is estimated to be 11 trips, plus 10 employee roundtrips per day. The vehicle miles traveled in these instances would likely average less than 80 miles round trip. The number of temporary truck trips will be minimized by using 15 cubic yard material haulers instead of smaller 10 cubic yard trucks to haul material onto and off of the site. Additionally, the same trucks that haul material onto the site would also carry material off of the site. Once constructed, no traffic would be generated by this project other than visits to the transmission main alignment by WVWD personnel to inspect and maintain facilities when necessary, resulting in minimal vehicle miles traveled once the pipelines are in operation. As such, development of the 18-Inch Transmission Main Installation Project is not anticipated to result in a significant impact related to vehicle miles travelled, and thus would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts under this issue are considered less than significant.
- c. ***Less Than Significant With Mitigation Incorporated*** – The project will temporarily alter existing roadways during construction of the proposed transmission main. However, this alteration will not create any hazards due to design features of incompatible uses. The proposed project will install approximately 650 LF of transmission main at a few points within existing rights-of-way at Lytle Creek Road and Citrus Avenue in the City of Fontana and County of San Bernardino. As stated under issue XVII(a) above, with the implementation of MMs **TRAN-1** and **TRAN-2**, which require implementation of a construction traffic management plan and requiring disturbances within public roadways to be returned to their original or better condition, any potential increase in hazards due to design features or incompatible use will be considered less than significant in the short term. In the long term, no impacts to any hazards or incompatible uses in existing roadways are anticipated because once the transmission main is constructed, the roadway and segments of undeveloped land/compacted dirt will be returned to its original condition, or better. Thus, any impacts are considered less than significant with implementation of mitigation. No additional mitigation is required.

- d. *Less Than Significant With Mitigation Incorporated* – Please refer to the discussions under issue XVII(a) and XVII(c) above. The proposed project will require closure of one lane within the roadway within which the transmission main must connect to WVWD's existing system. The 18-Inch Transmission Main Installation Project will install a transmission main within the City of Fontana and County of San Bernardino. The majority of the project will occur outside of the roadway, but connections to Lytle Creek Road and Citrus Avenue are required. These segments of roadway are local/modestly traveled roadways, and any lane closure required to install the proposed transmission main would not impact major routes of circulation within the area. Primary roadways within the project footprint that would be used during an emergency or evacuation order would be Lytle Creek Road and Citrus Avenue, though the main evacuation route is the I-15 freeway. During construction, the proposed transmission main would not interfere with traffic along the I-15, and at no time during the installation of transmission main will the entirety of this roadway be closed. The project would require one lane to be closed, which would allow for through-traffic so long as a traffic management plan is developed and implemented. Adequate emergency access will be provided along these routes throughout construction. Though closure of one lane will impact traffic, the implementation of mitigation measures **TRAN-1** and **TRAN-2** will ensure that impacts are reduced to a level of less than significant. No additional mitigation is required.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

A Tribal Resource is defined in the Public Resources Code section 21074 and includes the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in subdivision (k) of Section 5020.1;
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purpose of this paragraph, the lead agency shall consider the significance of the resources to a California American tribe;
- A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape;
- A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "non-unique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal resource if it conforms with the criteria of subdivision (a).

a&b. *Less Than Significant With Mitigation Incorporated* – The District has been contacted by three California tribes: Torres Martinez Desert Cahuilla Indians, San Manuel Band of Mission Indians, Morongo Band of Mission Indians, Gabrieleño Band of Mission Indians – Kizh Nation. The San Manuel Band of Mission Indians responded with a request for the Project Plans, Geotechnical Report, and the Cultural Report. The Project Plans and Geotechnical Report were sent to the tribe on July 20, 2021, while the Cultural Report was sent on November 4, 2021. On November 10, 2021, the representative from the San Manuel Band of Mission Indians provided mitigation that the Tribe would like to see incorporated in the environmental documentation to protect potential tribal cultural

resources. As such, the following mitigation measures shall be implemented to protect such resources:

TCR-1 Tribal Monitoring

Due to the heightened cultural sensitivity of the proposed project area, Tribal monitors representing the San Manuel Band of Mission Indians shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of Tribal monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation (“Cultural Resources” and “Tribal Cultural Resources”) shall be completed by the archaeologist, as detailed within CUL-1, and submitted to the District for dissemination to the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI). Once all parties review and agree to the plan, it shall be adopted by the District – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

TCR-2 Treatment of Cultural Resources

If a pre-contact cultural resource is discovered during archaeological presence/absence testing, the discovery shall be properly recorded and then reburied in situ. A research design shall be developed by the archaeologist that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI), the archaeologist/applicant, and the Lead Agency shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), avoidance (or other appropriate treatment) of the discovered resource, and the potential need for construction monitoring during project implementation. Should any significant resource and/or TCR not be a candidate for avoidance or preservation in place, and the removal of the resource(s) is necessary to mitigate impacts, the research design shall include a comprehensive discussion of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by SMBMI. All plans for analysis shall be reviewed and approved by the applicant and SMBMI prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of SMBMI that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by SMBMI and the District, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to the District, CHRIS, and SMBMI. All reburials are subject to a reburial agreement

that shall be developed between the District and SMBMI outlining the determined reburial process/location, and shall include measures and provisions to protect the reburial area from any future impacts (vis a vis project plans, conservation/preservation easements, etc.).

Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with SMBMI to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the District and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees.

All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the District and SMBMI for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the District, and SMBMI.

TCR-3

Inadvertent Discoveries of Human Remains/Funerary Objects

In the event that any human remains are discovered within the project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately who shall notify SMBMI, the applicant/developer, and the Lead Agency. The District and the applicant/developer shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD and the District agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The District should accommodate on-site reburial in a location mutually agreed upon by the Parties.

It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and the District, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

SMBMI also requested that MM **CUL-2** provided in Subsection V, Cultural Resources be implemented to protect cultural and tribal cultural resources. Additionally, the Gabrieleño Band of Mission Indians – Kizh Nation has also requested consultation under AB 52 in an email dated July 22, 2021. As of November 5, 2021, no specific requests have been made by the Gabrieleño Band of Mission Indians, though the District has reached out via email to ascertain their interest in the project area several times between July 22, 2021 and November 10, 2021. The Gabrieleño Band of Mission Indians – Kizh Nation responded on May 13, 2022 that the Tribe has been very busy and was trying to respond back to everyone as soon as they can. As of June 22, 2022, the Tribe has not provided any subsequent responses or feedback regarding consultation. AB 52 stipulates that consultation is concluded when either of the following occurs:

- The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists to a tribal cultural resource; or
- A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2, subd. (b)).

Given that the District has not received feedback from the Tribe after multiple attempts to ascertain what mitigations would be amenable to the tribe to protect tribal cultural resources within the project site, the District has determined that consultation shall be considered concluded with no further input from the Tribe during the initial public review process. The District will provide the Gabrieleño Band of Mission Indians – Kizh Nation an opportunity to provide additional input through the public review process. Ultimately, given the feedback that has been provided by the three tribes during the AB 52 consultation process, implementation of the proposed project can be implemented without the potential for significant impacts to occur. MM **CUL-1** will ensure proper handling of buried cultural materials should any be discovered during any earth-moving operations associated with the project. As such, with the implementation of MM **CUL-1**, and MM **TCR-1** through **TCR-3** above, which would ensure that SMBMI is able to protect any inadvertently discovered tribal cultural resources within the project footprint, the project has a less than significant potential to cause a substantial change in the significance of tribal cultural resources, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the California Native American tribe and that is either **a)** Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or **b)** A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

a. Water

Less Than Significant Impact – The proposed project will construct new water transmission facilities in the form of a 650 LF new transmission pipeline that will connect to an existing 18-inch transmission main at Lytle Creek Road and bore under the Ontario I-15 freeway and terminate at Citrus Avenue in an unimproved area. As demonstrated throughout this Initial Study, the proposed project will not result in any significant impacts from the installation of the new water transmission facilities that will connect to WVWD's existing water distribution system. WVWD will enable the transmission of a greater volume of water to Pressure Zone 7 to support future development. WVWD has available capacity to serve the future development that this new transmission main would serve. Therefore, while the proposed project would construct new water transmission facilities, development of the 18-Inch Transmission Main Installation Project would not result in a significant environmental effect related to the relocation or construction of new or expanded water facilities. Impacts are less than significant.

Wastewater

Less Than Significant Impact – The proposed project will not develop any housing or human-occupied structures that would require connection to a wastewater collection system. The project proposes to install 650 LF of water transmission main. Therefore, with no connections to any wastewater collection system required, site improvements are not forecast to require or result in the construction of new wastewater facilities or expansion of existing facilities in order to serve the project.

Stormwater

Less Than Significant Impact – As stated under issue XI(c)(i-iii)], implementation the proposed project is not forecast to significantly alter the volume of surface/stormwater runoff that will be generated

from the project footprint. The roadways and undeveloped area within which the pipeline will be installed will be returned to their original condition upon completion of the placement of each segment of transmission main. The roadways and undeveloped area will generate, transport, and absorb (where applicable) essentially the same amount of stormwater as they do at present because no expansion of roadway or change in drainage patterns are anticipated. Given that no new stormwater collection facilities are required to implement the proposed project, and that the existing stormwater collection facilities will remain in place under the proposed project, development of the project will not require or result in the construction of new or expansion of existing stormwater drainage facilities. Any impacts under this issue are considered less than significant. No mitigation is required.

Electric Power

Less Than Significant Impact – Development of the proposed 18-Inch Transmission Main Installation Project would not require the installation of electrical services or substantial additional energy beyond that which is currently required to operate WVWD's existing water distribution system. The proposed project would install 650 LF of transmission main that will be connected to WVWD's existing water distribution system. The area the proposed project will serve will receive water by gravity from an existing reservoir. The project will not require substantial additional energy use at existing transmission facilities to accommodate the transmission of 7,649 gallons per day (gpd). Any increase in energy use would be able to operate within existing electrical capacities. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded electric power facilities. No impacts are anticipated.

Natural Gas

No Impact – Development of the proposed 18-Inch Transmission Main Installation Project would not require installation or use of natural gas. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded natural gas facilities. No impacts are anticipated.

Telecommunications

No Impact – Development of the proposed 18-Inch Transmission Main Installation Project would not require installation of wireless internet service or phone service. Therefore, the project would not result in a significant environmental effect related to the relocation or construction of new or expanded telecommunication facilities. No impacts are anticipated.

- b. *Less Than Significant Impact* – Please refer to the discussion under Subchapter X, Hydrology, issue b. The project proposes to install a transmission main to facilitate supply to accommodate the increase in development that is projected to occur in Pressure Zone 7. The construction of this project will provide WVWD with increased circulation of water by connection the existing 18" transmission main on Lytle Creek Road and to the future 18" transmission main connection on Citrus Avenue as part of a planned tract development that has been analyzed in a separate CEQA document. The transmission main will give WVWD the ability to gravity flow water through the proposed transmission main from one side of the I-15 to the other side. The volume capacity of the transmission main once constructed will be approximately 7,649 gallons per day (gpd). The impacts of delivering this volume of water were analyzed in the WVWD 2020 Water Facilities Master Plan and the environmental impacts have been identified by the CEQA document prepared for the tract home development that will be served by the project (the Monarch Hills Residential Development; State Clearinghouse Number [SCH#] 2016101065); the District determined that capacity would be available to support the demand created by the development the proposed transmission main would serve. As such, the installation of the proposed transmission main would have a less than significant potential to substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin.
- c. *No Impact* – Please refer to the discussion under XIX(a) above. The operation of the transmission main will not require installation of restroom facilities or connection to the local wastewater treatment collection system; construction will require portable toilets that will be handled by the contractor. As such, given that the proposed transmission main will not require any new connection to wastewater

treatment services, it is not anticipated that the project would result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. No impacts under this issue are anticipated.

- d&e. *Less Than Significant With Mitigation Incorporated* – The project will generate construction waste from the removal of asphalt, concrete, and similar materials. The inert wastes can be disposed of at existing municipal or construction solid waste facilities, which have adequate capacity to accept inert wastes generated by this project, or can be recycled. Any construction and demolition (C&D) waste will be recycled to the maximum extent feasible and any residual materials will be delivered to one of several C&D disposal sites in the area surrounding the project site. Many of these C&D materials can be reused or recycled, thus prolonging our supply of natural resources and potentially saving money in the process.

In accordance with CALGreen Code 5.408.4, 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing must be reused or recycled. As this is a mandatory requirement, no mitigation is required to ensure compliance by WVWD for this project.

Because of increased construction recycling efforts resulting from CalGreen and other regulations, opportunities for construction recycling are becoming easier to find, such as one in Fontana that accepts a wide range of construction and demolition debris materials: Asphalt, Concrete, Brick, Concrete with Rebar, Mixed Loads, Rock, Roof Tile, Cardboard, Wood, Metals, Dirt, and Appliances. There are additional facilities that accept C&D materials located in the surrounding areas¹⁰ including facilities in Mira Loma and Rialto.

The facilities that accept C&D materials, combined with the landfills in the surrounding area, have adequate capacity to serve the proposed project. Solid waste will be disposed of in accordance with existing regulations at an existing licensed landfill. The project will not conflict with any state, federal, or local regulations regarding solid waste.

The San Bernardino Countywide Plan identifies landfills that serve the planning area. The San Timoteo Sanitary Landfill and Mid-Valley Sanitary Landfill serve the project area. The San Timoteo Sanitary Landfill has a maximum permitted daily capacity of 2,000 tons per day, with a permitted capacity of 20,400,000 cubic yards (CY), with 11,402,000 CY of capacity remaining. The Mid-Valley Sanitary Landfill has a maximum permitted daily capacity of 7,500 tons per day, with a permitted capacity of 101,300,000 CY, with 67,520,000 CY of capacity remaining. The County anticipates an increase in solid waste generation of 5,979,355 pounds per day at Build-Out of the Countywide Plan.

The above landfills permit thousands of tons of waste per day, which is beyond what the expected amount of waste would be generated by the proposed transmission main during construction. Furthermore, the proposed project is not anticipated to generate any operational waste as the project will install the transmission main below ground. As such, the proposed project would comply with all federal, State, and local statutes related to solid waste disposal.

Any hazardous materials collected within the project footprint during either construction or operation of the project will be transported and disposed of by a permitted and licensed hazardous materials service provider. Therefore, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes. To further reduce potential impacts to solid waste facilities due to the scale of the materials that may require disposal or recycling, the following mitigation measure will be implemented:

UTIL-1 *The contract with demolition and construction contractors shall include the requirement that all materials that can be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road*

¹⁰ https://cms.sbcounty.gov/Portals/50/solidwaste/CandD_Recycling_Guide.pzdf?ver=2015-06-10-130931-247

base, and asphalt. The contractor shall submit a recycling plan to WVWD for review and approval prior to the start of demolition/construction activities to accomplish this objective.

Therefore, with the above mitigation measure, the project is expected to comply with all regulations related to solid waste under federal, state, and local statutes and be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs. No further mitigation is necessary.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

- a. *Less Than Significant Impact* – The proposed project area is an area susceptible to wildland fires, and is located within an area delineated as a Very High Fire Hazard Severity Zone (VHFHSZ) in a State Responsibility Area (SRA) and a Local Responsibility Area (LRA) shown on Figures IX-3 and IX-4. As stated under Section XVII, Transportation under issue (d), there is an emergency evacuation route located adjacent to the project, the I-15 has been delineated as such on the Evacuation Route map provided as Figure XVII-1. The proposed project is not located along this emergency route, nor would implementation of the project impede emergency response from accessing the site or surrounding area. As stated under issue XVIII(c), the proposed project would install a transmission main below ground. Pipelines and transmission mains are not susceptible to wildfire hazards and the development of the proposed pipeline will not increase the risk of wildland fires to nearby residences and structures. Furthermore, the potential for loss of life during construction is considered lessened because the proposed project site is located in an area with an emergency route that leads away from the project area, I-15, as well as access to Lytle Creek Road and Citrus Avenue, which ultimately lead away from the fire hazard zones when traveling south of the project site. Based on past experience with wildfires in the area, the Valley Region does not experience the same level of wildfire hazards as do the mountain areas where fuel loads are greater, and as such, this part of the project area can be successfully evacuated and life preserved, even if property is damaged. The transmission main, however, would remain functional in the event of a wildland fire, as it will operate belowground. Though the project is located within a very high fire hazard severity zone within an SRA and LRA, impacts to emergency response and/or emergency evacuation plans are considered less than significant.
- b. *Less Than Significant Impact* – The proposed project is located within a vacant site between Lytle Creek Road and Citrus Avenue, with a section of the transmission main boring under the I-15 freeway; it is located in a relatively hilly area due to its location adjacent to the San Gabriel Mountains. The project site is slopes gently from north to south, with the entirety of the project to be installed belowground. The proposed project is located in a sparsely developed area with urban development located within close proximity to the project site; there are nearby areas that remain undeveloped or contain native vegetation. Once in operation, the proposed project will consist of a transmission main

that will operate below ground. The proposed project will remove aboveground vegetation where the trenching and pipeline installation will be installed, thereby minimizing the potential fire risks within this site. Given that, based on past experience with wildfires in the area, this area can be successfully evacuated and life preserved due to the availability of evacuation routes, and that the entirety of the pipeline will operate below ground with no occupied structures being developed, there is a less than significant potential for the proposed project to expose persons to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. Therefore, impacts under this issue are considered less than significant. No mitigation is required.

- c. *Less Than Significant With Mitigation Incorporated* – The project will install water transmission infrastructure in the form of a new 650 LF transmission main belowground. As stated above, the project will require removal of vegetation located within the project footprint to enable trenching and installation of the proposed pipeline. However, the project will be required to implement the following mitigation measure, which would minimize fire risk during activities that would utilize electric equipment by requiring construction crews to carry fire prevention equipment during activities involving electrical equipment.

WF-1 *During site clearing within the project site when any electrical construction equipment is in use, the construction crew shall have fire prevention equipment (such as fire extinguishers, emergency sand bags, etc.) to put out any accidental fires that could result from the use of construction/maintenance equipment.*

The proposed project would not result in any ongoing impacts to the environment that would exacerbate fire risk as the proposed project would operate belowground. Therefore, with the implementation of MM **WF-1** above, the project would not have a significant potential to exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impacts under this issue are considered less than significant.

- d. *Less Than Significant Impact* – The proposed project is located within a site that slopes slightly from north to south. The discussion under Section VII, Geology and Soils, concluded that the project would not have a significant potential to experience landslides or slope instability, particularly given that this project area has not been delineated as containing potential for landslides or slope instability by the San Bernardino Countywide Plan and that the entirety of the project would be installed belowground. The proposed project is located in an area that has not been historically subject to flooding. Furthermore, given that the roadways within which the pipeline will be installed will be returned to their original condition upon completion of the installation of the transmission main, as will the area of compacted dirt within which a portion of the alignment will be installed, the pervious area on the surface of the transmission main alignment would only marginally change. Furthermore, the transmission main would remain functional in the event of a wildland fire, as it will operate belowground, should downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage change occur on the surface above which the transmission mains are installed. As such, the development of the 18-Inch Transmission Main Installation Project at this site is anticipated to have a less than significant potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XXI. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUBSTANTIATION

The analysis in this Initial Study and the findings reached indicate that the proposed project can be implemented without causing any new project specific or cumulatively considerable unavoidable significant adverse environmental impacts. Mitigation is required to control potential environmental impacts of the proposed project to a less than significant impact level. The following findings are based on the detailed analysis of the Initial Study of all environmental topics and the implementation of the mitigation measures identified in the previous text and summarized in this section.

- a. *Less Than Significant With Mitigation Incorporated* – The project has no potential to cause a significant impact any biological or cultural resources. The project has been identified as having no potential to degrade the quality of the natural environment, substantially reduce habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The project requires mitigation to prevent significant impacts from occurring as a result of implementation of the project, including mitigation to protect burrowing owl and nesting birds. Based on the historic disturbance of the site, and its current disturbed condition, the potential for impacting cultural resources is low. Based on the past disturbance of the project footprint, it has been determined that no cultural resources of importance are anticipated to occur within the pipeline alignment, so it is not anticipated that any resources could be affected by the project because no cultural resources exist. However, because it is not known what could be unearthed upon any excavation activities, contingency mitigation measures are provided to ensure that, in the unlikely event that any resources are found, they are protected from any potential significant adverse impacts. Please see biological and cultural sections of this Initial Study.
- b. *Less Than Significant With Mitigation Incorporated* – Based on the analysis in this Initial Study, the proposed 18-Inch Transmission Main Installation Project has the potential to cause impacts that are individually or cumulatively considerable. While there may be cumulatively significant impacts under various issues discussed in this Initial Study as a result of cumulative projects, the proposed project's contribution to such impacts would not be cumulatively considerable. Furthermore, the provision of

additional water transmission main is generally viewed as a benefit to the community. The issues of Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire require the implementation of mitigation measures to reduce impacts to a less than significant level and ensure that cumulative effects are not cumulatively considerable. All other environmental issues were found to have no significant impacts without implementation of mitigation. The potential cumulative environmental effects of implementing the proposed project have been determined to be less than considerable and thus, less than significant impacts.

- c. *Less Than Significant With Mitigation Incorporated* – The project will achieve long-term community goals by providing additional capacity for transmission of water, which would serve existing, planned, and future uses within WVWD's service area. The short-term impacts associated with the project, which are mainly construction-related impacts, are less than significant with mitigation, and the proposed project is compatible with long-term environmental protection. The issues of Air Quality, Geology and Soils, Hazards and Hazardous Materials, Noise, and Wildfire require the implementation of mitigation measures to reduce human impacts to a less than significant level. All other environmental issues were found to have no significant impacts on humans without implementation of mitigation. The potential for direct human effects from implementing the proposed project have been determined to be less than significant.

Conclusion

This document evaluated all CEQA issues contained in the Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Aesthetics, Agricultural and Forestry Resources, Greenhouse Gas Emissions, Land Use and Planning, Mineral Resources, Population/Housing, Public Services, and Recreation. The issues of Air Quality, Biology, Cultural Resources, Energy, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation, Tribal Cultural Resources, Utilities and Service Systems, and Wildfire require the implementation of mitigation measures to reduce impacts to a less than significant level. The required mitigation has been proposed in this Initial Study to reduce impacts for these issues to a less than significant impact and will be implemented by the District.

Based on the findings in this Initial Study, West Valley Water District (WVWD or District) proposes to adopt a Mitigated Negative Declaration (MND) for the West Valley Water District 18-Inch Transmission Main Installation Project. A Notice of Intent to Adopt a Mitigated Negative Declaration (NOI) will be issued for this project by the District. The Initial Study and NOI will be circulated for 30 days of public comment because this project does involve state agencies as either a responsible or trustee agency. At the end of the 30-day review period, a final MND package will be prepared and it will be reviewed and considered by the District. WVWD will hold a future hearing for project adoption at their offices, the date for which has not yet been scheduled. If you or your agency comments on the MND/NOI for this project, you will be notified about the meeting date in accordance with the requirements in Section 21092.5 of CEQA (statute).

Note: Authority cited: Sections 21083 and 21083.05, Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151, Public Resources Code; *Sundstrom v. County of Mendocino*, (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors*, (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

Revised 2019

Authority: Public Resources Code sections 21083 and 21083.09

Reference: Public Resources Code sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3/ 21084.2 and 21084.3

SUMMARY OF MITIGATION MEASURES

Air Quality

- AQ-1 Fugitive Dust Control. The following measures shall be incorporated into project plans and specifications for implementation during construction:
- Apply soil stabilizers to inactive areas.
 - Prepare a high wind dust control plan and implement plan elements and terminate soil disturbance when winds exceed 25 mph.
 - Stabilize previously disturbed areas if subsequent construction is delayed.
 - Apply water to disturbed surfaces 3 times/day.
 - Replace ground cover in disturbed areas quickly.
 - Reduce speeds on unpaved roads to less than 15 mph.
 - Trenches shall be left exposed for as short a time as possible.
 - Identify proper compaction for backfilled soils in construction specifications.
- AQ-2 Exhaust Emissions Control. The following measures shall be incorporated into Project plans and specifications for implementation:
- Utilize off-road construction equipment that has met or exceeded the maker's recommendations for vehicle/equipment maintenance schedule.
 - Contactors shall utilize Tier 4 or better heavy equipment.
 - Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

Biological Resources

- BIO-1 Preconstruction presence/absence surveys for burrowing owl shall be conducted no more than 3 days prior to any onsite ground disturbing activity by a qualified biologist, including prior to each phase of new ground disturbance. The burrowing owl surveys shall be conducted pursuant to the recommendations and guidelines established by the California Department of Fish and Wildlife in the "California Department of Fish and Wildlife 2012 Staff Report on Burrowing Owl Mitigation." In the event this species is not identified within the project limits, no further mitigation is required, and a letter shall be prepared by the qualified biologist documenting the results of the survey. The letter shall be submitted to CDFW prior to commencement of project activities. If during the preconstruction survey, the burrowing owl is found to occupy the site, Mitigation Measure BIO-2 shall be required.

- BIO-2 If burrowing owls are identified during the survey period, the District shall take the following actions to offset impacts prior to ground disturbance:

The District shall notify CDFW within three business days of determining that a burrowing owl is occupying the site to discuss the observed location, activities and behavior of the burrowing owl(s) and appropriate avoidance and minimization measures.

Active nests within the areas scheduled for disturbance or degradation shall be avoided until fledging has occurred, as confirmed by a qualified biologist. Following fledging, owls may be passively relocated by a qualified biologist, as described below.

If impacts on occupied burrows are unavoidable, onsite passive relocation techniques may be used if approved by the CDFW to encourage owls to move to alternative burrows provided by the District outside of the impact area.

If relocation of the owls is approved for the site by CDFW, CDFW shall require the District to hire a qualified biologist to prepare a plan for relocating the owls to a suitable site and conduct an impact assessment. A qualified biologist shall prepare and submit a passive relocation program in accordance with Appendix E (i.e., Example Components for Burrowing Owl Artificial Burrow

and Exclusion Plans) of the 2012 Staff Report on Burrowing Owl Mitigation (CDFG 2012) to the CDFW for review/approval prior to the commencement of disturbance activities onsite.

The relocation plan must include all of the following and as indicated in Appendix E:

- The location of the nest and owls proposed for relocation.
- The location of the proposed relocation site.
- The number of owls involved and the time of year when the relocation is proposed to take place.
- The name and credentials of the biologist who will be retained to supervise the relocation.
- The proposed method of capture and transport for the owls to the new site.
- A description of site preparation at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control).

The District shall conduct an impact assessment, in accordance with the Staff Report on Burrowing Owl Mitigation prior to commencing project activities to determine appropriate mitigation, including the acquisition and conservation of occupied replacement habitat at no less than a 2:1 ratio.

Prior to passive relocation, suitable replacement burrows site(s) shall be provided at a ratio of 2:1 and permanent conservation and management of burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owl impacts are replaced consistent with the Staff Report on Burrowing Owl Mitigation including its Appendix A within designated adjacent conserved lands identified through coordination with CDFW and the District. A qualified biologist shall confirm the natural or artificial burrows on the conservation lands are suitable for use by the owls. Monitoring and management of the replacement burrow site(s) shall be conducted and a reporting plan shall be prepared. The objective shall be to manage the replacement burrow sites for the benefit of burrowing owls (e.g., minimizing weed cover), with the specific goal of maintaining the functionality of the burrows for a minimum of 2 years.

A final letter report shall be prepared by the qualified biologist documenting the results of the passive relocation. The letter shall be submitted to CDFW.

- BIO-3 Nesting bird surveys shall be conducted by a qualified avian biologist no more than three (3) days prior to vegetation clearing or ground disturbance activities. Preconstruction surveys shall focus on both direct and indirect evidence of nesting, including nest locations and nesting behavior. The qualified avian biologist will make every effort to avoid potential nest predation as a result of survey and monitoring efforts. If active nests are found during the preconstruction nesting bird surveys, a Nesting Bird Plan (NBP) shall be prepared and implemented by the qualified avian biologist. At a minimum, the NBP shall include guidelines for addressing active nests, establishing buffers, ongoing monitoring, establishment of avoidance and minimization measures, and reporting. The size and location of all buffer zones, if required, shall be based on the nesting species, individual/pair's behavior, nesting stage, nest location, its sensitivity to disturbance, and intensity and duration of the disturbance activity. To avoid impacts to nesting birds, any grubbing or vegetation removal should occur outside peak breeding season (typically February 1 through September 1).

Cultural Resources

- CUL-1 Should any cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist. Responsibility for making this determination shall be with the District. The archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures within the guidelines of the California Environmental Quality Act.

CUL-2 Archaeological Monitoring

Due to the heightened cultural sensitivity of the proposed project area, an archaeological monitor with at least 3 years of regional experience in archaeology shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the District for dissemination to the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI). Once all parties review and approve the plan, it shall be adopted by the District – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

Geology and Soils

- GEO-1 Stored backfill material shall be covered with water resistant material during periods of heavy precipitation to reduce the potential for rainfall erosion of stored backfill material. Where covering is not possible, measures such as the use of straw bales or sand bags shall be used to capture and hold eroded material on the Project site for future cleanup such that erosion does not occur.
- GEO-2 Excavated areas shall be backfilled and compacted such that erosion does not occur. Paved areas disturbed by this project shall be repaved in such a manner that roadways and other disturbed areas are returned to the pre-project conditions or better.
- GEO-3 All exposed, disturbed soil (trenches, stored backfill, etc.) will be sprayed with water or soil binders twice a day or more frequently if fugitive dust is observed migrating from the site within which the pipelines are being installed.
- GEO-4 The length of trench which can be left open at any given time will be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.
- GEO-5 Based upon the geotechnical investigation (Appendix 4a of this document), all of the recommended design and construction measures identified in Appendix 4a (listed on Pages 4-7) shall be implemented by the District. Implementation of these specific measures will address all of the identified geotechnical constraints identified at project site, including soil stability on future project-related structures.
- GEO-6 Should any paleontological resources be accidentally encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection should be performed immediately by a qualified paleontologist. Responsibility for making this determination shall be with WVWD's onsite inspector. The paleontological professional shall assess the find, determine its significance, and determine appropriate mitigation measures within the guidelines of the California Environmental Quality Act that shall be implemented to minimize any impacts to a paleontological resource.

Hazards and Hazardous Materials

- HAZ-1 All spills or leakage of petroleum products during construction activities will be remediated in compliance with applicable state and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste will be collected and disposed of at an appropriately licensed disposal or treatment facility.

Hydrology and Water Quality

- HYD-1 The District shall require that the construction contractor to implement specific Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving offsite into receiving waters. These practices shall include a Plan that identifies the methods of containing, cleanup, transport and proper disposal of hazardous chemicals or materials released during construction activities that are compatible with applicable laws and regulations. BMPs to be implemented by the District include the following:
- The use of silt fences or coir rolls;
 - The use of temporary stormwater desilting or retention basins;
 - The use of water bars to reduce the velocity of stormwater runoff;
 - The use of wheel washers on construction equipment leaving the site;
 - The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;
 - The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and
 - Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.

Noise

- NOI-1 All construction vehicles and fixed or mobile equipment shall be equipped with operating and maintained mufflers.
- NOI-2 All employees that will be exposed to noise levels greater than 75 dB over an 8-hour period shall be provided adequate hearing protection devices to ensure no hearing damage will result from construction activities.
- NOI-3 No construction activities shall occur during the hours of 6 PM through 7 AM, Monday through Friday, or 5 PM through 8 AM on Saturdays for temporary construction noise sources or 5 PM through 9 AM for mobile noise sources during construction and at no time shall construction activities occur on Sundays or holidays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector.
- NOI-4 Equipment not in use for five minutes shall be shut off.
- NOI-5 Equipment shall be maintained and operated such that loads are secured from rattling or banging.
- NOI-6 Construction employees shall be trained in the proper operation and use of equipment consistent with these mitigation measures, including no unnecessary revving of equipment.
- NOI-7 WVWD will require that all construction equipment be operated with mandated noise control equipment (mufflers or silencers). Enforcement will be accomplished by random field inspections by WVWD.

Transportation

- TRAN-1 WVWD shall require that contractors prepare a construction traffic control plan. Elements of the plan should include, but are not necessarily limited to, the following:
- Develop circulation and detour plans, if necessary, to minimize impacts to local street circulation. Use haul routes minimizing truck traffic on local roadways to the extent possible.
 - To the extent feasible, and as needed to avoid adverse impacts on traffic flow, schedule truck trips outside of peak morning and evening commute hours.
 - Install traffic control devices as specified in Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones where needed to maintain safe driving conditions. Use flaggers and/or signage to safely direct traffic through construction work zones.
 - For roadways requiring lane closures that would result in a single open lane, maintain alternate one-way traffic flow and utilize flagger-controls.
 - Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, hospitals, and schools. Provide advance notification to the facility owner or operator of the timing, location, and duration of construction activities.
- TRAN-2 WVWD shall require that all disturbances to public roadways be repaired in a manner that complies with the Standard Specifications for Public Works Construction (green book) or other applicable County of San Bernardino or City of Fontana standard design requirements.

Tribal Cultural Resources

- TCR-1 Tribal Monitoring
- Due to the heightened cultural sensitivity of the proposed project area, Tribal monitors representing the San Manuel Band of Mission Indians shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of Tribal monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist, as detailed within CUL-1, and submitted to the District for dissemination to the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI). Once all parties review and agree to the plan, it shall be adopted by the District – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.
- TCR-2 Treatment of Cultural Resources
- If a pre-contact cultural resource is discovered during archaeological presence/absence testing, the discovery shall be properly recorded and then reburied in situ. A research design shall be developed by the archaeologist that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI), the archaeologist/applicant, and the Lead Agency shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), avoidance (or other appropriate treatment) of the discovered resource, and the potential need for construction monitoring during project implementation. Should any significant resource and/or TCR not be a candidate for avoidance or preservation in place, and the removal of the resource(s) is necessary to mitigate impacts, the research design shall include a comprehensive discussion

of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by SMBMI. All plans for analysis shall be reviewed and approved by the applicant and SMBMI prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of SMBMI that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by SMBMI and the District, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to the District, CHRIS, and SMBMI. All reburials are subject to a reburial agreement that shall be developed between the District and SMBMI outlining the determined reburial process/location, and shall include measures and provisions to protect the reburial area from any future impacts (vis a vis project plans, conservation/preservation easements, etc.).

Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with SMBMI to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the District and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees.

All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the District and SMBMI for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the District, and SMBMI.

TCR-3 Inadvertent Discoveries of Human Remains/Funerary Objects

In the event that any human remains are discovered within the project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately who shall notify SMBMI, the applicant/developer, and the Lead Agency. The District and the applicant/developer shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD and the District agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the

human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The District should accommodate on-site reburial in a location mutually agreed upon by the Parties.

It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and the District, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

Utilities and Service Systems

- UTIL-1 The contract with demolition and construction contractors shall include the requirement that all materials that can be recycled shall be salvaged and recycled. This includes, but is not limited to, wood, metals, concrete, road base, and asphalt. The contractor shall submit a recycling plan to WVWD for review and approval prior to the start of demolition/construction activities to accomplish this objective.

Wildfire

- WF-1 During site clearing within the project site when any electrical construction equipment is in use, the construction crew shall have fire prevention equipment (such as fire extinguishers, emergency sand bags, etc.) to put out any accidental fires that could result from the use of construction/maintenance equipment.

REFERENCES

- CRM TECH, "Identification and Evaluation of Historic Properties, West Valley Water District 18-inch Transmission Main Installation Project" dated November 3, 2021
- Giroux & Associates, "Air Quality and GHG Impact Analyses, West Valley Water District Transmission Main Installation Project, San Bernardino County, California" dated July 12, 2021
- Jacobs, "West Valley Water District 18-inch Transmission Main Installation Project, Biological Resources Assessment and Jurisdictional Delineation Report" dated September 2021
- Landmark Geo-Engineers and Geologists, "Geotechnical Report Proposed 18-inch Transmission Main Waterline, Fontana, California" dated April 23, 2021
- Monarch Hills Residential Development Environmental Impact Report (EIR); State Clearinghouse Number [SCH#] 2016101065)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service Web Soil Service

Websites

<http://countywideplan.com/theplan/>
<https://www.sce.com/about-us/reliability/meeting-demand>
https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TUJUNGA.html
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<https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management>
https://scag.ca.gov/sites/main/files/file-attachments/unincareasanbernardinocounty_0.pdf?1606013790
https://scag.ca.gov/sites/main/files/file-attachments/fontana_localprofile.pdf?1606014851
https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial_demographics-and-growth-forecast.pdf?1606001579
https://cms.sbcounty.gov/Portals/50/solidwaste/CandD_Recycling_Guide.pzdf?ver=2015-06-10-130931-247

FIGURES

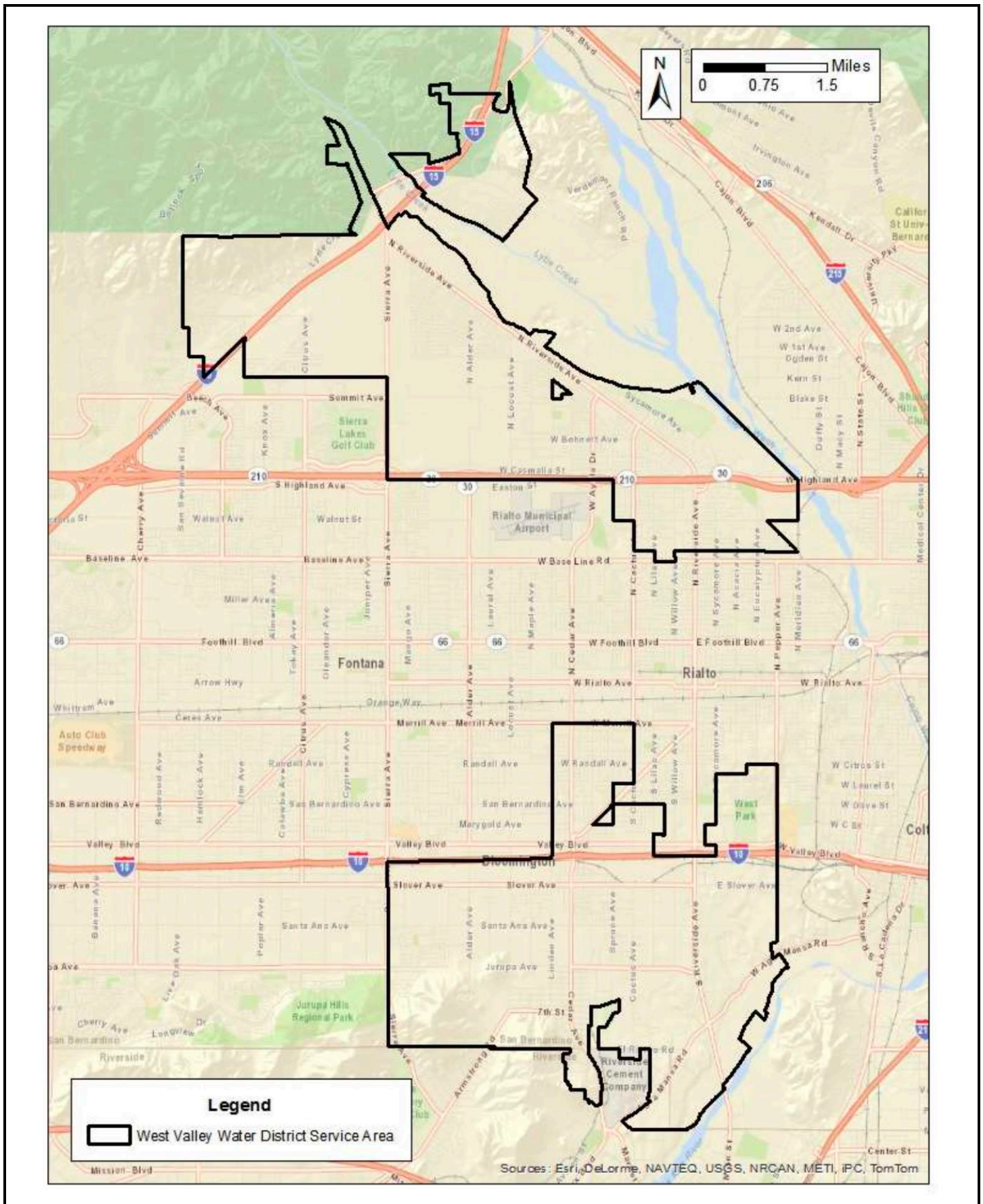


FIGURE 1

West Valley Water District Pipeline Transmission Main Installation Project

Site Location Map

Legend

- WVWD Pipeline
- WVWD Transmission Main Installation Project



FIGURE 2

West Valley Water District Pipeline Transmission Main Installation Project
Regional Location Map

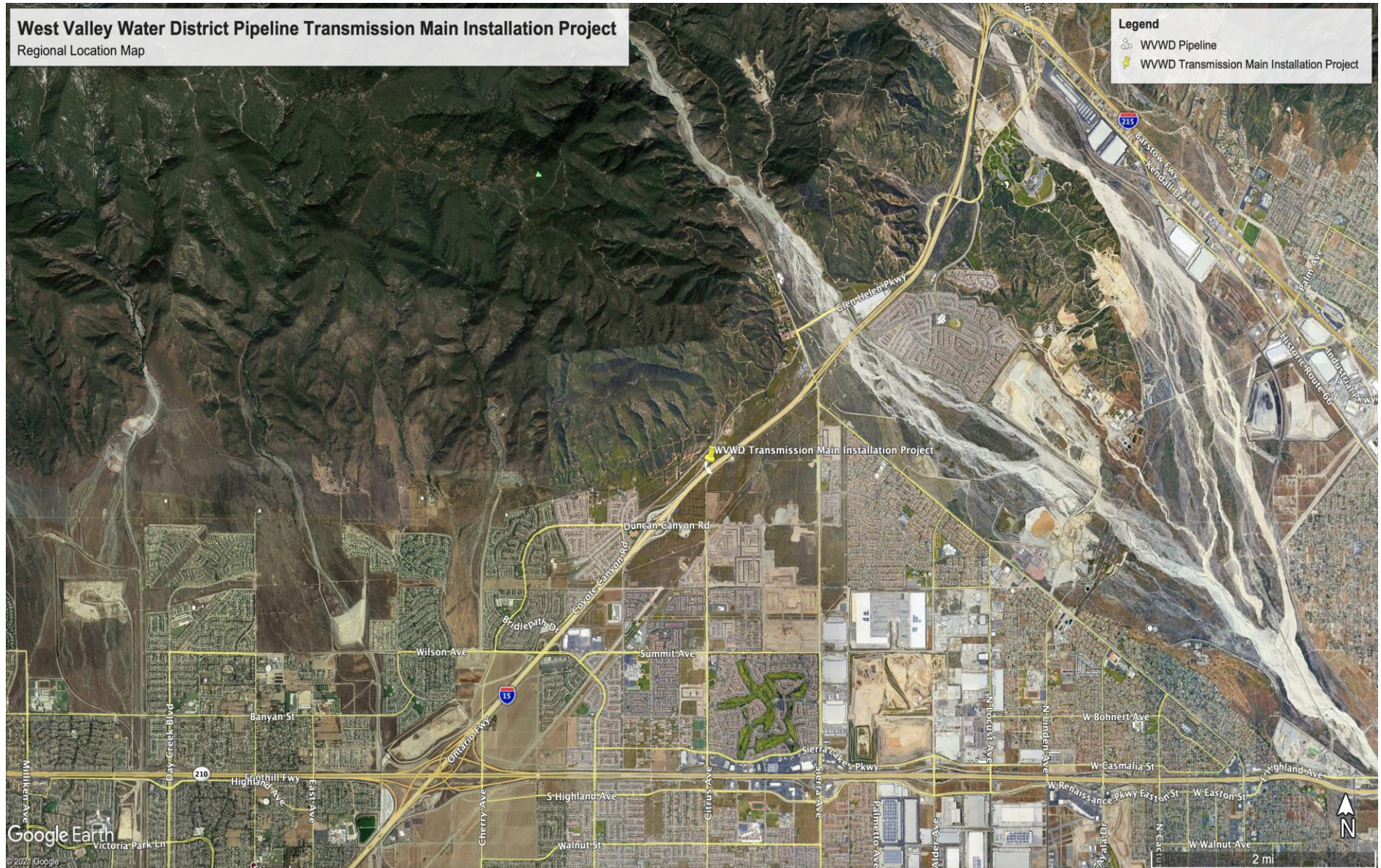


FIGURE 3

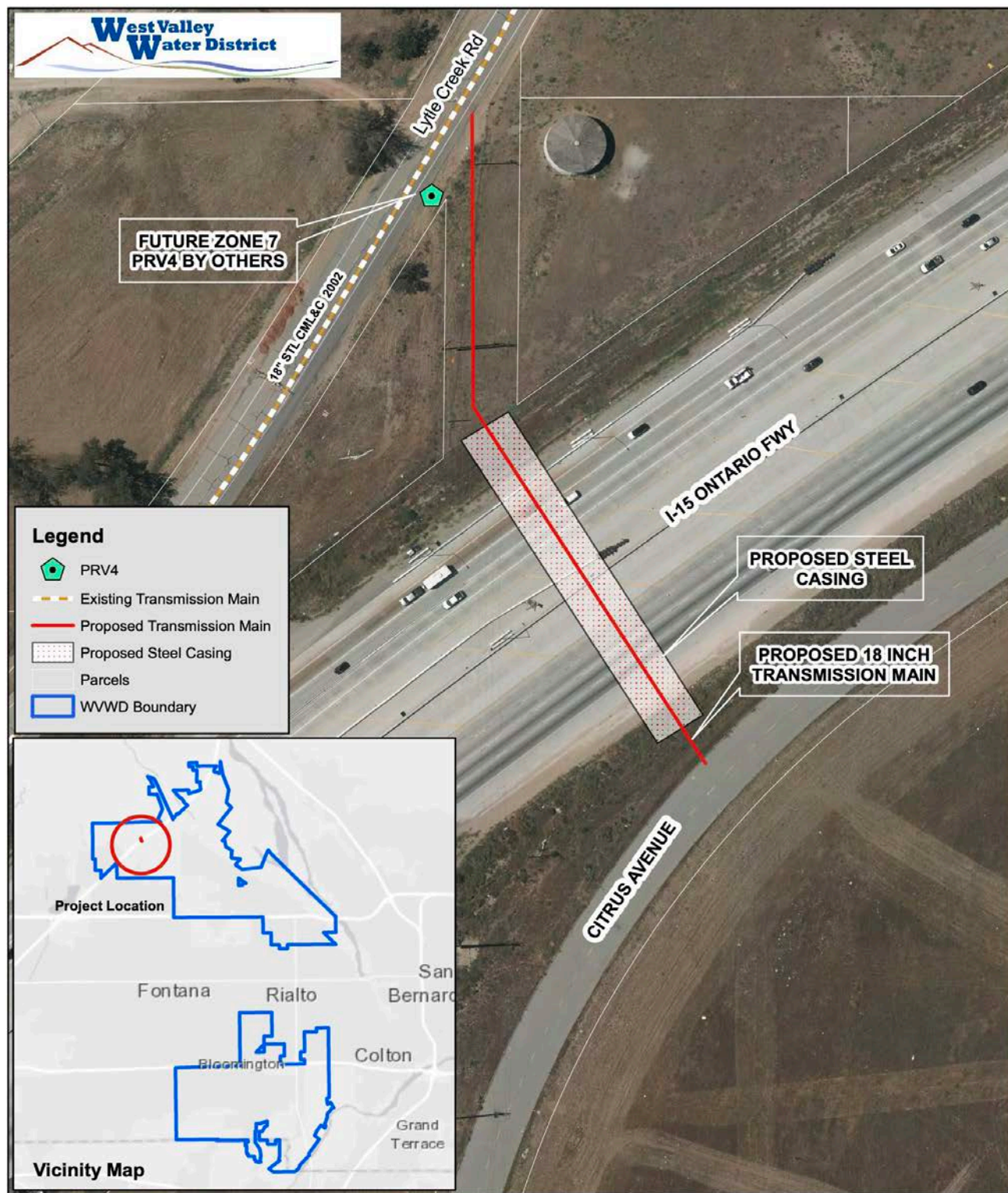


EXHIBIT A

**Proposed 18 inch Transmission Main with Steel Casing
within Future Right-of-Way from Citrus Avenue to Lytle Creek Rd.**

0 50 100
Feet

SOURCE: West Valley Water District

FIGURE 4

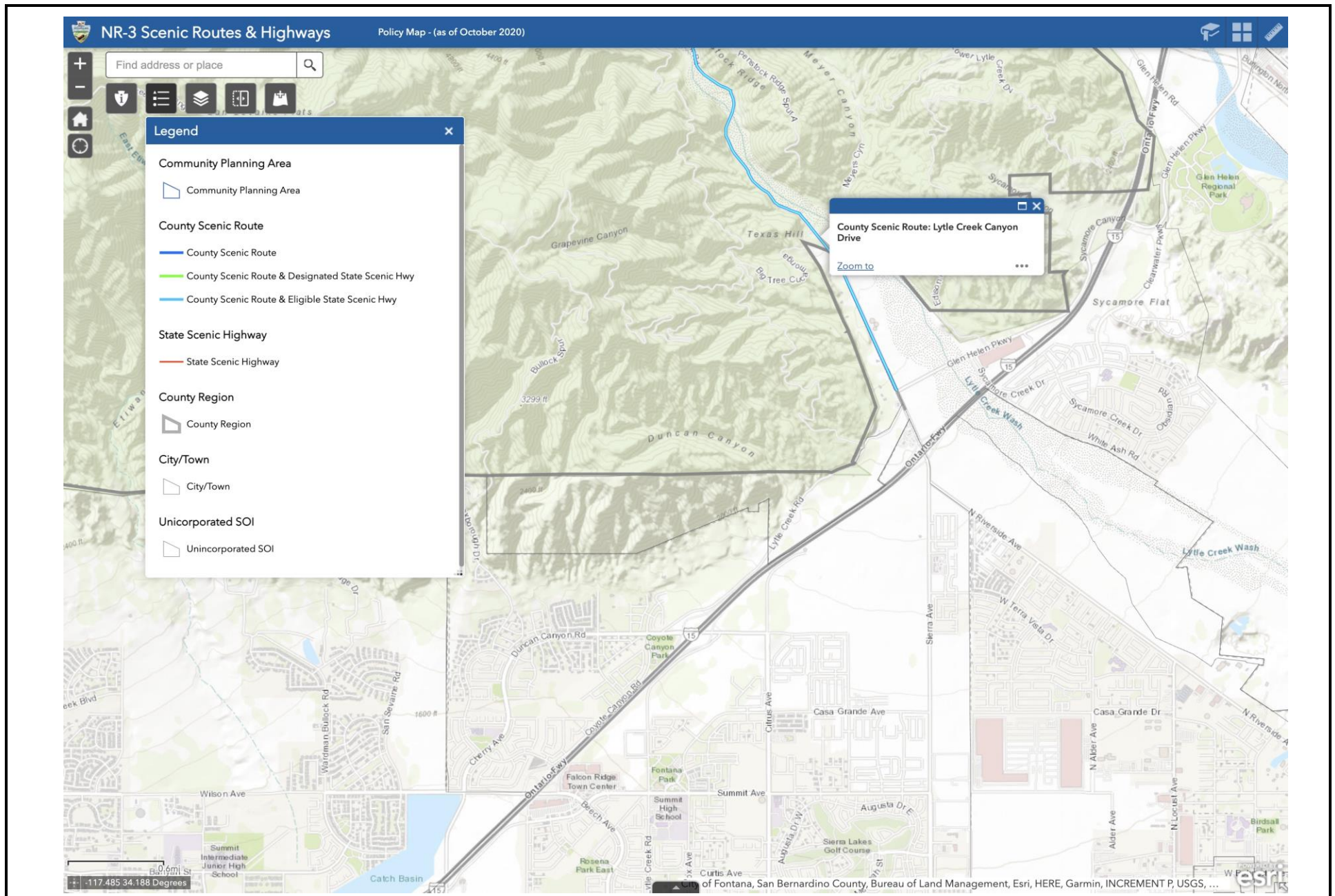


FIGURE I-1

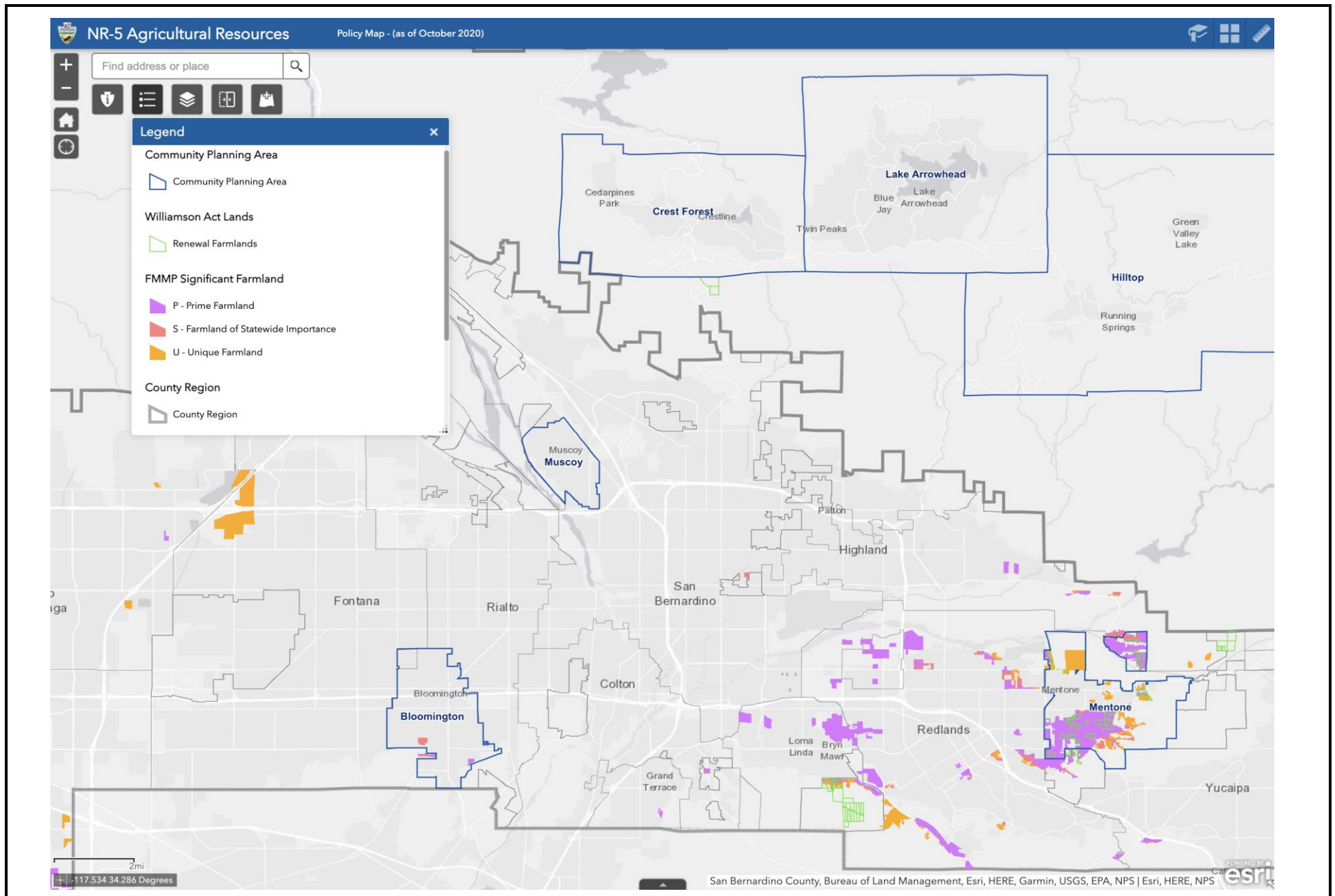


FIGURE II-1

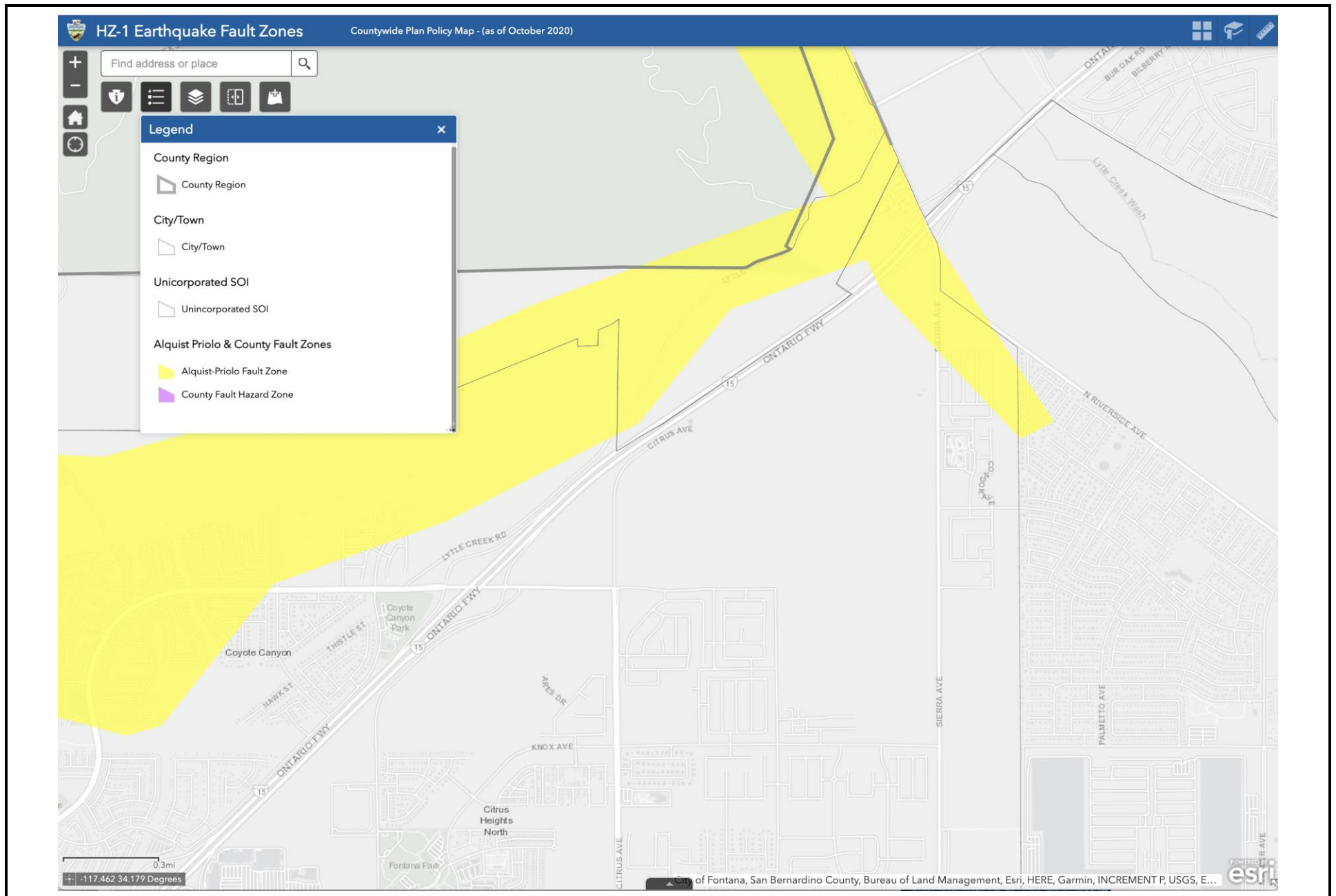


FIGURE VII-1

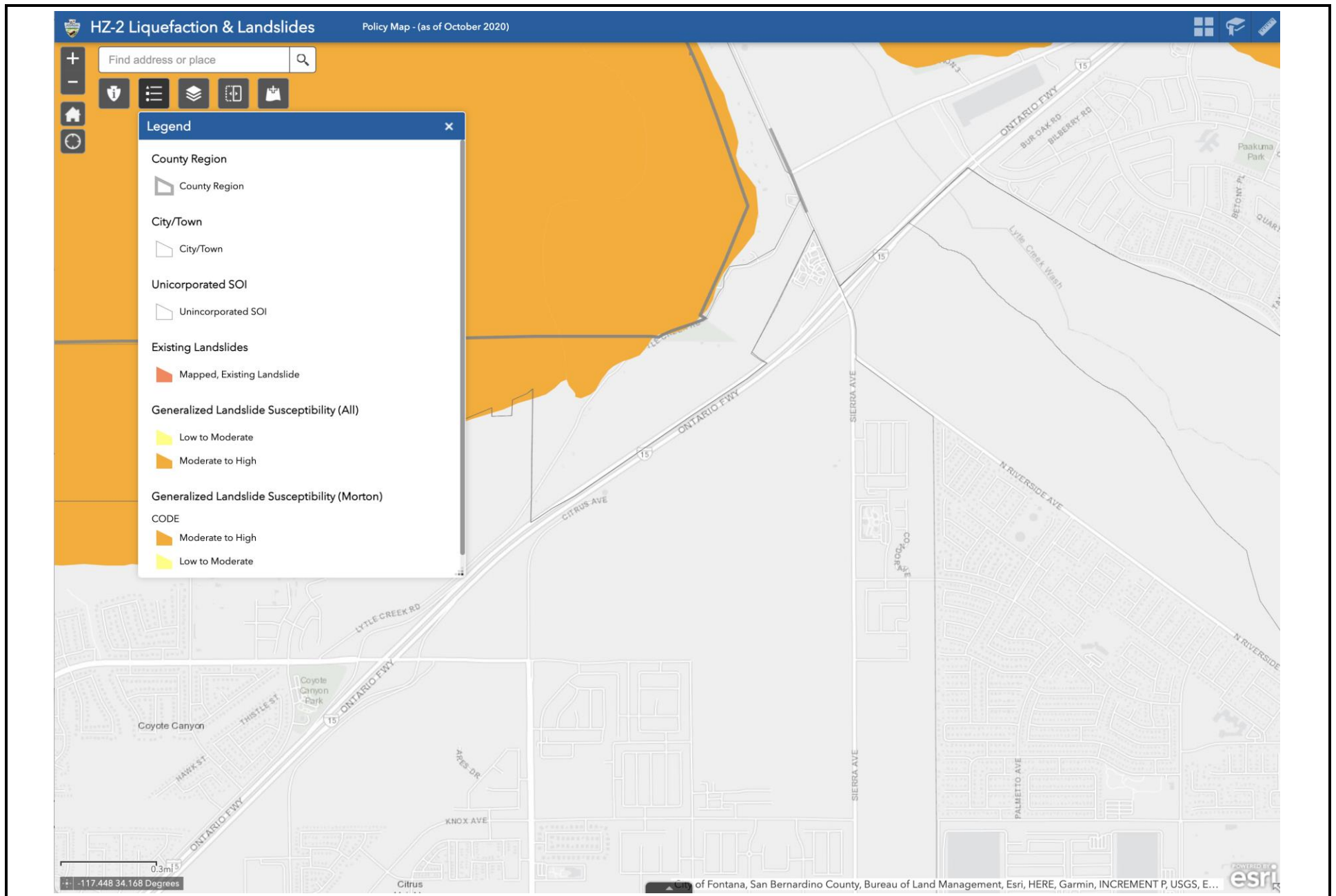


FIGURE VII-2

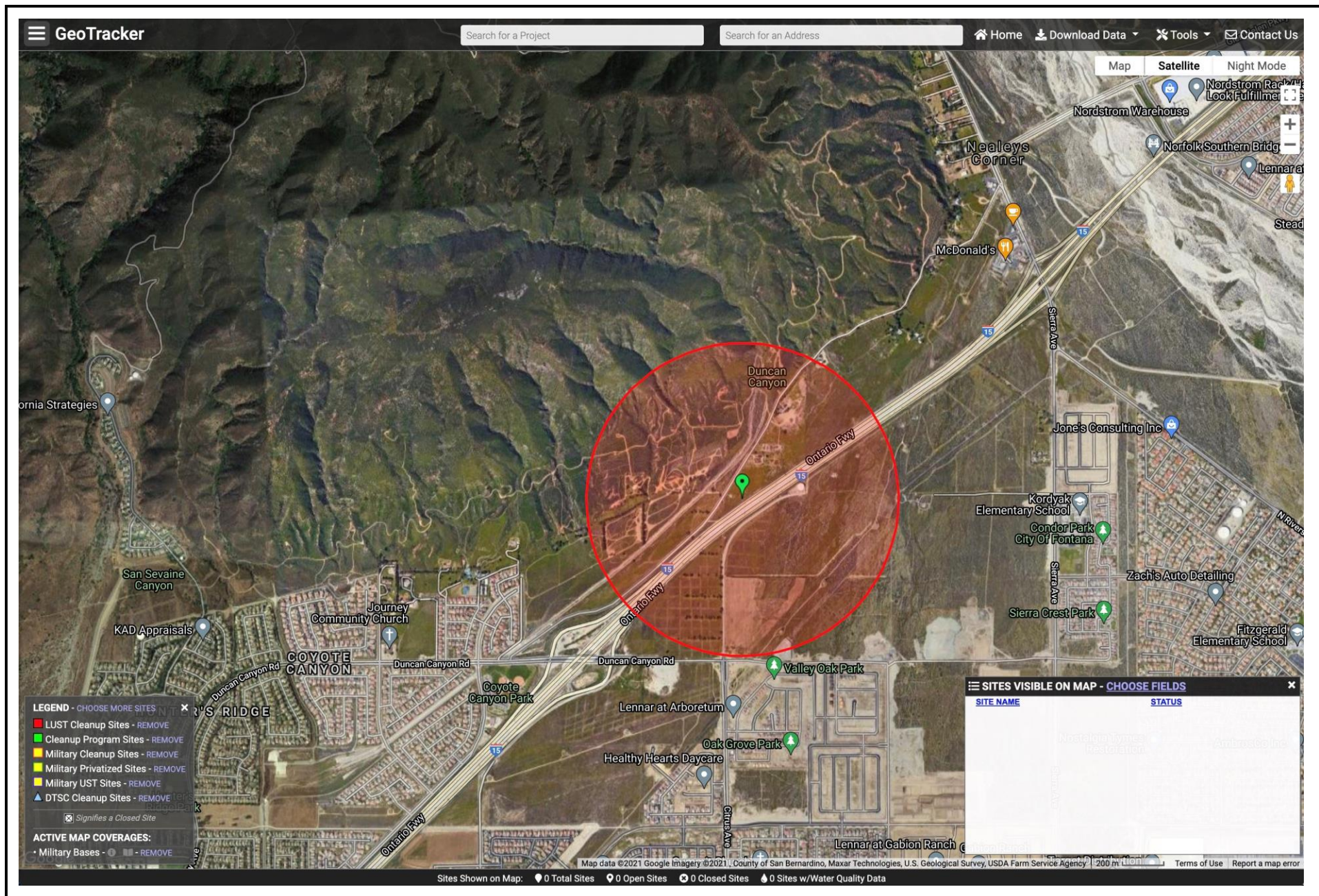


FIGURE IX-1

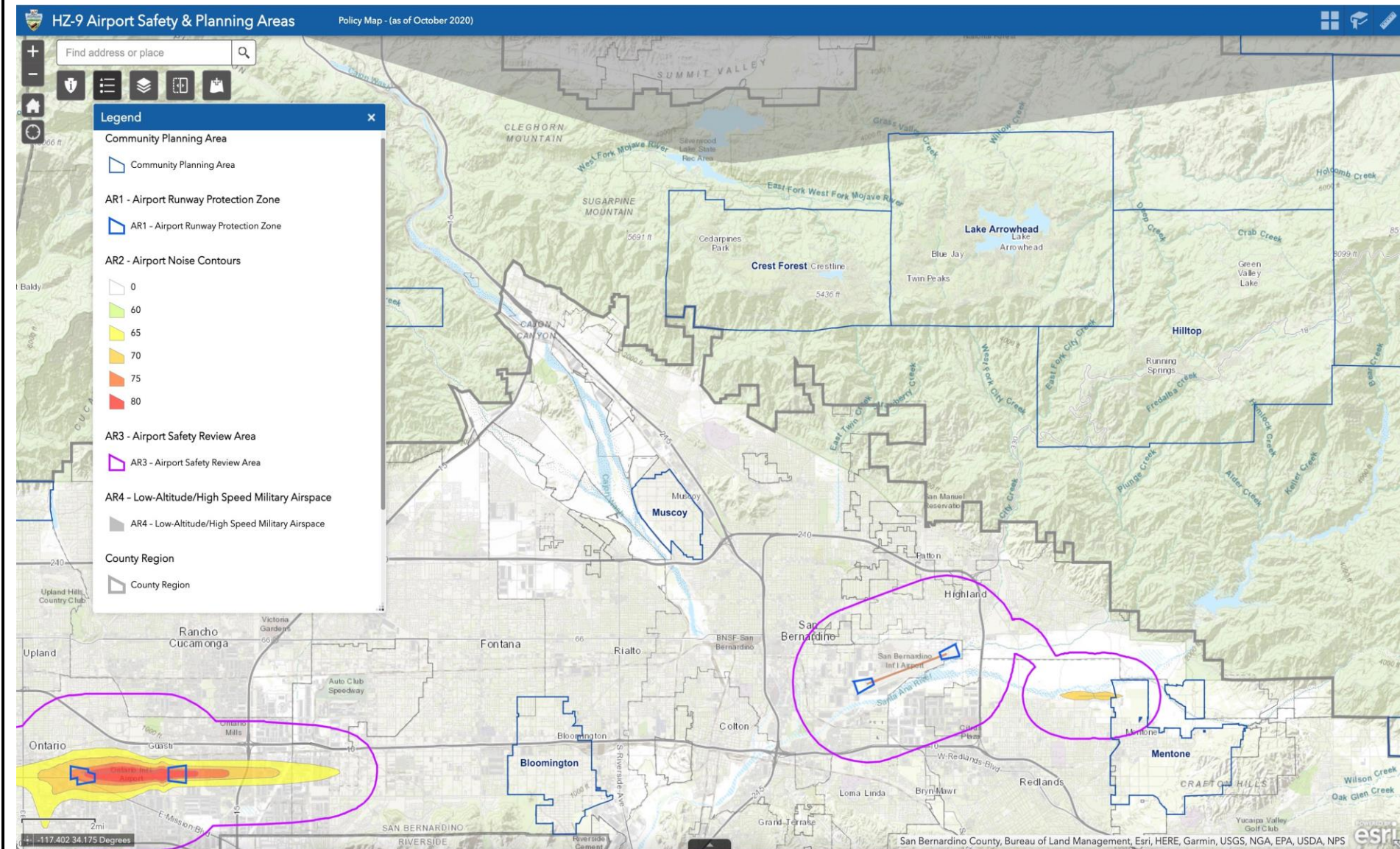


FIGURE IX-2

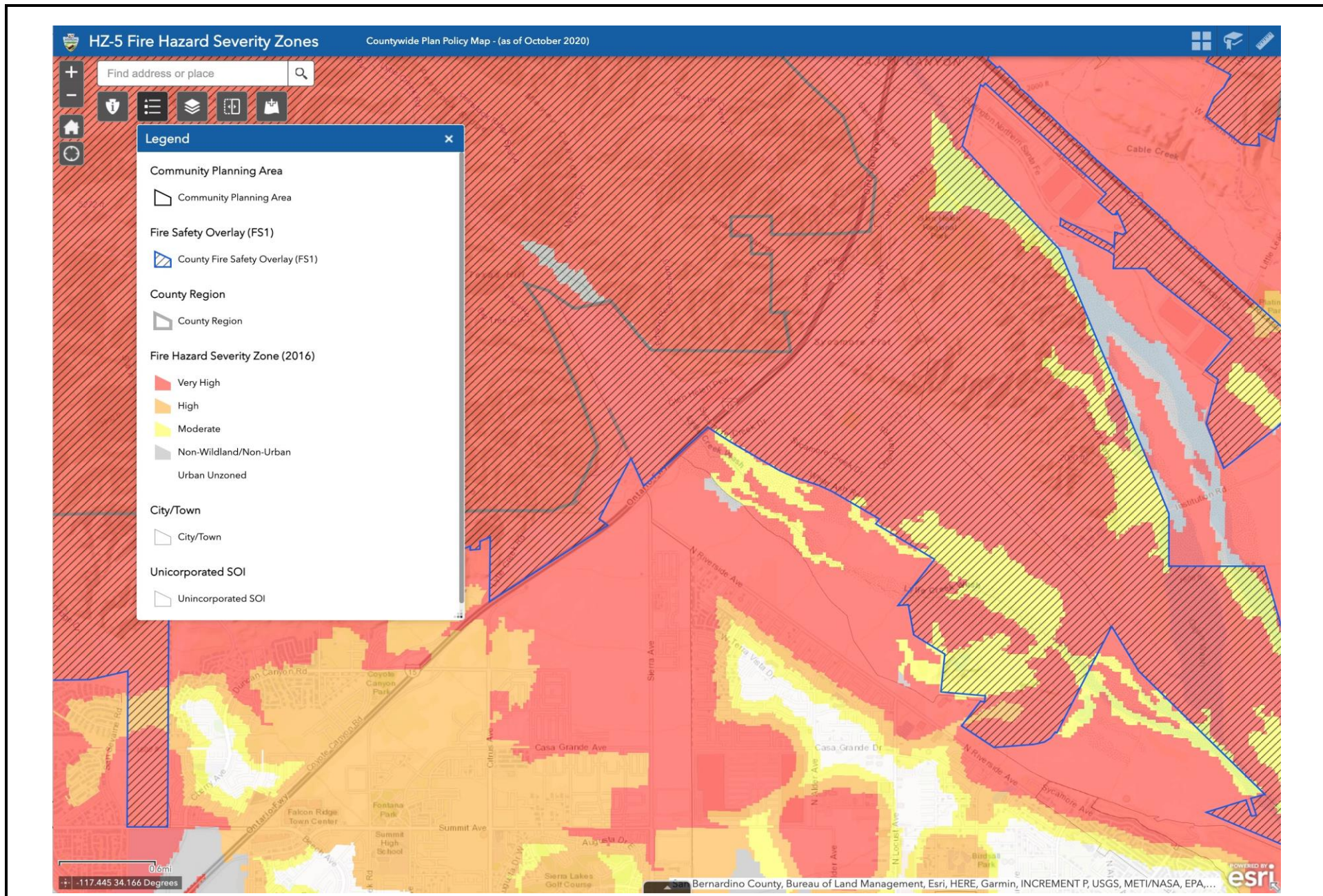


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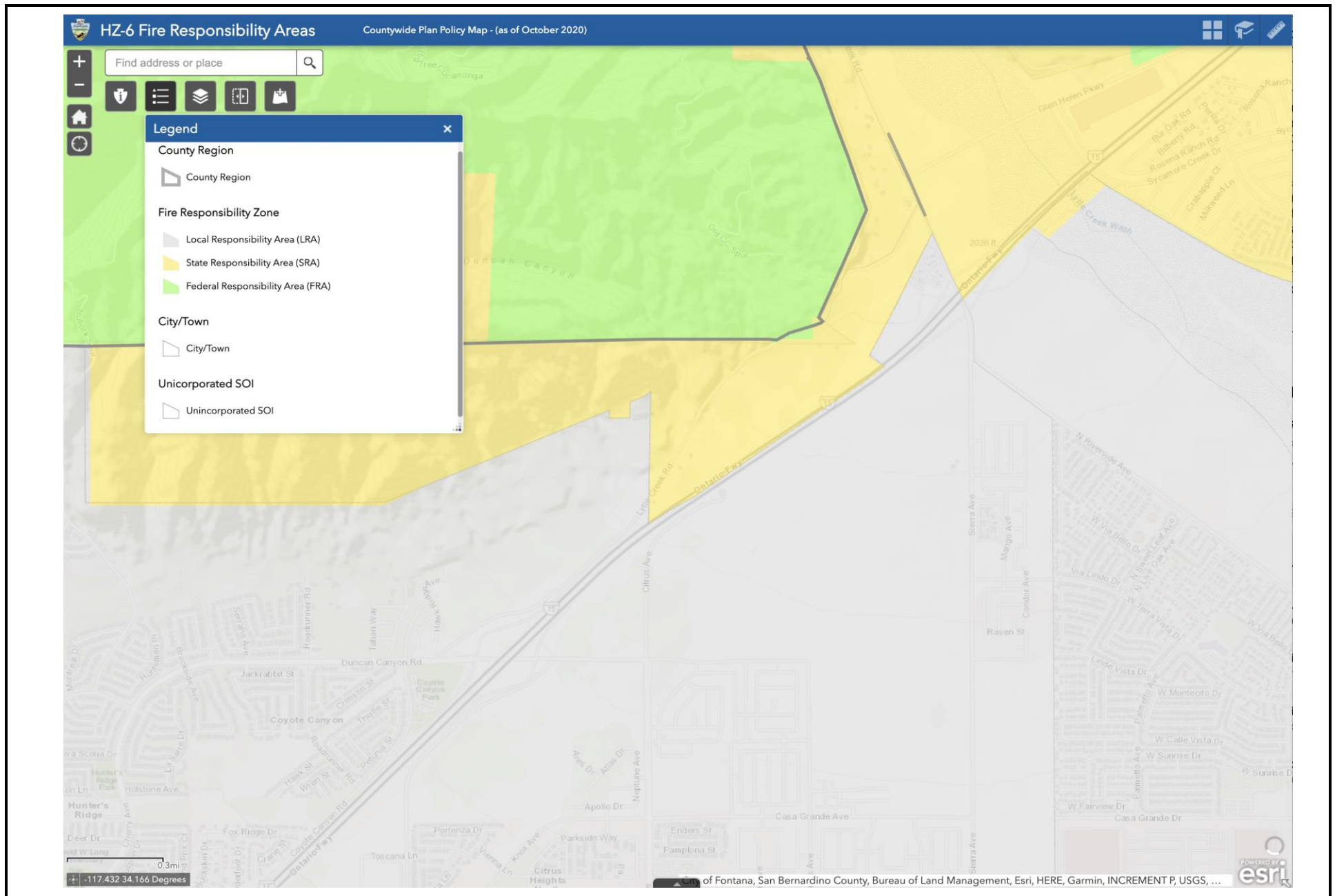


FIGURE IX-4

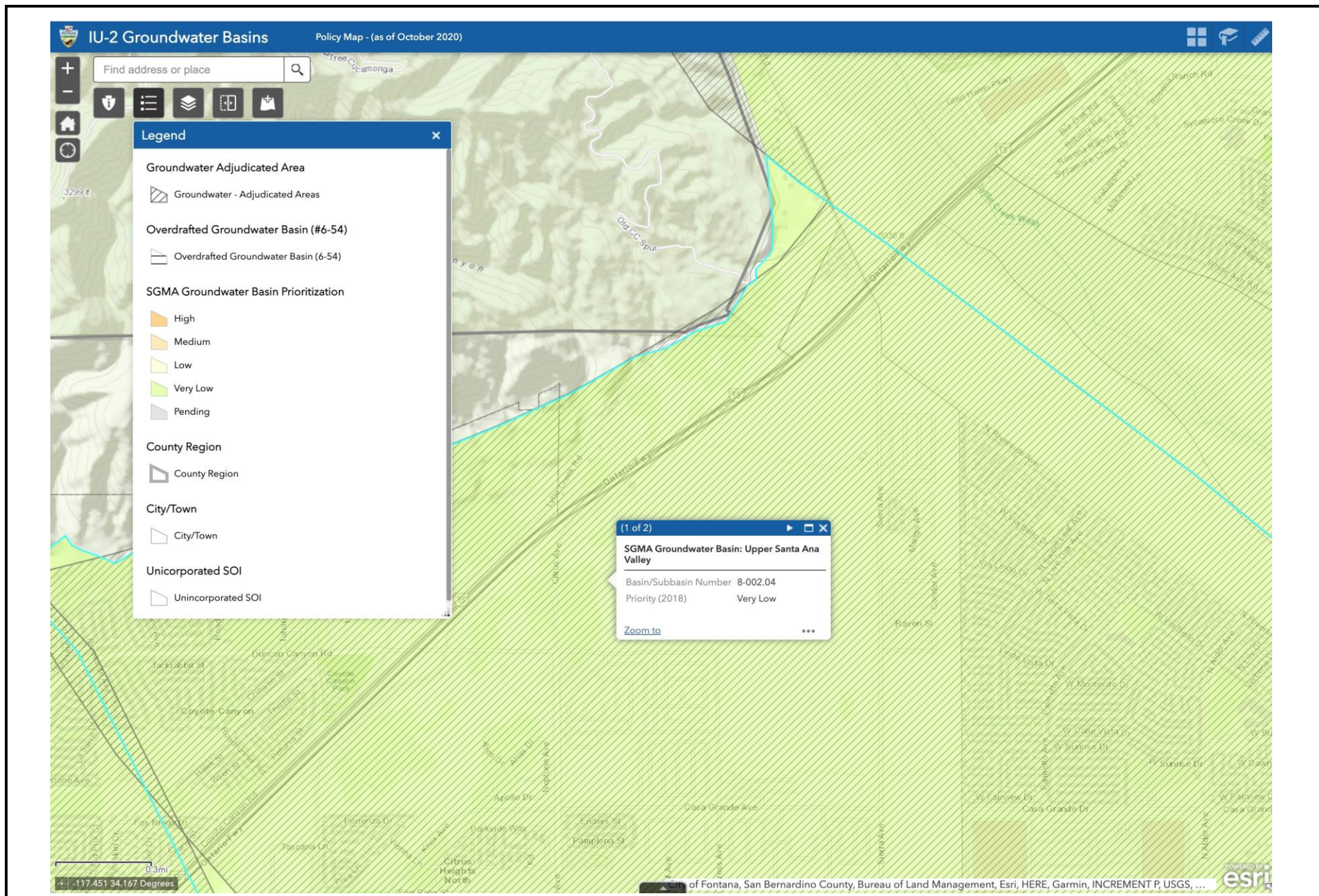


FIGURE X-1

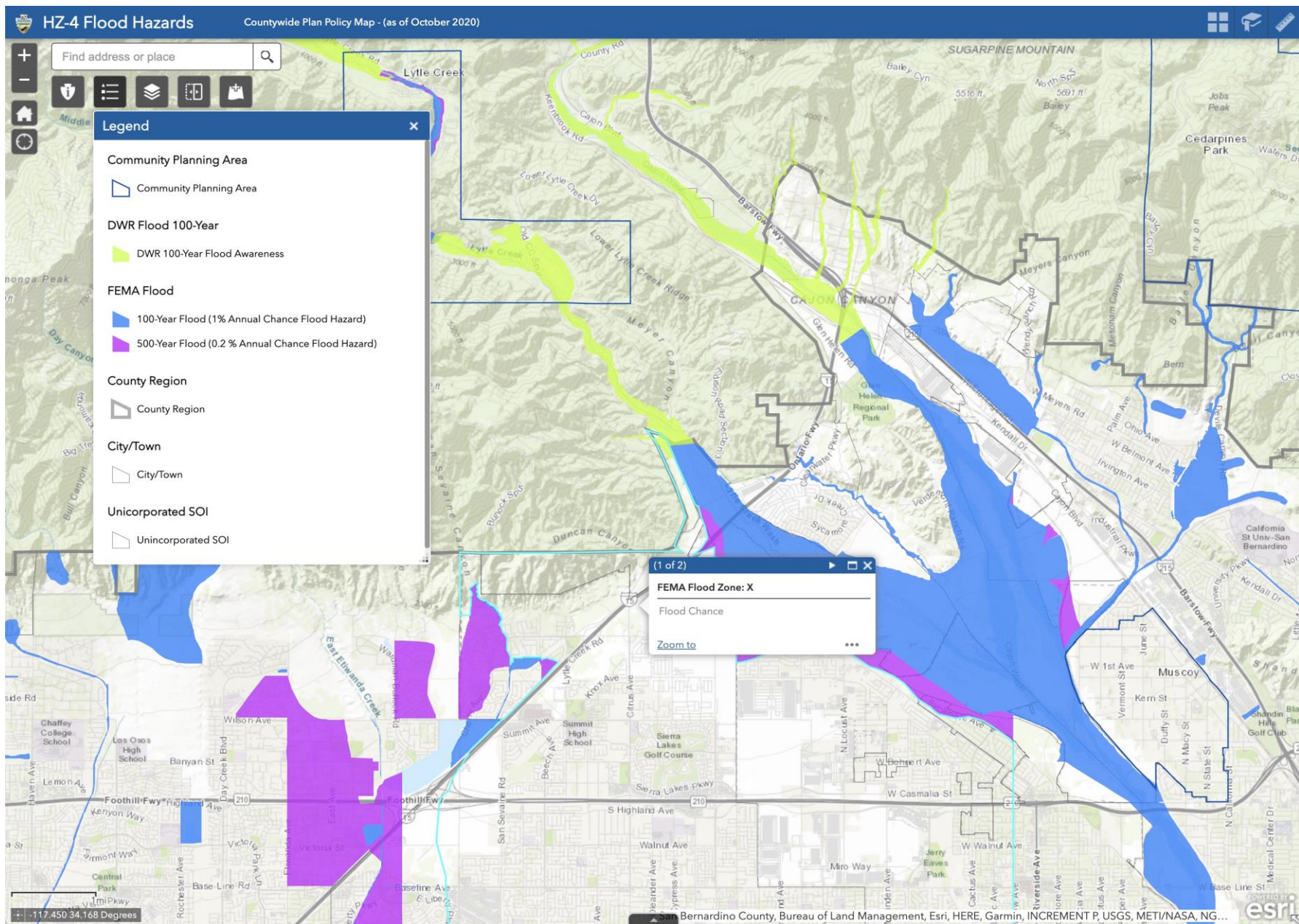


FIGURE X-2

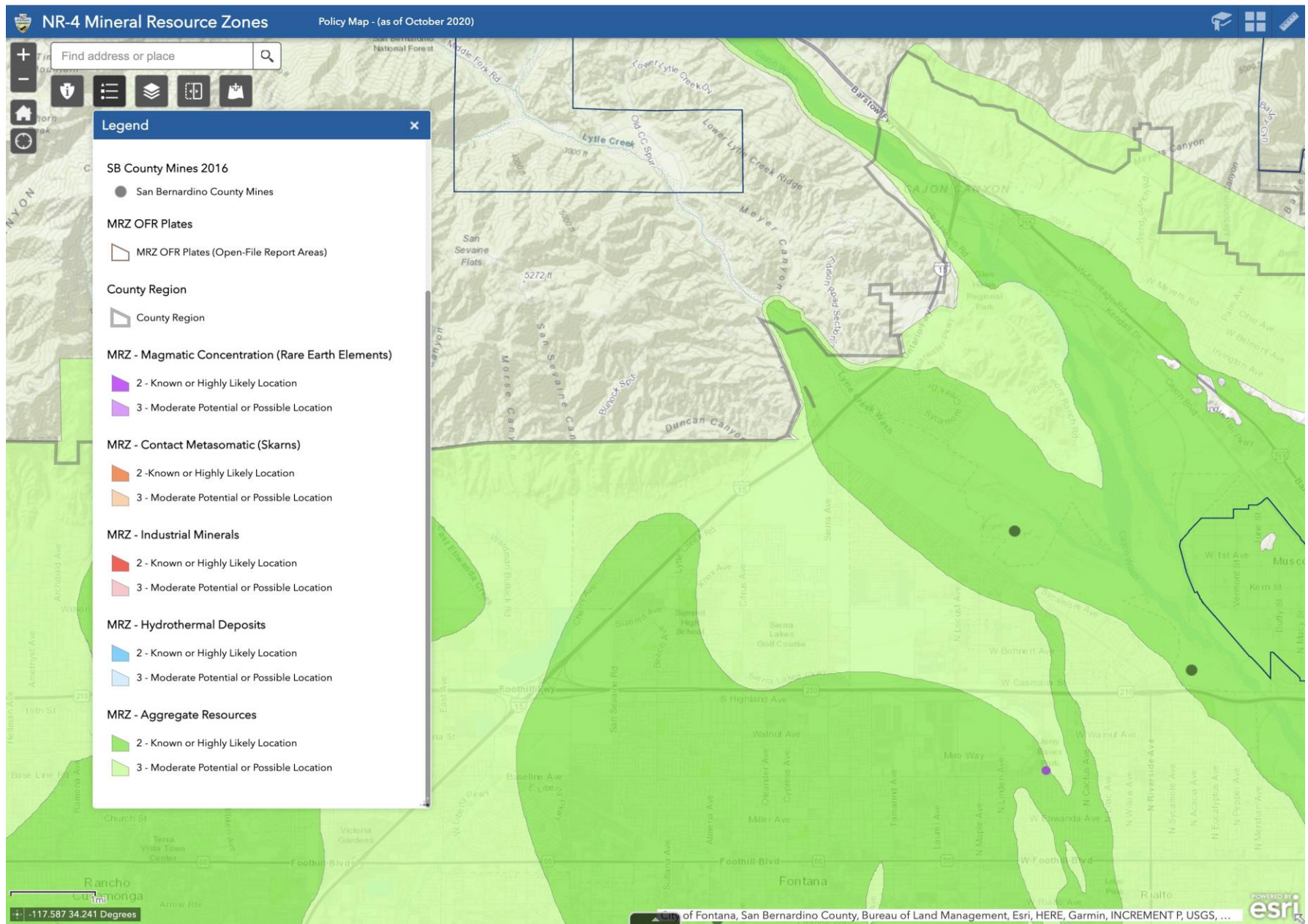


FIGURE XII-1

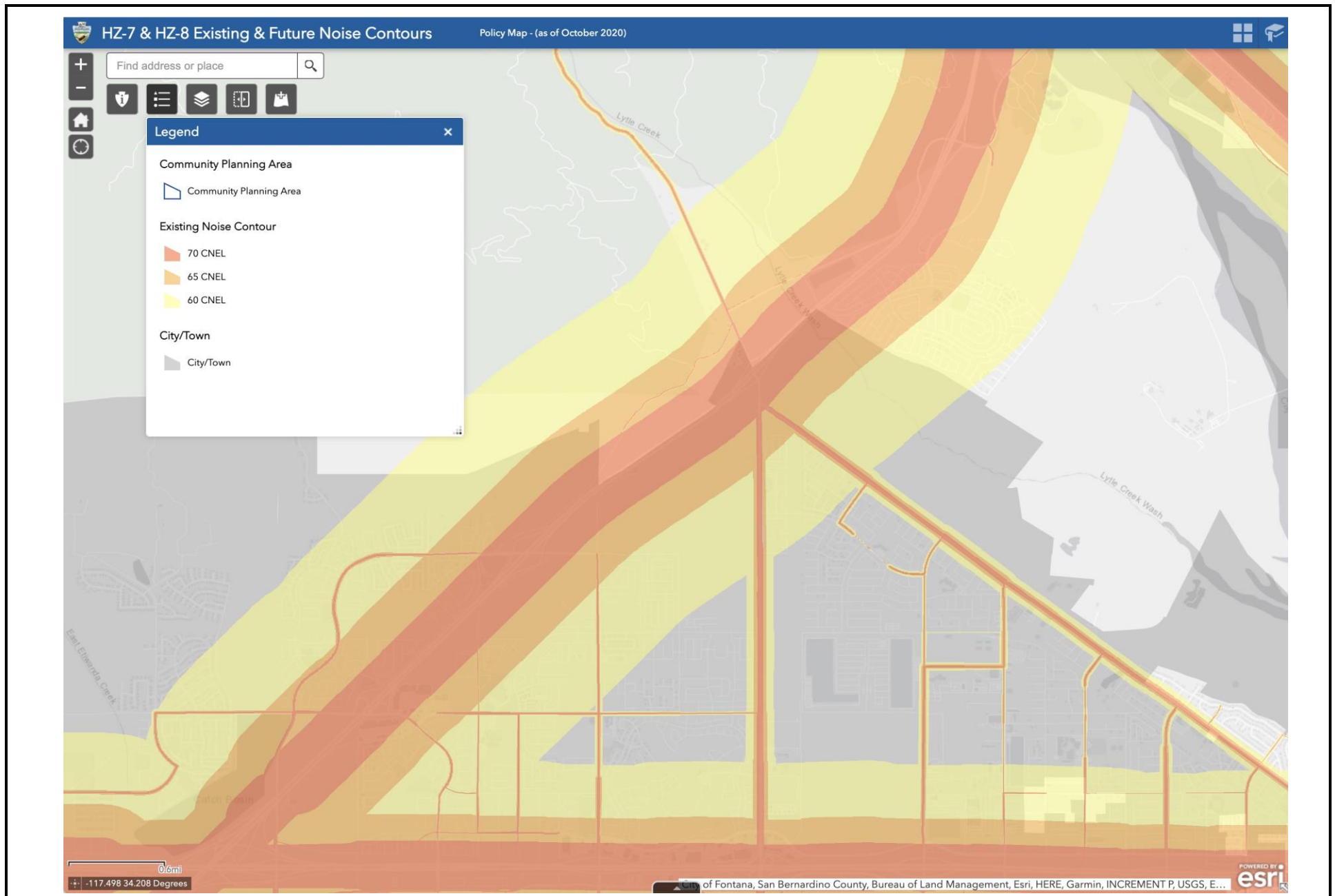


FIGURE XIII-1

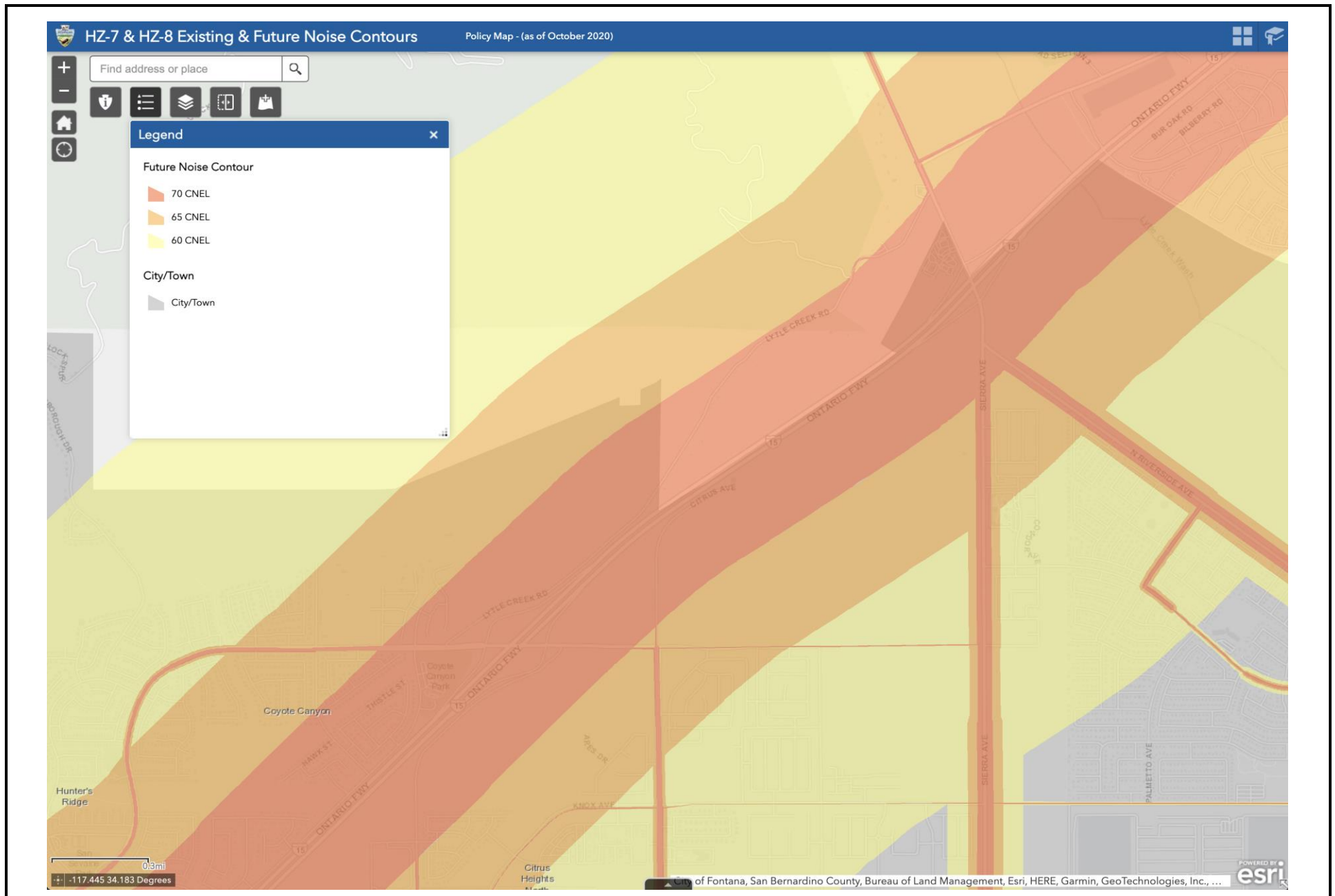


FIGURE XIII-2

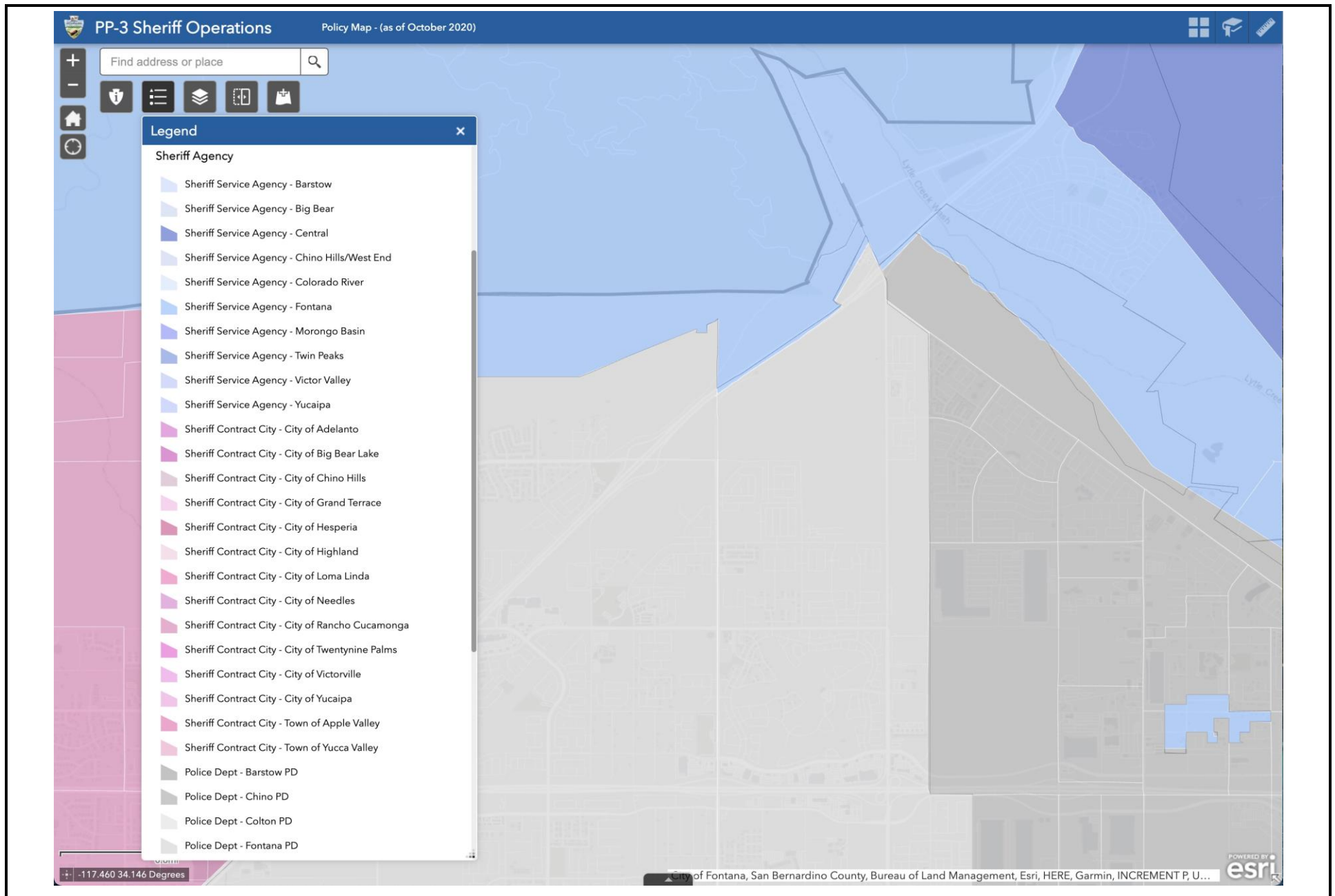


FIGURE XV-1

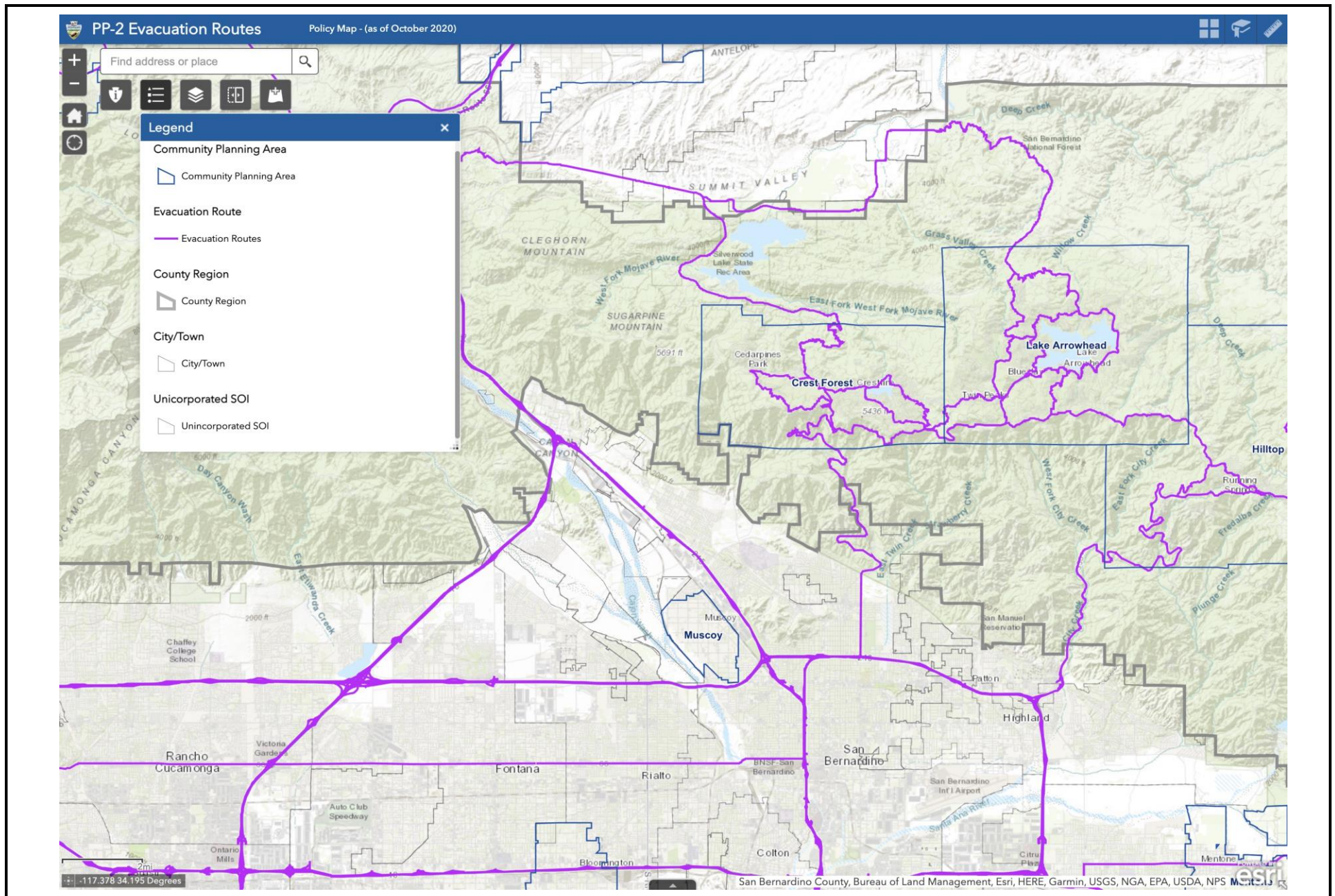


FIGURE XVII-1

APPENDIX 1

AIR QUALITY and GHG IMPACT ANALYSES

WV-090

WEST VALLEY WATER DISTRICT

TRANSMISSION MAIN INSTALLATION PROJECT

SAN BERNARDINO, CALIFORNIA

Prepared by:

Giroux & Associates

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PO Box 2307
San Bernardino, CA 92406-2307

Date:

July 12, 2021

Project No.: P21-024 AQ

ATMOSPHERIC SETTING

The climate the eastern San Bernardino Valley, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high-pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidity levels. Unfortunately, the same climatic conditions that create such a desirable living climate combine to severely restrict the ability of the local atmosphere to disperse the large volumes of air pollution generated by the population and industry attracted in part by the climate.

The project will be situated in an area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the project site during the daily sea breeze cycle. The resulting smog at times gives San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained despite the limited regional meteorological dispersion potential.

Winds across the project area are an important meteorological parameter because they control both the initial rate of dilution of locally generated air pollutant emissions as well as controlling their regional trajectory. Winds across the project site display a very unidirectional onshore flow from the southwest-west that is strongest in summer with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average 6-8 mph while the offshore flow is often calm or drifts slowly westward at 1-3 mph.

During the daytime, any locally generated air emissions are thus rapidly transported eastward toward Banning Pass without generating any localized air quality impacts. The nocturnal drainage winds which move slowly across the area have some potential for localized stagnation, but fortunately, these winds have their origin in the adjacent mountains where background pollution levels are low such that any localized contributions do not create any unhealthful impacts.

In conjunction with the two characteristic wind regimes that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. The summer on-shore flow is capped by a massive dome of warm, sinking air which caps a shallow layer of cooler ocean air. These marine/subsidence inversions act like a giant lid over the basin. They allow for local mixing of emissions, but they confine the entire polluted air mass within the basin until it escapes into the desert or along the thermal chimneys formed along heated mountain slopes.

In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed that trap low-level emissions such as automobile exhaust near their source. As background levels of primary vehicular exhaust rise during the seaward return flow, the combination of rising non-local baseline levels plus emissions trapped locally by these radiation inversions creates micro-scale air pollution "hot spots" near freeways, shopping centers and other

traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow down the adjacent slopes to the north has its origin in very lightly developed areas of the San Bernardino Mountains, background pollution levels at night in winter are very low in the project vicinity. Localized air pollution contributions are insufficient to create a "hot spot" potential when superimposed upon the clean nocturnal baseline. The combination of winds and inversions are thus critical determinants in leading to the degraded air quality in summer, and the generally good air quality in winter in the project area.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> • Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter. 	<ul style="list-style-type: none"> • Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> • Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions. 	<ul style="list-style-type: none"> • Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O ₃)	<ul style="list-style-type: none"> • Atmospheric reaction of organic gases with nitrogen oxides in sunlight. 	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	<ul style="list-style-type: none"> • Contaminated soil. 	<ul style="list-style-type: none"> • Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	<ul style="list-style-type: none"> • Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions. 	<ul style="list-style-type: none"> • Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	<ul style="list-style-type: none"> • Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics. 	<ul style="list-style-type: none"> • Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> • Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes. 	<ul style="list-style-type: none"> • Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO₂) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO₂ standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 µg/m³ to 12 µg/m³ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO₂) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO₂) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO₂ is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality around the proposed project area can best be best inferred from ambient air quality measurements conducted by the SCAQMD at the Upland monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide, PM-10, and nitrogen oxides. The Ontario monitoring station near route 60 monitors PM-2.5. Table 3 provides a 4-year summary of the monitoring data for the major air pollutants compiled from these air monitoring stations. From these data the following conclusions can be drawn:

1. Photochemical smog (ozone) levels frequently exceed standards. The 1-hour state standard was violated an average of 14 percent of all days in the last four years near Upland. The federal 8-hour standard has been exceeded an average of 15 percent of all days within the same period and the state 8-hour standard has been exceeded approximately 21 percent of all days. While ozone levels are still high, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.
2. PM-10 levels have exceeded the state 24-hour standard on approximately five percent of all measurement days. The three times less stringent federal 24 hour-standard has not been exceeded once in the last four years.
3. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). Both the frequency of violations of particulate standards, as well as high percentage of PM-2.5, are air quality concerns in the project area. However, PM-2.5 readings very infrequently exceed the federal 24-hour PM-2.5 ambient standard on approximately one percent of the measured days.
4. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site because background levels throughout western San Bernardino County, never exceed allowable levels. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3
Project Area Air Quality Monitoring Summary 2017-2020
(Days Standards Were Exceeded and Maximum Observed Levels)

Pollutant/Standard	2017	2018	2019	2020
Ozone				
1-Hour > 0.09 ppm (S)	66	25	31	82
8-Hour > 0.07 ppm (S)	87	52	52	114
8- Hour > 0.075 ppm (F)	72	32	34	87
Max. 1-Hour Conc. (ppm)	0.150	0.133	0.131	0.158
Max. 8-Hour Conc. (ppm)	0.127	0.111	0.107	0.123
Carbon Monoxide				
1-Hour > 20. ppm (S)	0	0	0	0
8-Hour > 9. ppm (S, F)	0	0	0	0
Max 8-Hour Conc. (ppm)	1.4	1.2	1.1	1.1
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.06	0.06	0.06	0.06
Respirable Particulates (PM-10)				
24-Hour > 50 µg/m ³ (S)	26/320	14/322	7/306	12/305
24-Hour > 150 µg/m ³ (F)	0/320	0/322	0/306	0/305
Max. 24-Hr. Conc. (µg/m ³)	106.	73.	125.	63.
Fine Particulates (PM-2.5) ¹				
24-Hour > 35 µg/m ³ (F)	7/359	5/357	5/364	4/356
Max. 24-Hr. Conc. (µg/m ³)	44.8	47.9	41.3	53.1

S=State Standard

F=Federal Standard

Source: South Coast AQMD

Upland Monitoring Station (5175) , ¹ Ontario Monitoring (near CA-60) Station for PM-2.5

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with “serious” or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NO_x) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NO_x and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air “blueprint” in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to “slip” from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary “bump-up” from a “severe non-attainment” area to an “extreme non-attainment” designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on “black-box” measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from “severe-17” to “extreme.” This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

Table 4
South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2015^a	2020^b	2025^b	2030^b
NOx	357	289	266	257
VOC	400	393	393	391
PM-10	161	165	170	172
PM-2.5	67	68	70	71

^a2015 Base Year.

^bWith current emissions reduction programs and adopted growth forecasts.

Source: California Air Resources Board, 2013 Almanac of Air Quality

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that a number of rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP was required for completion in 2016. The 2016 AQMP was adopted by the SCAQMD Board in March, 2017, and has been submitted the California Air Resources Board for forwarding to the EPA. The 2016 AQMP acknowledges that motor vehicle emissions have been effectively controlled and that reductions in NOx, the continuing ozone problem pollutant, may need to come from major stationary sources (power plants, refineries, landfill flares, etc.) . The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 µg/m ³)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)

24-hour PM-2.5 (35 µg/m³) 2019

The key challenge is that NO_x emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional stringent NO_x control measures are adopted and implemented, ozone attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations water improvement projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

CEQA STANDARDS OF SIGNIFICANCE

The SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the emission thresholds in Table 5 are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NO _x	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SO _x	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Federal Thresholds

Conformity analysis under EPA guidelines can be undertaken to demonstrate that the combined emissions from direct and indirect (transportation, etc.) project-related emissions have been accurately incorporated into the applicable SIP. A simpler test, as outlined in 40CFR Part 93.153, is to demonstrate that these emissions are less than the *de minimis* thresholds which depend upon the seriousness of the current level of non-attainment for federal clean air standards. If the project-related emissions from construction and operations are less than specified “*de minimis*” levels, no further SIP consistency demonstration is required. The SCAB is designated as “extreme” non-attainment for the 8-hour ozone standard and “serious” non-attainment of PM-2.5. Therefore, the applicable thresholds are as follows:

VOC/ROG	-	10 tons/year
NO _x	-	10 tons/year
CO	-	100 tons/year
PM-2.5	-	70 tons/year
PM-10	-	100 tons/year

Projects with annual direct and indirect emissions below these *de minimis* thresholds are considered to be in conformance with the applicable SIP.

CEQA SIGNIFICANCE IMPACT ANALYSIS

Inland Empire Utilities Agency proposes to install 650 linear feet of 18-inch transmission main pipeline in the Lytle Creek area which will bore under the Interstate 15 freeway and terminate at Citrus Avenue. The project is in an undeveloped area. The nearest residential use is more than 700 feet to the northeast.

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions. The following equipment fleet and durations shown in Table 6 were modeled as provided by the project engineer:

Table 6
Construction Activity Equipment Fleet
650 LF

Demo Roadway and Trench 2 weeks	2 Loader/Backhoes
	1 Excavator
	1 Concrete Saw
	3 Signal Boards
Install Pipe 2 weeks	2 Forklifts
	1 Crane
	2 Loader/Backhoes
	3 Signal Boards
Backfill and Pave 60 days	1 Compactor
	1 Paver
	1 Loader/Backhoe
	1 Roller
	3 Signal Boards

Utilizing the indicated equipment fleet and durations the following worst-case daily construction emissions are calculated by CalEEMod as shown in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NO_x	CO	SO₂	PM-10	PM-2.5
2021	1.0	8.2	9.4	0.0	0.7	0.4
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds without the need for added mitigation.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs).

For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NO_x), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project, the nearest residential use is more than 700-feet to the northeast such that the 200-meter distance was used.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites. For this project, the most stringent standards for a 1-acre disturbance area were used.

The following thresholds and emissions shown in Table 8 are therefore determined (pounds per day):

Table 8
LST and Project Emissions (pounds/day)

LST 1 acres/200 meters Central San Bernardino Valley	CO	NO_x	PM-10	PM-2.5
LST Threshold	5,356	334	74	23
Max On-Site Emissions	10	8	<1	<1

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. Emissions meet the LST for construction thresholds without the need for added mitigation. LST impacts are less-than-significant.

NEPA Analysis

Annual emissions were run with the same assumptions as used for daily emissions and are shown in Table 9. The calculated maximum annual emissions were then compared to the EPA *de minimis* emission thresholds that would allow for a federal conformity finding with Section 176c of the Clean Air Act.

Table 9
Total Annual Construction Emissions
(tons/year)

Activity	ROG	NOx	CO	SO ₂	PM-10	PM-2.5
Construction 2021	0.03	0.27	0.30	<0.1	0.02	0.02
NEPA Threshold	10	10	100	100	100	70

As summarized below, maximum annual emissions are much less than their associated *de minimis* thresholds. A formal SIP consistency analysis is not required.

Pollutant	Threshold	Project Emissions
VOC/ROG	10 tons/year	0.03 tons/year
NOx	10 tons/year	0.27 tons/year
PM-2.5	70 tons/year	0.02 tons/year
PM-10	100 tons/year	0.02 tons/year
CO	100 tons/year	0.30 tons/year
SO ₂	100 tons/year	<0.1 tons/year

GHG EMISSIONS THRESHOLDS

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO₂ equivalent/year CO₂e. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the 10,000 MT guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

PROJECT GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2016.3.2 computer model predicts that the construction activities will generate the annual CO₂e emissions identified in Table 10.

Table 10
Construction Emissions (Metric Tons CO₂e)

CO₂e	45.7
Amortized	1.5

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered less-than-significant.

Total project GHG emissions would be substantially below the proposed significance threshold of 10,000 MT suggested by the SCAQMD. Hence, the project would not result in generation of a significant level of greenhouse gases.

CALEEMOD2016.3.2 COMPUTER MODEL OUTPUT

- **DAILY EMISISONS**
- **ANNUAL EMISSIONS**

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

WEST VALLEY WATER DISTRICT Pipeline

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.10	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0.1 acre per proj descripton

Construction Phase - Demo 2 weeks, Pipeline Install 2 weeks, Backfill and Pave 60 days

Off-road Equipment - Cuting and digging: 1 concrete saw, 2 loader/backhoes, 1 excavator, 3 signal boards

Off-road Equipment - Pipeline Install: 1 crane, 2 forklifts, 2 loader/backhoes, 3 signal boards

Off-road Equipment - Backfill and Pave: 1 paver, 1 roller, 1 loader/backhoe, 1 compactor, 3 signal boards

Trips and VMT - 22 worker trips day, 10 dump trucks 80 miles round trip

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	PhaseEndDate	2/4/2022	10/1/2021
tblConstructionPhase	PhaseEndDate	2/11/2022	12/24/2021
tblConstructionPhase	PhaseStartDate	2/5/2022	10/2/2021
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	22.00

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

tblTripsAndVMT	WorkerTripNumber	10.00	22.00
tblTripsAndVMT	WorkerTripNumber	18.00	22.00

2.0 Emissions Summary

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.9745	8.2809	9.6391	0.0172	0.2634	0.4353	0.6876	0.0700	0.4038	0.4709	0.0000	1,618.3524	1,618.3524	0.3322	0.0000	1,625.3451
Maximum	0.9745	8.2809	9.6391	0.0172	0.2634	0.4353	0.6876	0.0700	0.4038	0.4709	0.0000	1,618.3524	1,618.3524	0.3322	0.0000	1,625.3451

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	0.9745	7.2026	9.6391	0.0172	0.2634	0.4353	0.6876	0.0700	0.4038	0.4709	0.0000	1,618.3524	1,618.3524	0.3322	0.0000	1,625.3451
Maximum	0.9745	7.2026	9.6391	0.0172	0.2634	0.4353	0.6876	0.0700	0.4038	0.4709	0.0000	1,618.3524	1,618.3524	0.3322	0.0000	1,625.3451

[illegible]

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/14/2021	5	10	
2	Building Construction	Building Construction	9/18/2021	10/1/2021	5	10	
3	Paving	Paving	10/2/2021	12/24/2021	5	60	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	1	4.00	158	0.38
Demolition	Concrete/Industrial Saws	1	6.00	81	0.73
Demolition	Signal Boards	3	8.00	6	0.82
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Signal Boards	3	8.00	6	0.82
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	6.00	80	0.38
Paving	Plate Compactors	1	6.00	8	0.43
Paving	Signal Boards	3	8.00	6	0.82
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	5	22.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	22.00	0.00	10.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	22.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	7.2825	8.6930	0.0140		0.3919	0.3919		0.3743	0.3743		1,295.1357	1,295.1357	0.2684		1,301.8466
Total	0.8568	7.2825	8.6930	0.0140		0.3919	0.3919		0.3743	0.3743		1,295.1357	1,295.1357	0.2684		1,301.8466

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.9400e-003	0.2281	0.0353	7.8000e-004	0.0175	6.5000e-004	0.0182	4.8000e-003	6.2000e-004	5.4200e-003		82.5190	82.5190	4.4200e-003		82.6296
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1177	0.2972	0.9461	3.2000e-003	0.2634	2.2200e-003	0.2656	0.0700	2.0700e-003	0.0721		323.2167	323.2167	0.0113		323.4985

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.2 Demolition - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8568	5.1221	8.6930	0.0140		0.3919	0.3919		0.3743	0.3743	0.0000	1,295.1357	1,295.1357	0.2684		1,301.8466
Total	0.8568	5.1221	8.6930	0.0140		0.3919	0.3919		0.3743	0.3743	0.0000	1,295.1357	1,295.1357	0.2684		1,301.8466

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.9400e-003	0.2281	0.0353	7.8000e-004	0.0175	6.5000e-004	0.0182	4.8000e-003	6.2000e-004	5.4200e-003		82.5190	82.5190	4.4200e-003		82.6296
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1177	0.2972	0.9461	3.2000e-003	0.2634	2.2200e-003	0.2656	0.0700	2.0700e-003	0.0721		323.2167	323.2167	0.0113		323.4985

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.3 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	8.1153	7.0366	0.0119		0.4336	0.4336		0.4022	0.4022		1,100.7064	1,100.7064	0.3235		1,108.7940
Total	0.8534	8.1153	7.0366	0.0119		0.4336	0.4336		0.4022	0.4022		1,100.7064	1,100.7064	0.3235		1,108.7940

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5900e-003	0.0964	0.0182	2.7000e-004	6.4000e-003	1.7000e-004	6.5700e-003	1.8400e-003	1.6000e-004	2.0000e-003		28.4589	28.4589	1.8000e-003		28.5039
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1144	0.1655	0.9289	2.6900e-003	0.2523	1.7400e-003	0.2541	0.0671	1.6100e-003	0.0687		269.1566	269.1566	8.6500e-003		269.3729

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.3 Building Construction - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8534	7.0371	7.0366	0.0119		0.4336	0.4336		0.4022	0.4022	0.0000	1,100.706 4	1,100.706 4	0.3235		1,108.794 0
Total	0.8534	7.0371	7.0366	0.0119		0.4336	0.4336		0.4022	0.4022	0.0000	1,100.706 4	1,100.706 4	0.3235		1,108.794 0

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5900e-003	0.0964	0.0182	2.7000e-004	6.4000e-003	1.7000e-004	6.5700e-003	1.8400e-003	1.6000e-004	2.0000e-003		28.4589	28.4589	1.8000e-003		28.5039
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1144	0.1655	0.9289	2.6900e-003	0.2523	1.7400e-003	0.2541	0.0671	1.6100e-003	0.0687		269.1566	269.1566	8.6500e-003		269.3729

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.4 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6694	6.0780	6.3450	0.0103		0.3154	0.3154		0.2941	0.2941		931.3375	931.3375	0.2631		937.9137
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6694	6.0780	6.3450	0.0103		0.3154	0.3154		0.2941	0.2941		931.3375	931.3375	0.2631		937.9137

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5900e-003	0.0964	0.0182	2.7000e-004	6.4000e-003	1.7000e-004	6.5700e-003	1.8400e-003	1.6000e-004	2.0000e-003		28.4589	28.4589	1.8000e-003		28.5039
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1144	0.1655	0.9289	2.6900e-003	0.2523	1.7400e-003	0.2541	0.0671	1.6100e-003	0.0687		269.1566	269.1566	8.6500e-003		269.3729

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

3.4 Paving - 2021**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6694	4.8113	6.3450	0.0103		0.3154	0.3154		0.2941	0.2941	0.0000	931.3375	931.3375	0.2631		937.9137
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6694	4.8113	6.3450	0.0103		0.3154	0.3154		0.2941	0.2941	0.0000	931.3375	931.3375	0.2631		937.9137

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	2.5900e-003	0.0964	0.0182	2.7000e-004	6.4000e-003	1.7000e-004	6.5700e-003	1.8400e-003	1.6000e-004	2.0000e-003		28.4589	28.4589	1.8000e-003		28.5039
Worker	0.1118	0.0691	0.9108	2.4200e-003	0.2459	1.5700e-003	0.2475	0.0652	1.4500e-003	0.0667		240.6977	240.6977	6.8500e-003		240.8690
Total	0.1144	0.1655	0.9289	2.6900e-003	0.2523	1.7400e-003	0.2541	0.0671	1.6100e-003	0.0687		269.1566	269.1566	8.6500e-003		269.3729

4.0 Operational Detail - Mobile

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		2.0000e-005	2.0000e-005	0.0000		2.0000e-005

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Summer

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

WEST VALLEY WATER DISTRICT Pipeline

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	0.10	User Defined Unit	0.10	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 0.1 acre per proj description

Construction Phase - Demo 2 weeks, Pipeline Install 2 weeks, Backfill and Pave 60 days

Off-road Equipment - Cutting and digging: 1 concrete saw, 2 loader/backhoes, 1 excavator, 3 signal boards

Off-road Equipment - Pipeline Install: 1 crane, 2 forklifts, 2 loader/backhoes, 3 signal boards

Off-road Equipment - Backfill and Pave: 1 paver, 1 roller, 1 loader/backhoe, 1 compactor, 3 signal boards

Trips and VMT - 22 worker trips day, 10 dump trucks 80 miles round trip

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	10.00

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

tblConstructionPhase	NumDays	5.00	60.00
tblConstructionPhase	PhaseEndDate	2/4/2022	10/1/2021
tblConstructionPhase	PhaseEndDate	2/11/2022	12/24/2021
tblConstructionPhase	PhaseStartDate	2/5/2022	10/2/2021
tblLandUse	LotAcreage	0.00	0.10
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Signal Boards
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	PhaseName		Building Construction
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Demolition
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	PhaseName		Paving
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	0.00	22.00

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

tblTripsAndVMT	WorkerTripNumber	10.00	22.00
tblTripsAndVMT	WorkerTripNumber	18.00	22.00

2.0 Emissions Summary

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0328	0.2670	0.3012	5.4000e-004	9.9600e-003	0.0137	0.0236	2.6500e-003	0.0128	0.0154	0.0000	45.4804	45.4804	0.0102	0.0000	45.7341
Maximum	0.0328	0.2670	0.3012	5.4000e-004	9.9600e-003	0.0137	0.0236	2.6500e-003	0.0128	0.0154	0.0000	45.4804	45.4804	0.0102	0.0000	45.7341

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0328	0.2128	0.3012	5.4000e-004	9.9600e-003	0.0137	0.0236	2.6500e-003	0.0128	0.0154	0.0000	45.4804	45.4804	0.0102	0.0000	45.7341
Maximum	0.0328	0.2128	0.3012	5.4000e-004	9.9600e-003	0.0137	0.0236	2.6500e-003	0.0128	0.0154	0.0000	45.4804	45.4804	0.0102	0.0000	45.7341

[illegible]

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2021	9-30-2021	0.0857	0.0699
		Highest	0.0857	0.0699

2.2 Overall Operational

Unmitigated Operational

[illegible]

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	9/14/2021	5	10	
2	Building Construction	Building Construction	9/18/2021	10/1/2021	5	10	
3	Paving	Paving	10/2/2021	12/24/2021	5	60	

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	1	4.00	158	0.38
Demolition	Concrete/Industrial Saws	1	6.00	81	0.73
Demolition	Signal Boards	3	8.00	6	0.82
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Signal Boards	3	8.00	6	0.82
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	6.00	80	0.38
Paving	Plate Compactors	1	6.00	8	0.43
Paving	Signal Boards	3	8.00	6	0.82
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	5	22.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	22.00	0.00	10.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	22.00	1.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2800e-003	0.0364	0.0435	7.0000e-005		1.9600e-003	1.9600e-003		1.8700e-003	1.8700e-003	0.0000	5.8746	5.8746	1.2200e-003	0.0000	5.9051
Total	4.2800e-003	0.0364	0.0435	7.0000e-005		1.9600e-003	1.9600e-003		1.8700e-003	1.8700e-003	0.0000	5.8746	5.8746	1.2200e-003	0.0000	5.9051

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1700e-003	1.9000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3702	0.3702	2.0000e-005	0.0000	0.3707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0009	1.0009	3.0000e-005	0.0000	1.0016
Total	5.4000e-004	1.5500e-003	4.1100e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.6000e-004	0.0000	1.3711	1.3711	5.0000e-005	0.0000	1.3723

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2800e-003	0.0256	0.0435	7.0000e-005		1.9600e-003	1.9600e-003		1.8700e-003	1.8700e-003	0.0000	5.8746	5.8746	1.2200e-003	0.0000	5.9051
Total	4.2800e-003	0.0256	0.0435	7.0000e-005		1.9600e-003	1.9600e-003		1.8700e-003	1.8700e-003	0.0000	5.8746	5.8746	1.2200e-003	0.0000	5.9051

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1700e-003	1.9000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.3702	0.3702	2.0000e-005	0.0000	0.3707
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0009	1.0009	3.0000e-005	0.0000	1.0016
Total	5.4000e-004	1.5500e-003	4.1100e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3000e-003	3.4000e-004	1.0000e-005	3.6000e-004	0.0000	1.3711	1.3711	5.0000e-005	0.0000	1.3723

3.3 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2700e-003	0.0406	0.0352	6.0000e-005		2.1700e-003	2.1700e-003		2.0100e-003	2.0100e-003	0.0000	4.9927	4.9927	1.4700e-003	0.0000	5.0294
Total	4.2700e-003	0.0406	0.0352	6.0000e-005		2.1700e-003	2.1700e-003		2.0100e-003	2.0100e-003	0.0000	4.9927	4.9927	1.4700e-003	0.0000	5.0294

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.3 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.9000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1270	0.1270	1.0000e-005	0.0000	0.1272
Worker	5.1000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0009	1.0009	3.0000e-005	0.0000	1.0016
Total	5.2000e-004	8.7000e-004	4.0200e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1279	1.1279	4.0000e-005	0.0000	1.1288

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2700e-003	0.0352	0.0352	6.0000e-005		2.1700e-003	2.1700e-003		2.0100e-003	2.0100e-003	0.0000	4.9927	4.9927	1.4700e-003	0.0000	5.0294
Total	4.2700e-003	0.0352	0.0352	6.0000e-005		2.1700e-003	2.1700e-003		2.0100e-003	2.0100e-003	0.0000	4.9927	4.9927	1.4700e-003	0.0000	5.0294

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.3 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0000e-005	4.9000e-004	1.0000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1270	0.1270	1.0000e-005	0.0000	0.1272
Worker	5.1000e-004	3.8000e-004	3.9200e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0009	1.0009	3.0000e-005	0.0000	1.0016
Total	5.2000e-004	8.7000e-004	4.0200e-003	1.0000e-005	1.2400e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.1279	1.1279	4.0000e-005	0.0000	1.1288

3.4 Paving - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0201	0.1823	0.1904	3.1000e-004		9.4600e-003	9.4600e-003		8.8200e-003	8.8200e-003	0.0000	25.3469	25.3469	7.1600e-003	0.0000	25.5258
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0201	0.1823	0.1904	3.1000e-004		9.4600e-003	9.4600e-003		8.8200e-003	8.8200e-003	0.0000	25.3469	25.3469	7.1600e-003	0.0000	25.5258

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.4 Paving - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.9200e-003	5.9000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7619	0.7619	5.0000e-005	0.0000	0.7632
Worker	3.0400e-003	2.3000e-003	0.0235	7.0000e-005	7.2400e-003	5.0000e-005	7.2800e-003	1.9200e-003	4.0000e-005	1.9700e-003	0.0000	6.0053	6.0053	1.7000e-004	0.0000	6.0096
Total	3.1200e-003	5.2200e-003	0.0241	8.0000e-005	7.4300e-003	6.0000e-005	7.4700e-003	1.9700e-003	4.0000e-005	2.0300e-003	0.0000	6.7672	6.7672	2.2000e-004	0.0000	6.7727

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0201	0.1443	0.1904	3.1000e-004		9.4600e-003	9.4600e-003		8.8200e-003	8.8200e-003	0.0000	25.3468	25.3468	7.1600e-003	0.0000	25.5258
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0201	0.1443	0.1904	3.1000e-004		9.4600e-003	9.4600e-003		8.8200e-003	8.8200e-003	0.0000	25.3468	25.3468	7.1600e-003	0.0000	25.5258

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

3.4 Paving - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-005	2.9200e-003	5.9000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	0.0000	6.0000e-005	0.0000	0.7619	0.7619	5.0000e-005	0.0000	0.7632
Worker	3.0400e-003	2.3000e-003	0.0235	7.0000e-005	7.2400e-003	5.0000e-005	7.2800e-003	1.9200e-003	4.0000e-005	1.9700e-003	0.0000	6.0053	6.0053	1.7000e-004	0.0000	6.0096
Total	3.1200e-003	5.2200e-003	0.0241	8.0000e-005	7.4300e-003	6.0000e-005	7.4700e-003	1.9700e-003	4.0000e-005	2.0300e-003	0.0000	6.7672	6.7672	2.2000e-004	0.0000	6.7727

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

[illegible]

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

WEST VALLEY WATER DISTRICT Pipeline - San Bernardino-South Coast County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

APPENDIX 2

Biological Resources Assessment & Jurisdictional Delineation Report



Jacobs



West Valley Water District 18-inch Transmission Main Installation Project

Biological Resources Assessment And Jurisdictional Delineation Report

Document No. | FINAL
September 2021

Tom Dodson & Associates

Document history and status

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WVWD 18-inch Transmission Main Installation Project

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Contents

Executive Summary.....	iii
1. Introduction.....	1
1.1 Project Description.....	1
1.2 Location.....	3
1.3 Environmental Setting.....	6
2. Assessment Methodology.....	7
2.1 Biological Resources Assessment	7
2.1.1 Biological Resources Assessment Field Survey	7
2.2 Jurisdictional Delineation.....	7
3. Results	10
3.1 Existing Biological and Physical Conditions.....	10
3.2 Special Status Species and Habitats	10
3.2.1 Special Status Species	11
3.2.2 Special Status Habitats.....	14
3.3 Jurisdictional Delineation.....	15
4. Conclusions and Recommendations	16
4.1 Sensitive Biological Resources	16
4.2 Jurisdictional Waters	17
5. References	18
Appendix A. CNDDDB Species and Habitats Documented Within the <i>Devore</i> and <i>Cucamonga Peak</i> USGS 7.5-Minute Quadrangles	
Appendix B. Site Photos	
Appendix C. Regulatory Framework	

Executive Summary

Jacobs Engineering Group, Inc. was retained by Tom Dodson and Associates to conduct a Biological Resources Assessment and Jurisdictional Delineation for the West Valley Water District's proposed 18-inch Transmission Main Installation Project. The proposed Project would connect a new 18-inch transmission main to an existing 18-inch transmission main at Lytle Creek Road and bore under the Interstate 15 freeway, terminating at Citrus Avenue in the City of Fontana and unincorporated San Bernardino County, California.

In August of 2021, Jacobs biologists conducted a Biological Resources Assessment survey to address potential effects of the Project on designated Critical Habitats and/or special status species. Results of the Biological Resources Assessment are intended to provide sufficient baseline information to the Project Proponent and, if required, to City and/or County planning officials and federal and state regulatory agencies to determine if the Project is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects. Data regarding biological resources in the Project vicinity were obtained through literature review and field investigation. Available databases and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species that could potentially occur in the Project vicinity, including the U.S. Fish and Wildlife Service designated Critical Habitat online mapper and Information for Planning and Consultation System, as well as the most recent versions of the California Natural Diversity Database and California Native Plant Society Electronic Inventory. The result of the reconnaissance-level field survey was that no state or federally listed species were identified within the Project Area and the Project is not within any federal Critical Habitat. Due to the environmental conditions on site and the adjacent disturbances, the Project Area is likely not suitable to support any of the special status wildlife species that have been documented in the Project vicinity (within approximately 3 miles).

Jacobs biologists also assessed the Project Area for the presence of state and/or federal jurisdictional waters that may potentially be impacted by the Project. The jurisdictional waters assessment was conducted in accordance with the U.S. Army Corps of Engineers *Wetlands Delineation Manual*, *Jurisdictional Determination Form Instructional Guidebook*, and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland jurisdictional waters within the Project Area. Therefore, the Project will not impact any jurisdictional waters and no state or federal jurisdictional waters permitting will be required under current regulation.

This report describes delineated resources, provides an aquatic resource delineation map, identifies state and/or federally listed species with potential to occur on site and presents representative site photographs. The delineation results and conclusions presented in this report are considered preliminary and valid under current regulatory context. Additionally, according to protocol and standard practices, the results of the habitat assessment surveys will remain valid for the period of one year, or until August 2022, after which time, if the site has not been disturbed in the interim, another survey may be required to determine the persisting absence of special status species and to verify environmental conditions on site. Regardless of survey results and conclusions given herein, if any state or federally listed species are found on site during Project-related work activities, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions.

1. Introduction

The West Valley Water District (WVWD) serves customers in the Cities of Rialto, Fontana, Colton, Jurupa Valley ("Riverside County") and unincorporated areas of San Bernardino County, serving over 80,000 residents within these jurisdictions. The District obtains water from both local and imported sources to serve its customers, including about 68% from groundwater, 18% from surface water diversions from Lytle Creek, and 14% from the State Water Project. The service area consists of eight (8) pressure zones: Zone 2, 3, 3A, 4, 5, 6, 7 and 8, and is divided into Northern and Southern systems by the central portion of the City of Rialto.

Pressure Zone 7 is north of Pressure Zone 6 in WVWD's North System. Storage is provided by Reservoirs (R7-1, R7-2, R7-3, and R7-4) on Lytle Creek Road. There is currently no source of supply within Pressure Zone 7, as water is boosted from the Lower Pressure Zones (4, 5, and 6) to serve that area. As such, the District is proposing a new 650-linear-foot (LF), 18-inch transmission main to facilitate supply to accommodate the increase in development that is projected to occur in Pressure Zone 7.

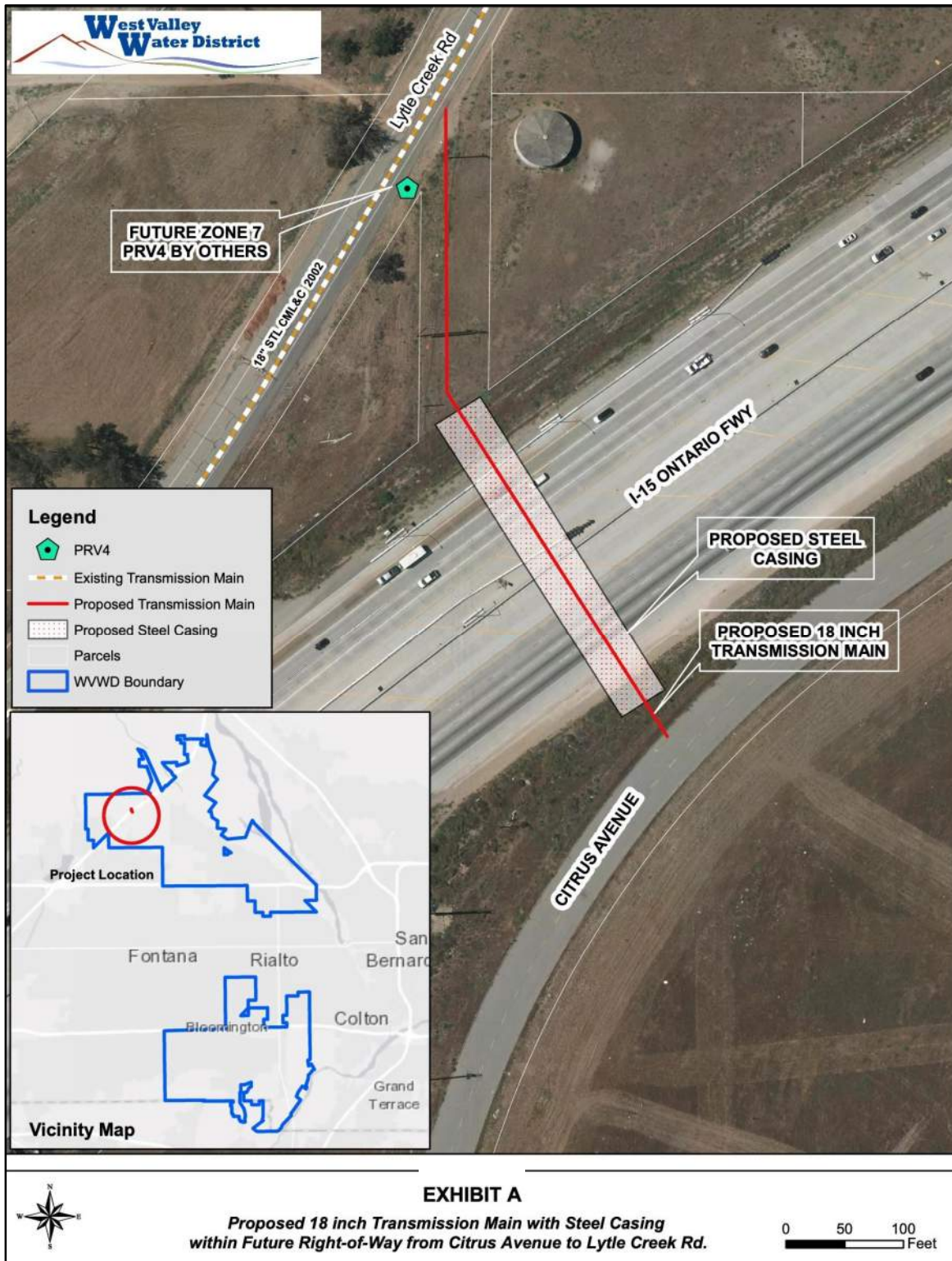
On behalf of Tom Dodson and Associates (TDA), Jacobs Engineering Group, Inc. (Jacobs) has prepared this Biological Resources Assessment (BRA) report for WVWD's proposed 18-inch Transmission Main Installation Project (Project). The BRA fieldwork was conducted by Jacobs biologist Daniel Smith in August of 2021. The purpose of the BRA survey was to address potential effects of the Project on designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA), as well as any species otherwise designated as sensitive by the California Department of Fish and Wildlife (CDFW [formerly California Department of Fish and Game]) and/or the California Native Plant Society (CNPS).

The Project Area was assessed for sensitive species known to occur locally. Attention was focused on those state and/or federally listed as threatened or endangered species and California Fully Protected species that have been documented in the vicinity of the Project Area, whose habitat requirements are present within or adjacent to the Project Area. Results of the habitat assessment are intended to provide sufficient baseline information to the Project Proponent (WVWD) and, if required, to City, County or other local government planning officials and federal and state regulatory agencies, including the U.S. Fish and Wildlife Service (USFWS) and CDFW, respectively, to determine if the Project is likely to result in any adverse effects on sensitive biological resources and to identify mitigation measures to offset those effects.

In addition to the BRA survey, Jacobs biologists assessed the Project Area for the presence of state and/or federal jurisdictional waters potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1600 of the California FGC, respectively.

1.1 Project Description

The Project would consist of installing approximately 650 LF of 18-inch transmission main within Pressure Zone 7 (Figure 1). The proposed transmission main would connect to an existing 18-inch transmission main at Lytle Creek Road and bore under the Interstate 15 (I-15) freeway and terminate at Citrus Avenue in an unimproved area. Approximately 250 LF of 18-inch diameter pipe would be trenched in the unimproved area. The proposed pits for the jack and bore would be approximately 40 feet in length and 20 feet in width and would be located outside the Caltrans right-of-way (ROW). The pipeline that would traverse under the I-15 includes trenchless installation of approximately 325 LF of 18-inch diameter carrier pipe in a 30-inch diameter casing under the I-15 freeway to connect to segments at either side of the freeway. The segments of pipeline would be installed mostly within unimproved areas between Lytle Creek Road and Citrus Avenue (Figure 1).



SOURCE: West Valley Water District

FIGURE 1

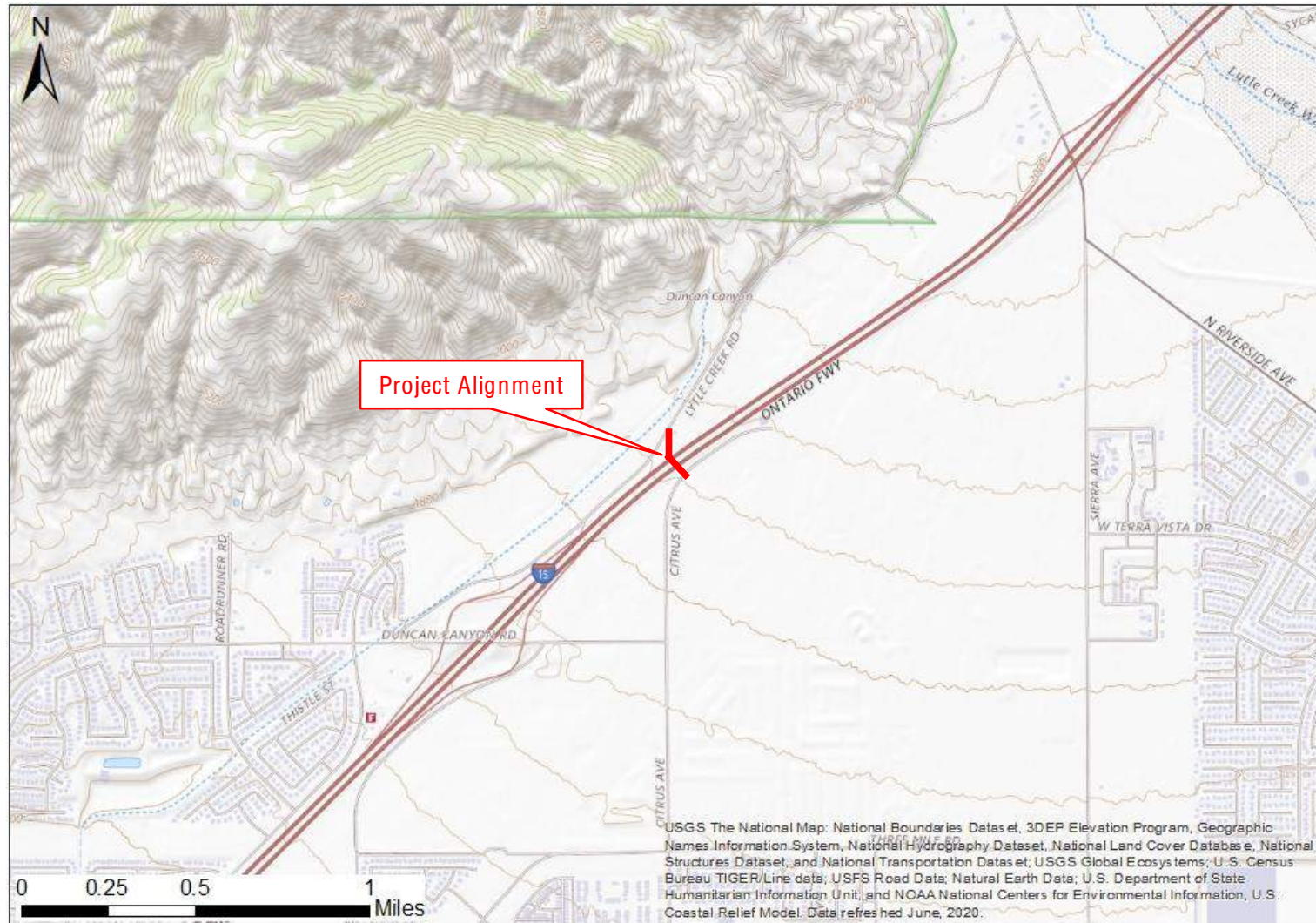
1.2 Location

The WVWD service area is in southern California within southwestern San Bernardino County, with a small part in northern Riverside County. The WVWD's service area is shown on Figure 1. The Project will occur within the northern portion of the WVWD service area, within an easement between Lytle Creek Road to the north and Citrus Avenue to the south, traversing under the I-15 freeway within unincorporated San Bernardino County and the City of Fontana. The Project Area is depicted on the *Devore* U. S. Geological Survey's (USGS) 7.5-Minute Series Quadrangle map, within Section 18 of Township 1 North and Range 5 West, San Bernardino Base Meridian. The approximate GPS coordinates of the Project Area are 34.171502°, -117.453627°. Please refer to Figures 2 and 3 for the regional and site location maps.



SOURCE: Esri ArcMap 10.6 – World Street Map 1:500,000 scale

FIGURE 2



SOURCE: Esri ArcMap 10.6 – USGS Topo 1:24,000 scale

FIGURE 3

1.3 Environmental Setting

The Project Area lies in the geographically based ecological classification known as the Inland Valleys – Level IV ecoregion, of the Southern California/Northern Baja Coast – Level III ecoregion (Griffith et al. 2016). The goal of regional ecological classifications is to reduce variability based on spatial covariance in climate, geology, topography, climax vegetation, hydrology, and soils. The Inland Valleys ecoregion is a heavily urbanized ecoregion that historically consisted of the alluvial fans and basin floors immediately south of the San Gabriel and San Bernardino Mountains (Griffith et al. 2016).

The Project Area is situated near the northern end of the broad alluvial fan that lies to the southwest of Lytle Creek, northwest of the Lytle Creek Wash/Cajon Wash confluence, and south of the eastern end of the San Gabriel Mountain foothills. The topography of the Project site consists of a flat, graded landscape, comprised of existing transportation corridor and adjacent disturbed landscape. The elevation of the Project site ranges from approximately 1,865 feet above mean sea level (amsl) at the north end of the Project alignment, to 1,845 feet amsl at the south end of the Project alignment.

The Project Area is within a hot-summer Mediterranean climate (Csa), characterized by both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures peak at 96.2 degrees Fahrenheit (° F) in July and August and drop to an average annual minimum temperature of 38.5° F in January. Average annual precipitation is greatest from November through April and reaches a peak in February (3.25 inches). Precipitation is lowest in the month of July (0.04 inches). Annual total precipitation averages 16.12 inches.

Hydrologically, the Project Area is situated within the Rialto Hydrologic Sub-Area (HSA 801.43). The Rialto HSA comprises a 4,577-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. The nearest tributary to the Santa Ana River is Lytle Creek, which flows generally northwest to southeast, approximately 1.5 miles northeast of the Project site at its closest point.

Soils within the Project Areas consist of fill material and Tujunga gravelly loamy sand, 0 to 9 percent slopes. Tujunga gravelly loamy sand soil type consists of gravelly loamy sand and gravelly sand layers comprised of alluvium derived from granite. This soil type is somewhat excessively drained, with a very low runoff class and does not have a hydric soil rating.

The Fontana area consists of a mix of urban landscapes, disturbed vacant land, and undeveloped chaparral, sage scrub, and grassland habitats. The Project Area consists of existing transportation corridor (I-15), paved roadways (Lytle Creek Road to the north and Citrus Avenue to the south), and disturbed, vacant land. Adjacent land consists of non-native grassland and unvegetated (disked) bare ground.

2. Assessment Methodology

2.1 Biological Resources Assessment

Data regarding biological resources in the Project vicinity were obtained through literature review, desktop evaluation and field investigation. Prior to performing the field survey, available databases, and documentation relevant to the Project Area were reviewed for documented occurrences of sensitive species that could potentially occur in the Project vicinity. The USFWS designated Critical Habitat online mapper, USFWS threatened and endangered species occurrence data overlay, and the most recent versions of the California Natural Diversity Database (CNDDB) and California Native Plant Society Electronic Inventory (CNPSEI) databases were searched for sensitive species data in the *Devore* and *Cucamonga Peak* USGS 7.5-Minute Series Quadrangles. The Project site is situated within the western portion of the *Devore* quad and the sites' proximity to the *Cucamonga Peak* quad led to its inclusion in the review. These databases contain records of reported occurrences of state and federally listed species or otherwise sensitive species and habitats that may occur within the vicinity of the Project site (approximately 3 miles). Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

2.1.1 Biological Resources Assessment Field Survey

Jacobs biologist Daniel Smith conducted a biological resources assessment of the Project Area on August 23, 2021. The reconnaissance-level field survey consisted of a pedestrian survey that encompassed the entire Project Area and included 100 percent visual coverage of the site and immediate surrounding area. Wildlife species were detected during field surveys by sight, calls, tracks, scat, and/or other sign. In addition to species observed, expected wildlife usage of the site was determined based on known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species survey was to identify potential habitat for special status wildlife that may occur within the Project vicinity.

2.2 Jurisdictional Delineation

On August 23, 2021, Mr. Smith also evaluated the Project Area for the presence of riverine/riparian/wetland habitat and jurisdictional waters, i.e. Waters of the U.S. (WOTUS), as regulated by the USACE and RWQCB, and/or jurisdictional streambed and associated riparian habitat as regulated by the CDFW. Prior to the field visit, aerial photographs of the Project Area were viewed and compared with the surrounding USGS 7.5-Minute Topographic Quadrangle maps to identify drainage features within the survey area as indicated from topographic changes, blue-line features, or visible drainage patterns. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" Google Earth Pro data layers were also reviewed to determine whether any hydrologic features and wetland areas had been documented within the vicinity of the site. Similarly, the United States Department of Agriculture (USDA) – Natural Resources Conservation Service (NRCS) "Web Soil Survey" was reviewed for soil types found within the Project Area to identify the soil series in the area and to check these soils to determine whether they are regionally identified as hydric soils. Upstream and downstream connectivity of waterways (if present) were reviewed on Google Earth Pro aerial photographs and topographic maps to determine jurisdictional status. The lateral extent of potential USACE jurisdiction was measured at the Ordinary High Water Mark (OHWM) in accordance with regulations set forth in 33CFR part 328 and the USACE guidance documents listed below:

- *USACE – Corps of Engineers Wetlands Delineation Manual, Wetlands Research Program Technical Report Y-87-1 (on-line edition), January 1987 - Final Report.*
- *USACE – Jurisdictional Determination Form Instructional Guidebook (JD Form Guidebook), May 30, 2007.*

- *USACE – A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (A Delineation Manual), August 2008.*
- *USACE – Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), September 2008.*
- *USACE – Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (Minimum Standards), January 2016.*
- *The Environmental Protection Agency (EPA) and the Department of the Army's "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" April 21, 2020 (effective June 22, 2020) (85 FR 22250).*

To be considered a *jurisdictional wetland* under the federal CWA, Section 404, an area must possess three (3) wetland characteristics: hydrophytic *vegetation*, hydric *soils*, and wetland *hydrology*.

- **Hydrophytic vegetation:** Hydrophytic vegetation is plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, and herb layers) is considered hydrophytic. Hydrophytic species are those included on the 2018 National Wetland Plant Lists for the Arid West Region (USACE 2018). Each species on the lists is rated with a wetland indicator category, as shown in Table 1. To be considered hydrophytic, the species must have *wetland indicator status*, i.e., be rated as OBL, FACW or FAC.

Table 1. Wetland Indicator Vegetation Categories

Category	Probability
Obligate Wetland (OBL)	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland (FACW)	Usually occur in wetlands (estimated probability 67 to 99%)
Facultative (FAC)	Equally likely to occur in wetlands and non-wetlands (estimated probability 34 to 66%)
Facultative Upland (FACU)	Usually occur in non-wetlands (estimated probability 67 to 99%)
Obligate Upland (UPL)	Almost always occur in non-wetlands (estimated probability >99%)

- **Hydric Soil:** Soil maps from the USDA-NRCS Web Soil Survey (USDA 2021) were reviewed for soil types found within the Project Area. Hydric soils are saturated or inundated long enough during the growing season to develop anaerobic conditions that favor growth and regeneration of hydrophytic vegetation. There are several indirect indicators that may signify the presence of hydric soils including hydrogen sulfide generation, the presence of iron and manganese concretions, certain soil colors, gleying, and the presence of mottling. Generally, hydric soils are dark in color or may be gleyed (bluish, greenish, or grayish), resulting from soil development under anoxic (without oxygen) conditions. Bright mottles within an otherwise dark soil matrix indicate periodic saturation with intervening periods of soil aeration. Hydric indicators are particularly difficult to observe in sandy soils, which are often recently deposited soils of flood plains (entisols) and usually lack sufficient fines (clay and silt) and organic material to allow use of soil color as a reliable indicator of hydric conditions. Hydric soil indicators in sandy soils include accumulations of organic matter in the surface horizon, vertical streaking of subsurface horizons by organic matter, and organic pans.

The hydric soil criterion is satisfied at a location if soils in the area can be inferred or observed to have a high groundwater table, if there is evidence of prolonged soil saturation, or if there are any indicators

suggesting a long-term reducing environment in the upper part of the soil profile. Reducing conditions are most easily assessed using soil color. Soil colors were evaluated using the Munsell Soil Color Charts (Munsell 2000). Soil pits are dug (when necessary) to an approximate depth of 16-20 inches to evaluate soil profiles for indications of anaerobic and redoximorphic (hydric) conditions in the subsurface.

- ▶ *Wetland Hydrology*. The wetland hydrology criterion is satisfied at a location based upon conclusions inferred from field observations that indicate an area has a high probability of being inundated or saturated (flooded, ponded, or tidally influenced) long enough during the growing season to develop anaerobic conditions in the surface soil environment, especially the root zone (USACE 1987 and USACE 2008).

Evaluation of CDFW jurisdiction followed guidance in the Fish and Game Code and *A Review of Stream Processes and Forms in Dryland Watersheds* (CDFW, 2010). Specifically, CDFW jurisdiction would occur where a stream has a definite course showing evidence of where waters rise to their highest level and to the extent of associated riparian vegetation.

3. Results

3.1 Existing Biological and Physical Conditions

The Project Area consists of the approximately 650-foot alignment between Lytle Creek Road to the north, and Citrus Avenue to the south (Figure 1). The proposed impact area is completely disturbed, consisting of existing transportation corridor (I-15), paved roadways (Lytle Creek Road and Citrus Avenue), and the disturbed, vacant land between Lytle Creek Road and Citrus Avenue. Surrounding land uses consist of transportation corridor, paved roadways, and disturbed, vacant land.

The proposed impact area no longer supports any native habitat, but there is some non-native grassland within and adjacent the proposed impact area (see attached Site Photos). Vegetation in the Project Area is dominated by non-native species including non-native brome grasses (*Bromus* spp.), tocalote (*Centaurea melitensis*), and shortpod mustard (*Hirschfeldia incana*). Scattered native species present within the Project Area are mostly ruderal species including Turkey-mullein (*Croton setiger*), jimsonweed (*Datura wrightii*), and common sunflower (*Helianthus annuus*), as well as several California buckwheat (*Eriogonum fasciculatum*).

Birds were the only observed wildlife group during survey and species observed or otherwise detected in the Project Area during the reconnaissance-level survey included:

- Rock pigeon (*Columba livia*)
- American kestrel (*Falco sparverius*)
- House finch (*Haemorrhous mexicanus*)
- Black phoebe (*Sayornis nigricans*)
- European starling (*Sturnus vulgaris*)
- Cassin's kingbird (*Tyrannus vociferans*)

3.2 Special Status Species and Habitats

According to the CNDDDB, 45 sensitive species (21 plant species, 24 animal species) and five sensitive habitats have been documented in the *Devore* and *Cucamonga Peak* USGS 7.5-Minute Series Quadrangles. This list of sensitive species and habitats includes any state and/or federally listed threatened or endangered species, California Fully Protected species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

Of the six state and/or federally listed species documented within the *Devore* and *Cucamonga Peak* quads, the following four state and/or federally listed species have been documented in the Project vicinity (within approximately 3 miles):

- San Bernardino kangaroo rat (*Dipodomys merriami parvus*)
- Slender-horned spineflower (*Dodecahema leptoceras*)
- Coastal California gnatcatcher (*Poliophtila californica californica*)
- Least Bell's vireo (*Vireo bellii pusillus*)

Although not a state or federally listed as threatened or endangered species, burrowing owl (*Athene cunicularia*) are considered a state and federal SSC and this species is protected by the international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 and by State law under the California FGC (FGC #3513 & #3503.5).

Additionally, this species is commonly found in open habitats consisting of short or sparse vegetation and disturbed areas. Therefore, burrowing owl will be included in the discussion below.

3.2.1 Special Status Species

No state and/or federally listed threatened or endangered species, or other sensitive species were observed within the Project Area during the reconnaissance-level field survey and due to the environmental conditions on site, none are expected to occur. An analysis of the likelihood for occurrence of all CNDDDB sensitive species documented in the *Devore* and *Cucamonga Peak* quads is provided in Appendix A. This analysis considers species' range as well as documentation within the vicinity of the Project site and includes the habitat requirements for each species and the potential for their occurrence on site, based on required habitat elements and range relative to the current site conditions.

Slender-horned spineflower – Endangered (Federal/State)

The state and federally listed as endangered slender-horned spineflower is a small annual flower that is found in sandy soil in association with mature alluvial scrub. The ideal habitat for this species appears to be a terrace or bench that receives over-bank deposits every 50 to 100 years. This flower is endemic to southwestern California, ranging from central Los Angeles County east to San Bernardino County, and south to southwestern Riverside County in the foothills of the Transverse and Peninsular Ranges, at 200 to 700 meters elevation (Hickman 1993). Only eight areas are still known to support slender-horned spineflower populations, including two in San Bernardino County (Santa Ana River floodplain and Cajon Wash) (CNDDDB 2008). Individuals are small and difficult to locate. This species is only readily detectable in the spring between April and June when in bloom. The Slender-horned spineflower was listed as endangered in January 1982 by the California Fish and Game Commission. On September 28, 1987, it was federally listed as endangered.

Findings: According to the CNDDDB, the nearest documented slender-horned spineflower occurrence (2005) is approximately 1.5 miles northeast of the Project site, within the Lytle Creek floodplain. However, the Project Area is likely not suitable to support slender-horned spineflower. The habitat this species is typically associated with (i.e. mature alluvial scrub) is absent from the Project Area and the Project site is outside of the 100-year floodplain. Furthermore, the Project Area consists of paved surfaces, fill material, and disturbed soils that are regularly disked for weed abatement. Therefore, slender-horned spineflower is presumed absent from the Project Area and the Project is not likely to adversely affect this species.

San Bernardino kangaroo rat – Endangered (Federal)

The federally listed as endangered San Bernardino kangaroo rat (SBKR) is one of three recognized subspecies of Merriam's kangaroo rat (*D. merriami*) in California. The Merriam's kangaroo rat is a small, burrowing rodent species that can be found within inland valleys and deserts of southwest United States of America and northern Mexico. The Dulzura kangaroo rat (*Dipodomys simulans*), the Pacific kangaroo rat (*Dipodomys agilis*) and the Stephens kangaroo rat (*Dipodomys stephensi*) occur in areas occupied by SBKR, but these other species have a wider habitat range. SBKR, however, has a restricted southern California distribution, confined to certain inland valley scrub communities and, more particularly, to scrub communities occurring along rivers, streams, and drainages within the San Bernardino, Menifee, and San Jacinto valleys. Most of these drainages have been historically altered due to a variety of reasons including, mining, off-road vehicle use, road and housing development, and flood control efforts. This increased use of river floodplain resources resulted in a reduction in both the amount and quality of habitat available for SBKR.

The areas which SBKR occupy are subjected to periodic flooding and hence, the dominant vegetation type (alluvial fan sage scrub) is described in general terms as having three successional phases: pioneer, intermediate, and mature as determined by elevation and distance from the main channel and time since previous flooding (Hanes et al. 1989, p. 187, as cited in USFWS 2009). Vegetation cover generally increases with distance from the active stream channel. The pioneer phase is subject to frequent flood disturbance (Smith 1980, p. 133; Hanes et al. 1989, p. 187, as cited in USFWS 2009). The intermediate phase, defined as the area between the active channel and mature terraces, is subject to periodic flooding at longer intervals. The vegetation on intermediate terraces is relatively open. As alluvial fan scrub vegetation ages in the absence of flooding, the suitability of this habitat for the SBKR declines (McKernan 1997, p. 58, as cited in USFWS 2009).

The USFWS listed SBKR as endangered on September 24, 1998 and set aside 33,295 acres of critical habitat for the SBKR in 2002. The USFWS then revised that decision in 2008 after a lawsuit and cut the designation down to 7,779 acres in Riverside and San Bernardino counties. On January 10, 2011, a federal court struck down the 2008 designation. The ruling concluded that the USFWS improperly relied on "core habitat" to define critical habitat for the SBKR rather than specifying the physical and biological features essential for the kangaroo rat's conservation, as the law requires. The ruling reinstated the 2002 designation. The 2002 critical habitat rule for SBKR defined four Primary Constituent Elements (PCEs) that are essential to the conservation of SBKR. These PCEs are as follows: 1) Soil series consisting predominantly of sand, loamy sand, sandy loam, or loam; 2) Alluvial sage scrub and associated vegetation, such as coastal sage scrub and chamise chaparral, with a moderately open canopy; 3) River, creek, stream, and wash channels; alluvial fans; floodplains; floodplain benches and terraces; and historic braided channels that are subject to dynamic geomorphological and hydrological processes typical of fluvial systems within the historical range of the SBKR; and 4) Upland areas proximal to floodplains with suitable habitat.

Findings: According to the CNDDDB, the nearest documented SBKR occurrence (2003) is approximately 0.5 miles southeast of the Project site, within fragmented alluvial fan sage scrub habitat on the Fontana Alluvial Fan. This occurrence consists of a remnant population detected during presence/absence trapping studies conducted in 2002 and 2003 (CNDDDB 2021). According to the CNDDDB, two male SBKR were trapped during 250 trap nights in 2002 and one male SBKR was detected in 2003, respectively (CNDDDB 2021). However, the Project Area is likely not suitable to support SBKR. Although there are loamy sand soils within the Project Area (PCE 1), the plant communities this species typically occurs in (i.e. alluvial sage scrub and associated vegetation) are absent from the Project Area (PCEs 2 and 4), and the Project Area is no longer subject to the dynamic hydrological processes (PCE 3) typical of the fluvial systems within the historical range of this species. Furthermore, the Project site is subject to a high level of ongoing human disturbance associated with the I-15 freeway, and the habitat within and adjacent the Project Area consists of non-native grassland that is regularly disked for weed abatement. Therefore, SBKR is presumed absent from the Project Area and the Project is not likely to adversely affect this species.

Coastal California gnatcatcher – Threatened (Federal)

The federally listed as threatened coastal California gnatcatcher (CAGN) is a resident (non-migratory) small songbird (passerine) which typically nests and forages in coastal sage scrub vegetation in southern California year-round. CAGN occur in dynamic and successional sage scrub habitats and non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats. This species often nests in California sagebrush (USFWS 2010).

CAGN was federally listed as threatened in 1993 and critical habitat for this species was designated by the USFWS in 2000 and revised in 2007. The PCEs identified by the USFWS for CAGN consist of the following: 1) Dynamic and successional sage scrub habitats: Venturan coastal sage scrub, Diegan coastal sage scrub,

Riversidean sage scrub, Riversidean alluvial fan sage scrub, maritime succulent scrub, southern coastal bluff scrub, and coastal sage-chaparral scrub in Ventura, Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties that provide space for individual and population growth, normal behavior, breeding, reproduction, nesting, dispersal and foraging; and 2) Non-sage scrub habitats such as chaparral, grassland, riparian areas, in proximity to sage scrub habitats as described for PCE 1 above that provide space for dispersal, foraging, and nesting.

Findings: According to the CNDDDB, the nearest documented CAGN occurrence (1991) is approximately 1.4 miles northeast of the Project site, within the Lytle Creek floodplain. However, the Project Area is likely not suitable to support CAGN. The PCEs identified for this species (i.e. dynamic and successional sage scrub habitats and proximal non-sage scrub habitats) are absent from the Project Area. Furthermore, the Project site is subject to a high level of ongoing human disturbance associated with the I-15 freeway, and the habitat within and adjacent the Project Area consists of non-native grassland that is regularly disked for weed abatement. Therefore, CAGN is presumed absent from the Project Area and the Project is not likely to adversely affect this species.

Least Bell's Vireo – Endangered (Federal/State)

The least Bell's vireo (LBVI) is a state and federally listed endangered migratory bird species. This species is a small, olive-gray migratory songbird that nests and forages almost exclusively in riparian woodland habitats. LBVI 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.

LBVI was first proposed for listing as endangered by the USFWS on May 3, 1985, (50 FR 18968 18975) and was subsequently listed as federally endangered on May 2, 1986 (51 FR 16474 16482). Critical habitat units were designated by the USFWS on February 2, 1994 (59 FR 4845) and included reaches of ten streams in six counties in southern California and the surrounding approximately 38,000 acres.

Findings: According to the CNDDDB, the nearest documented LBVI occurrence (2007) is approximately 2.7 miles northeast of the Project site, within cottonwood-willow riparian habitat northeast of the Lytle Creek floodplain. However, there is no riparian habitat within or adjacent the Project Area. Therefore, LBVI is presumed absent from the Project Area and the Project is not likely to adversely affect this species.

Burrowing Owl – SSC

The burrowing owl (BUOW) is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. According to the definition provided in the 2012 CDFG Staff Report on Burrowing Owl Mitigation, "Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey." BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles

and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

BUOW have disappeared from significant portions of their range in the last 15 years and, overall, nearly 60 percent of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The BUOW is not listed under the state or federal ESAs but is considered both a state and federal SSC. Additionally, the BUOW is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California FGC (FGC #3513 & #3503.5).

Findings: BUOW have not been documented within or adjacent the Project Area. According to the CNDDDB, the nearest documented BUOW occurrence (2009) is approximately 2.3 miles southwest of the Project site. The reconnaissance level pedestrian survey included a BUOW habitat suitability assessment survey that was structured, in part, to detect BUOW. The survey included 100 percent visual coverage of any potentially suitable BUOW habitat within and immediately adjacent the Project site.

The result of the survey was that no evidence of BUOW was found in the survey area. Although there is short, sparse vegetation and well drained soils within and adjacent the Project Area, and the surrounding undeveloped areas likely support sufficient prey resources, no BUOW individuals or sign including castings, feathers or whitewash were observed during survey. Furthermore, no suitably sized burrows, burrow surrogates, or fossorial mammal dens were observed within or adjacent the Project Area. Therefore, BUOW are considered absent from the Project Area at the time of survey and the Project is not likely to adversely affect this species.

3.2.2 Special Status Habitats

According to the CNDDDB, five sensitive habitats have been documented in the *Devore* and *Cucamonga Peak* USGS 7.5-Minute Series Quadrangles. None of the five sensitive habitats documented in the CNDDDB query for these quads are present within or adjacent the Project Area. However, Project Area is mapped within USFWS designated Critical Habitat for SBKR. The USFWS Critical Habitat designation for the SBKR encompasses 33,295 acres of land in Riverside and San Bernardino counties, California. The areas designated as critical habitat for SBKR are identified in four separate units. The four units are within the geographical range of the SBKR and support the habitat the species requires for foraging, sheltering, reproduction, rearing of young, dispersal, and genetic exchange.

Findings: The Project Area falls just within the boundary of the Lytle and Cajon Creeks Critical Habitat Unit (Unit 2), located in San Bernardino County. Unit 2 encompasses approximately 13,970 acres, and includes suitable alluvial fan, floodplain terrace, and historic braided river channel habitat along Lytle and Cajon Creeks (67 FR 19812 19845). However, the Project site and surrounding area consists of paved surfaces, fill material, and non-native grassland that is regularly disked for weed abatement, and no longer supports the alluvial sage scrub and associated vegetation (PCEs 2 and 4) and dynamic hydrological processes (PCE 3) typical of suitable SBKR habitat. Furthermore, all Project impacts will be temporary, consisting of the installation of an underground pipeline. Therefore, the Project will not result in any loss or adverse modification of USFWS designated Critical Habitat, or any other special status habitats.

3.3 Jurisdictional Delineation

The Project Area is within the Rialto Hydrologic Sub-Area (HSA 801.43). The Rialto HSA comprises a 4,577-acre drainage area, within the larger Santa Ana Watershed (HUC 18070203). This watershed is primarily within San Bernardino County and Riverside Counties, with smaller areas in Orange and Los Angeles Counties. The Santa Ana Watershed is bound on the north by the Mojave and Southern Mojave Watersheds, on the southeast by the Whitewater and San Jacinto Watersheds, and on the west by the San Gabriel, Seal Beach, Newport Bay, and Aliso-San Onofre Watersheds. The Santa Ana Watershed encompasses a portion of the San Gabriel and San Bernardino Mountains in the north, the Santa Ana Mountains in the south, and is approximately 1,694 square miles in area. The Santa Ana River is the major hydrogeomorphic feature within the Santa Ana Watershed. The nearest tributary to the Santa Ana River is Lytle Creek, which flows generally northwest to southeast, approximately 1.5 miles northeast of the Project site at its closest point.

Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. WOTUS are defined as:

"All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters" (Section 404 of the CWA; 33 CFR 328.3 (a)).

Therefore, CWA jurisdiction exists over the following:

1. All traditional navigable waters (TNWs);
2. All wetlands adjacent to TNWs;
3. Non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) i.e., tributaries that typically flow year-round or have continuous flow at least seasonally; and
4. Every water body determined to have a significant nexus with TNWs.

Additionally, areas meeting all three wetland parameters would be designated as USACE wetlands, if they are adjacent to jurisdictional WOTUS, or otherwise determined to have a significant nexus to a TNW.

Findings: There are no wetland or non-wetland WOTUS within the Project Area. Therefore, the Project will not result in any permanent or temporary impacts to WOTUS.

State Lake/Streambed

There are no lake, river, stream or aquatic resources, stream-dependent wildlife resources or riparian habitats within the Project Area. Therefore, the Project will not result in any permanent or temporary impacts to jurisdictional waters of the State.

4. Conclusions and Recommendations

4.1 Sensitive Biological Resources

No sensitive species were observed within the Project Area during the reconnaissance-level field survey and due to the environmental conditions on site, none are expected to occur. The Project Area is completely disturbed (see attached Site Photos), consisting of existing transportation corridor (I-15), paved roadways (Lytle Creek Road to the north and Citrus Avenue to the south), and disturbed, vacant land comprised of non-native grassland and unvegetated (disked) bare ground. The Project Area no longer supports any native habitats that would be suitable to support any of the state or federally listed species, or other special status species documented in the Project vicinity. Therefore, the proposed Project is not likely to adversely affect any state or federally listed species, or other special status species, and the potential for any of the sensitive species identified in Appendix A to occur within the Project Area is low. Furthermore, although the Project Area is within USFWS designated Critical Habitat for the federally listed SBKR, and the Project will not result in any loss or adverse modification of Critical Habitat.

Burrowing Owl

A BUOW habitat suitability assessment was conducted by Jacobs biologists in August 2021 that included 100 percent visual coverage of the Project Area, wherever potentially suitable BUOW habitat was present. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including castings, feathers or whitewash were observed and BUOW are considered absent from the Project Area at the time of survey. Although the Project is not likely to adversely affect this species, there is still a potential for the Project Area to become occupied by BUOW between the time the survey was conducted and the commencement of Project-related construction activities. Therefore, the following precautionary avoidance measures are recommended to ensure the Project does not result in any impacts to BUOW:

Pre-construction surveys for BUOW should be conducted no more than 3 days prior to commencement of Project-related ground disturbance to verify that BUOW remain absent from the Project Area.

It is recommended that orange construction fence be installed around the perimeter of the proposed Project footprint and that all Project-related activities, personnel, and equipment be restricted to the clearly identified Project site and existing access roads.

The BUOW is a state and federal SSC and is also protected under the MBTA and by state law under the California FGC (FGC #3513 & #3503.5). In general, impacts to BUOW can be avoided by conducting work outside of their nesting season (peak BUOW breeding season is identified as April 15th to August 15th). However, if all work cannot be conducted outside of nesting season, a project specific BUOW protection and/or passive relocation plan can be prepared to determine suitable buffers and/or artificial burrow construction locations. Regardless of survey results and conclusions given herein, BUOW are protected by applicable state and federal laws. As such, if a BUOW is found on-site at the time of construction, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report is intended to authorize any form of disturbance to BUOW. Such authorization must come from the appropriate regulatory agencies, including CDFW and/or USFWS.

Nesting Birds

There is habitat within the Project Area that is suitable to support nesting birds, including both vegetation and man-made structures. Most native bird species are protected from unlawful take by the MBTA (Appendix C). In December 2017, the Department of the Interior (DOI) issued a memorandum concluding that the MBTA's

prohibitions on take apply "[...] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Then in April 2018, the USFWS issued a guidance memorandum that further clarified that the take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA (USFWS 2018).

However, the State of California provides additional protection for native bird species and their nests in the FGC (Appendix C). Bird nesting protections in the FGC include the following (Sections 3503, 3503.5, 3511, 3513 and 3800):

- 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), and 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.
- Section 3800 prohibits the take of any any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally February 1st through August 31st. However, if all work cannot be conducted outside of nesting season, the following is recommended:

To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist should conduct pre-construction nesting bird surveys no more than 3 days prior to Project-related disturbance to suitable nesting areas to identify any active nests. If no active nests are found, no further action would be required. If an active nest is found, the biologist should set appropriate no-work buffers around the nest which would be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity, and duration of disturbance. The nest(s) and buffer zones should be field checked weekly by a qualified biological monitor. The approved no-work buffer zone should be clearly marked in the field, within which no disturbance activity should commence until the qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

4.2 Jurisdictional Waters

In addition to the BRA, Jacobs also assessed the Project Area for the presence of any state and/or federal jurisdictional waters. The result of the jurisdictional waters assessment is that there are no wetland or non-wetland WOTUS or waters of the State potentially subject to regulation by the USACE under Section 404 of the CWA, the RWQCB under Section 401 of the CWA and/or Porter Cologne Water Quality Control Act, or the CDFW under Section 1602 of the California FGC, respectively. Therefore, the Project will not impact any jurisdictional waters and no state or federal jurisdictional waters permitting will be required.

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Appendix A. CNDDDB Species and Habitats Documented Within the *Devore* and *Cucamonga Peak* USGS 7.5-Minute Quadrangles

Special Status Species Occurrence Potential Analysis

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	None/ None	G5; S2; CNPS: 2B.2	Chaparral, Sonoran desert scrub. Sandy soils. 5-475 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Anniella stebbinsi</i>	Southern California legless lizard	None/ None	G3; S3; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	San Gabriel manzanita	None/ None	G5T3; S3; CNPS: 1B.2	Chaparral. Rocky outcrops; can be dominant shrub where it occurs. 960-2015 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Arizona elegans occidentalis</i>	California glossy snake	None/ None	G5T2; S2; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Artemisiospiza belli belli</i>	Bell's sage sparrow	None/ None	G5T2T3; S3; CDFW: WL	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Athene cunicularia</i>	burrowing owl	None/ None	G4; S3; CDFW: SSC	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.	This species was absent from the Project Area at the time of survey. However, there is some potentially suitable habitat for this species in the surrounding area. Occurrence potential is low within the Project site and moderate adjacent the Project site.
<i>Batrachoseps gabrieli</i>	San Gabriel slender salamander	None/ None	G2G3; S2S3	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Bombus crotchii</i>	Crotch bumble bee	None/ Candidate Endangered	G3G4; S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	Very few food plants for this species exist in the Project Area. Occurrence potential is low.
California Walnut Woodland	California Walnut Woodland	None/ None	G2; S2.1		This habitat is absent from the Project Area.
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None/ None	G4; S4; CNPS: 4.2	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very common after fire. 60-2500 m.	The Project Area consists of paved surfaces, fill material, and disturbed soils that are regularly disked for weed abatement. Occurrence potential is low.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa-lily	None/ None	G3G4T2; S3; CNPS: 1B.2	Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops. 60-1575 m.	The Project Area consists of paved surfaces, fill material, and disturbed soils that are regularly disked for weed abatement. Occurrence potential is low.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None/ None	G5T3T4; S3S4; CDFW: SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	None/ None	G5T3T4; S3S4; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower	None/ None	G3T2; S2; CNPS: 1B.1	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.	The Project Area consists of paved surfaces, fill material, and disturbed soils that are regularly disked for weed abatement. Occurrence potential is low.
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	white-bracted spineflower	None/ None	G4T3; S3; CNPS: 1B.2	Mojavean desert scrub, pinyon and juniper woodland, coastal scrub (alluvial fans). Sandy or gravelly places. 365-1830 m.	The Project Area consists of paved surfaces, fill material, and disturbed soils that are regularly disked for weed abatement. Occurrence potential is low.
<i>Claytonia peirsonii</i> ssp. <i>peirsonii</i>	Peirson's spring beauty	None/ None	G2G3T2; S2; CNPS: 1B.2	Upper montane coniferous forest, subalpine coniferous forest. Granitic scree slopes, often with a sandy or fine soil component and granitic cobbles. 1510-2745 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
Coastal and Valley Freshwater Marsh	Coastal and Valley Freshwater Marsh	None/ None	G3; S2.1		This habitat is absent from the Project Area.
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	Endangered/ Candidate Endangered	G5T1; S1; CDFW: SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Dodecahema leptoceras</i>	slender-horned spineflower	Endangered/ Endangered	G1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include <i>Encelia</i> , <i>Dalea</i> , <i>Lepidospartum</i> , etc. Sandy soils. 200-765 m.	The environmental conditions and habitats this species is associated with are absent from the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar	Endangered/ Endangered	G4T1; S1; CNPS: 1B.1	Coastal scrub, chaparral. In sandy soils on river floodplains or terraced fluvial deposits. 180-705 m.	The environmental conditions and habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Johnston's buckwheat	None/ None	G5T2; S2; CNPS: 1B.3	Subalpine coniferous forest, upper montane coniferous forest. Slopes and ridges on granite or limestone. 1795-2865 m	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Eumops perotis californicus</i>	western mastiff bat	None/ None	G4G5T4; S3S4; CDFW: SSC	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.	No suitable roosting habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Horkelia cuneata</i> var. <i>puberula</i>	mesa horkelia	None/ None	G4T1; S1; CNPS: 1B.1	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 15-1645 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Lasiurus xanthinus</i>	western yellow bat	None/ None	G4G5; S3; CDFW: SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	No suitable roosting habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	None/ None	G5T3T4; S3S4; CDFW: SSC	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Lilium parryi</i>	lemon lily	None/ None	G3; S3; CNPS: 1B.2	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.	The mesic conditions this species is associated with are absent from the Project Area. Occurrence potential is low.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Linanthus concinnus</i>	San Gabriel linanthus	None/ None	G2; S2; CNPS: 1B.2	Lower montane coniferous forest, upper montane coniferous forest, chaparral. Dry rocky slopes, often in Jeffrey pine/canyon oak forest. 1310-2560 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Lycium parishii</i>	Parish's desert-thorn	None/ None	G4; S1; CNPS: 2B.3	Coastal scrub, Sonoran desert scrub. -3-570 m.	The habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Malacothamnus parishii</i>	Parish's bush-mallow	None/ None	GXQ; SX; CNPS: 1A	Chaparral, coastal sage scrub. In a wash. 305-455 m.	The environmental conditions and habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Monardella australis</i> ssp. <i>jokerstii</i>	Jokerst's monardella	None/ None	G4T1?; S1?; CNPS: 1B.1	Lower montane coniferous forest, chaparral. Steep scree or talus slopes between breccia. Secondary alluvial benches along drainages and washes. 210-1740 m.	The environmental conditions and habitats this species is associated with are absent from the Project Area. Occurrence potential is low.
<i>Neolarra alba</i>	white cuckoo bee	None/ None	GH; SH	Known only from localities in Southern California. Cleptoparasitic in the nests of perdita bees.	Unknown.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None/ None	G5T3T4; S3S4; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None/ None	G5; S3; CDFW: 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.	No suitable roosting habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Opuntia basilaris</i> var. <i>brachyclada</i>	short-joint beavertail	None/ None	G5T3; S3; CNPS: 1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Sandy soil or coarse, granitic loam. 425-2015 m.	This species is absent from the Project Area.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Oreonana vestita</i>	woolly mountain-parsley	None/ None	G3; S3; CNPS: 1B.3	Subalpine coniferous forest, upper montane coniferous forest, lower montane coniferous forest. High ridges; on scree, talus, or gravel. 800-3370 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Ovis canadensis nelsoni</i>	desert bighorn sheep	None/ None	G4T4; S3; CDFW: FP	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	None/ None	G5T2; S1S2; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Phrynosoma blainvillii</i>	coast horned lizard	None/ None	G3G4; S3S4; CDFW: SSC	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	Threatened/ None	G4G5T3Q; S2; CDFW: 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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.
<i>Rana muscosa</i>	southern mountain yellow-legged frog	Endangered/ Endangered	G1; S1; CDFW: WL	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.	The aquatic habitats this species requires do not exist in the Project Area. Therefore, this species is considered absent from the Project Area.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Rhinichthys osculus</i> ssp. 8	Santa Ana speckled dace	None/ None	G5T1; S1; CDFW: SSC	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.	The aquatic habitats this species requires do not exist in the Project Area. Therefore, this species is considered absent from the Project Area.
Riversidian Alluvial Fan Sage Scrub	Riversidian Alluvial Fan Sage Scrub	None/ None	G1; S1.1		This habitat is absent from the Project Area.
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	None/ None	G3; S3; CNPS: 1B.2	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m.	The mesic conditions this species is associated with are absent from the Project Area. Occurrence potential is low.
Southern Riparian Forest	Southern Riparian Forest	None/ None	G4; S4		This habitat is absent from the Project Area.
Southern Sycamore Alder Riparian Woodland	Southern Sycamore Alder Riparian Woodland	None/ None	G4; S4		This habitat is absent from the Project Area.
<i>Spea hammondi</i>	western spadefoot	None/ None	G2G3; S3; CDFW: SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	The aquatic habitats this species requires do not exist in the Project Area. Therefore, this species is considered absent from the Project Area.
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	None/ None	G3G4; S3S4; CNPS: 4.3	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. 1440-2500 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None/ None	G4; S3S4; CDFW: SSC	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.	The aquatic habitats this species requires do not exist in the Project Area. Therefore, this species is considered absent from the Project Area.

Scientific Name	Common Name	Listing Status	Other Status	Habitat	Occurrence Potential
<i>Viola pinetorum</i> ssp. <i>grisea</i>	grey-leaved violet	None/ None	G4G5T3; S3; CNPS: 1B.2	Subalpine coniferous forest, upper montane coniferous forest, meadows and seeps. Dry mountain peaks and slopes. 1580-3700 m.	The Project Area is outside the known elevation range for this species. Occurrence potential is low.
<i>Vireo bellii pusillus</i>	least Bell's vireo	Endangered/ Endangered	G5T2; S2	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.	No suitable habitat for this species exists in the Project Area. Occurrence potential is low.

Coding and Terms

E = Endangered T = Threatened C = Candidate FP = Fully Protected SSC = Species of Special Concern R = Rare

State Species of Special Concern: An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

State Fully Protected: The classification of Fully Protected was the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians and reptiles. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Global Rankings (Species or Natural Community Level):

G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 = Secure – Common; widespread and abundant.

Subspecies Level: Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa*. The T-rank refers only to the global condition of ssp. *phaea*.

State Ranking:

S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.

S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.

S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.

S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.

S5 = Secure – Common, widespread, and abundant in the State.

California Rare Plant Rankings (CNPS List):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere.

1B = Plants rare, threatened, or endangered in California and elsewhere.

2A = Plants presumed extirpated in California, but common elsewhere.

2B = Plants rare, threatened, or endangered in California, but more common elsewhere.

3 = Plants about which more information is needed; a review list.

4 = Plants of limited distribution; a watch list.

Threat Ranks:

.1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Appendix B. Site Photos



Photo 1. North side of Project alignment; looking southwest along Lytle Creek Road, where the proposed 18-inch CML&C transmission water main would connect to an existing 18-inch transmission main at Lytle Creek Road.



Photo 2. North side of Project alignment, looking south along the proposed 18-inch CML&C transmission water main alignment on the north side of I-15 from Lytle Creek Road.



Photo 3. North side of Project alignment, looking north along the proposed 18-inch CML&C transmission water main alignment on the north side of I-15 from I-15 (on the upper right side).



Photo 4. Approximate location of proposed jack and bore pit on north side of I-15.



Photo 5. South side of Project alignment; looking northwest toward I-15 from Citrus Avenue.



Photo 6. South side of Project alignment; looking southeast toward Citrus Avenue from I-15.

Appendix C. Regulatory Framework

Federal Regulations

Clean Water Act

The purpose of the Clean Water Act (CWA) of 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" (WOTUS) without a permit from the United States Army Corps of Engineers (USACE). The definition of waters of the United States includes rivers, streams, estuaries, 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). The U.S. Environmental Protection Agency (EPA) also has authority over wetlands and may override a USACE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; in California this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

Navigable Waters Protection Rule

The USACE has authority to permit the discharge of dredged or fill material in WOTUS under Section 404 of the CWA. According to the EPA and the Department of the Army's April 21, 2020 (effective June 22, 2020) "Navigable Waters Protection Rule: Definition of 'Waters of the United States,'" WOTUS are defined as: "The territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters." (85 FR 22250). The Navigable Waters Protection Rule specifically excludes from the definition of WOTUS:

- "Groundwater, including groundwater drained through subsurface drainage systems;
- ephemeral features that flow only in direct response to precipitation, including ephemeral streams, swales, gullies, rills, and pools;
- diffuse stormwater runoff and directional sheet flow over upland;
- ditches that are not traditional navigable waters, tributaries, or that are not constructed in adjacent wetlands, subject to certain limitations;
- prior converted cropland;
- artificially irrigated areas that would revert to upland if artificial irrigation ceases;
- artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;
- water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

- stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;
- groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and
- waste treatment systems.” (85 FR 22250).

Federal Endangered Species Act (ESA)

The federal Endangered Species Act (ESA) of 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 the ESA (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 the ESA, 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. The ESA 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 ESA 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 National Marine Fisheries Service (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.

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) of 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).

However, on December 22, 2017 the U.S. Department of the Interior (DOI) issued a memorandum concluding that MBTA's prohibitions on take apply "[...] only to affirmative actions that have as their purpose the taking or killing of migratory birds, their nests, or their eggs" (DOI 2017). Therefore, take of migratory birds or their active nests (i.e., with eggs or young) that is incidental to, and not the purpose of, an otherwise lawful activity does not constitute a violation of the MBTA. Then, on April 11, 2018, the USFWS issued a guidance memorandum that provided further clarification on their interpretation:

"We interpret the M-Opinion to mean that the MBTA's prohibitions on take apply when the purpose of an action is to take migratory birds, their eggs, or their nests. Conversely, the take of birds, eggs or nests occurring as the result of an activity, the purpose of which is not to take birds, eggs or nests, is not prohibited by the MBTA" (USFWS 2018).

Therefore, the MBTA is currently interpreted to prohibit the take of birds, nests or eggs when the *purpose* or *intent* of the action is to take birds, eggs or nests, not when the take of birds, eggs or nests is incidental to but not the intended purpose of an otherwise lawful action.

Executive Orders (EO)

Invasive Species – EO 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.

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*).

Birds of Conservation Concern

Birds of Conservation Concern (BCC) is a USFWS list of bird species identified to have the highest conservation priority, and with the potential for becoming candidates for listing as federally threatened or endangered. The chief legal authority for BCC is the Fish and Wildlife Conservation Act of 1980 (FWCA). Other authorities include the FESA, the Fish and Wildlife Act of 1956, and the Department of the Interior U.S Code (16 U.S.C. § 701). The 1988 amendment to the FWCA (Public Law 100-653, Title VIII) requires the Secretary of the Interior, through the USFWS, to “identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973” (USFWS, 2008a).

State Regulations

California Fish and Game Code Sections 1600 through 1606 of the 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 (CFGF) list 37 fully protected species (CFGF 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, 3513 and 3800) in the CFGF 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), and 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.

Section 3800 prohibits the take of any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).

Native Plant Protection Act

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

APPENDIX 3

IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES

WEST VALLEY WATER DISTRICT

18-INCH TRANSMISSION MAIN INSTALLATION PROJECT

**In and near the City of Fontana
San Bernardino County, California**

For Submittal to:

West Valley Water District
855 W. Baseline Road
Rialto, CA 92376

Prepared for:

Tom Dodson & Associates
2150 N. Arrowhead Avenue
San Bernardino, CA 92405

Prepared by:

CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton, CA 92324

Bai “Tom” Tang, Principal Investigator
Michael Hogan, Principal Investigator

November 3, 2021
CRM TECH Contract No. 3755

Title: Identification and Evaluation of Historic Properties: West Valley Water District 18-inch Transmission Main Installation Project, in and near the City of Fontana, San Bernardino County, California

Author(s): Bai “Tom” Tang, Principal Investigator/Historian
Deirdre Encarnación, Archaeologist/Report Writer
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Date: November 3, 2021

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Prepared for: Kaitlyn Dodson-Hamilton, Vice President
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USGS Quadrangle: Devore, Calif., 7.5’ quadrangle (Section 18; T1N R5W, San Bernardino Baseline and Meridian)

Project Size: Approximately 650 linear feet

Keywords: Northeastern San Bernardino Valley; Phase I historical/archaeological resources survey; Site 3755-1H (temporary designation); segment of Lytle Creek Road; no “historic property” or “historical resource” affected

EXECUTIVE SUMMARY

Between July and November 2021, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources study on the Area of Potential Effects (APE) for a proposed water main installation project in and near the City of Fontana, San Bernardino County, California. The project entails primarily the installation of approximately 650 linear feet of 18-inch transmission main pipeline from an existing water main along Lytle Creek Road, proceeding south and southeast under Interstate Highway 15 (I-15) and terminating at Citrus Avenue. The APE lies within the west half of Section 18, Township 1 North, Range 5 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey Devore, California, 7.5' quadrangle. The vertical extent of the APE is anticipated to range from 6.5 feet to 13.4 feet below surface.

The study is a part of the environmental review process for the undertaking, as required by the West Valley Water District (WVWD) pursuant to the California Environmental Quality Act (CEQA). As the project may involve federal funding and oversight, the study was designed and carried out to comply with both CEQA and Section 106 of the National Historic Preservation Act (NHPA). The purpose of the study is to provide the WVWD and other responsible agencies with the necessary information and analysis to determine whether the project would have an effect on any “historic properties,” as defined by 36 CFR 800.16(l), or “historical resources,” as defined by PRC §5020.1(j), that may exist in or near the APE. In order to accomplish this objective, CRM TECH initiated a historical/archaeological resources records search, pursued historical and geoarchaeological background research, consulted with Native American representatives, and conducted an intensive-level field survey.

During the survey, the small segment of Lytle Creek Road at the northern end of the APE was recorded into the California Historical Resources Inventory and assigned the temporary designation of Site 3755-1H, pending assignment of an official identification number once the California Historical Resources Information System resumes normal operation. The site represents the southwestern end of the portion of Lytle Creek Road that still follows its pre-1970s alignment, which dated at least to the 1930s. Further to the southwest, the road was completely realigned as a result of the construction of I-15 in the 1970s, and the original alignment, extending south along a portion of the APE, has been removed and has left no discernable physical remains today. Due to the lack of any distinguished aspects of significance and of sufficient historic integrity, Site 3755-1H does not appear eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. Therefore, it does not meet the definition of a “historic property” or a “historical resource.”

No other potential “historic properties”/“historical resources” were encountered within or adjacent to the APE, and the subsurface sediments in the vertical APE appear to be relatively low in sensitivity for potentially significant archaeological deposits of prehistoric origin. Based on these findings, and pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1, CRM TECH recommends to the WVWD and other responsible agencies a conclusion that *no “historic properties” or “historical resources” will be affected by the proposed undertaking.* No further cultural resources investigation is recommended for the undertaking unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during earth-moving operations associated with the undertaking, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
INTRODUCTION	1
SETTING.....	4
Current Natural Setting	4
Cultural Setting	5
Prehistoric Context.....	5
Ethnohistoric Context	5
Historical Context	6
RESEARCH METHODS	8
Records Search.....	8
Historical Background Research.....	8
Field Survey	8
Native American Participation.....	8
Geoarchaeological Analysis.....	9
RESULTS AND FINDINGS	9
Records Search.....	9
Historical Background Research.....	10
Field Survey	11
Native American Participation.....	11
Geoarchaeological Analysis.....	13
DISCUSSION	14
CONCLUSION AND RECOMMENDATIONS	15
REFERENCES	16
APPENDIX 1: Personnel Qualifications	19
APPENDIX 2: Summary of Cultural Resources Records Search Results	22
APPENDIX 3: Correspondence with Native American Representatives	28
APPENDIX 4: California Historical Resources Inventory Record Form	39

LIST OF FIGURES

Figure 1. Project vicinity.....	1
Figure 2. Project location.....	2
Figure 3. Aerial view of the Area of Potential Effects	3
Figure 4. Typical landscape in the APE.....	4
Figure 5. The project location in 1852-1875	10
Figure 6. The project location in 1893-1894	10
Figure 7. The project location in 1936.....	11
Figure 8. The project location in 1952-1954	11
Figure 9. Current condition of Lytle Creek Road at the northern end of the APE	12

INTRODUCTION

Between July and November 2021, at the request of Tom Dodson & Associates, CRM TECH performed a cultural resources study on the Area of Potential Effects (APE) for a proposed water main installation project in and near the City of Fontana, San Bernardino County, California (Fig. 1). The project entails primarily the installation of approximately 650 linear feet of 18-inch transmission main pipeline from an existing water main along Lytle Creek Road, proceeding south and southeast under Interstate Highway 15 (I-15) and terminating at Citrus Avenue. The APE lies within the west half of Section 18, Township 1 North, Range 5 West, San Bernardino Baseline and Meridian, as depicted in the United States Geological Survey (USGS) Devore, California, 7.5' quadrangle (Figs. 2, 3). The vertical extent of the APE is anticipated to range from 6.5 feet to 13.4 feet below surface.

The study is a part of the environmental review process for the undertaking, as required by the West Valley Water District (WVWD) pursuant to the California Environmental Quality Act (CEQA). As the project may involve federal funding and oversight, the study was designed and carried out to comply with both CEQA and Section 106 of the National Historic Preservation Act (NHPA). The purpose of the study is to provide the WVWD and other responsible agencies with the necessary information and analysis to determine whether the project would have an effect on any “historic properties,” as defined by 36 CFR 800.16(l), or “historical resources,” as defined by PRC §5020.1(j), that may exist in or near the APE.

In order to accomplish this objective, CRM TECH initiated a historical/archaeological resources records search, pursued historical and geoarchaeological background research, consulted with Native American representatives, and conducted an intensive-level field survey. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

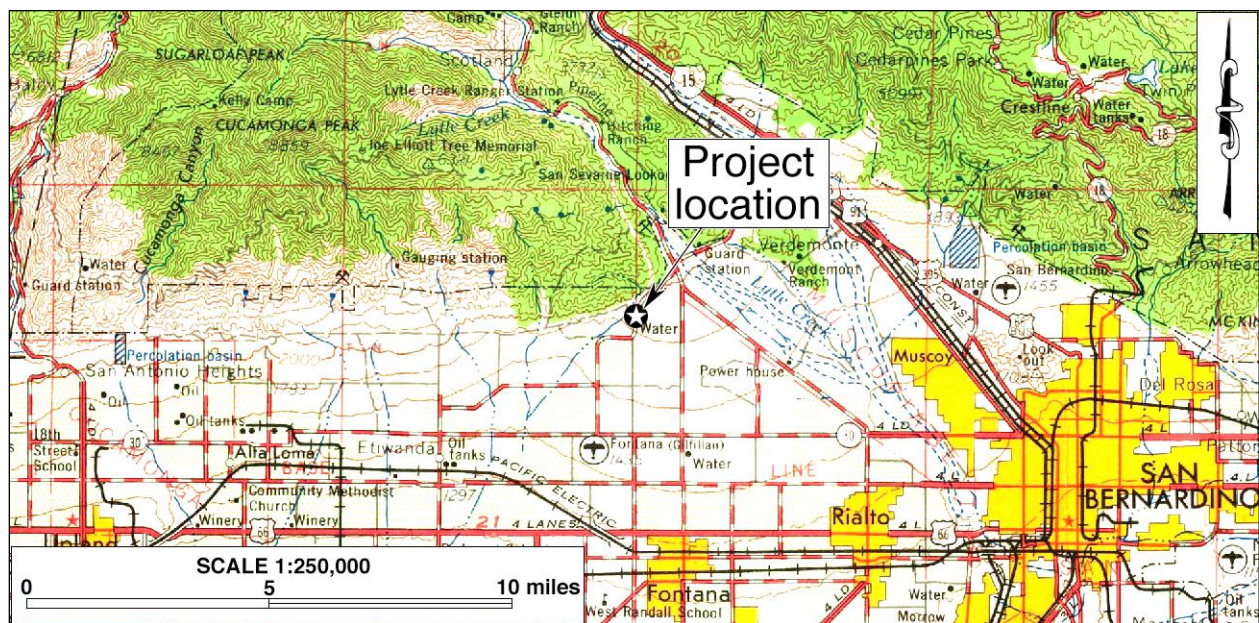


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 120'x60' quadrangle [USGS 1969])

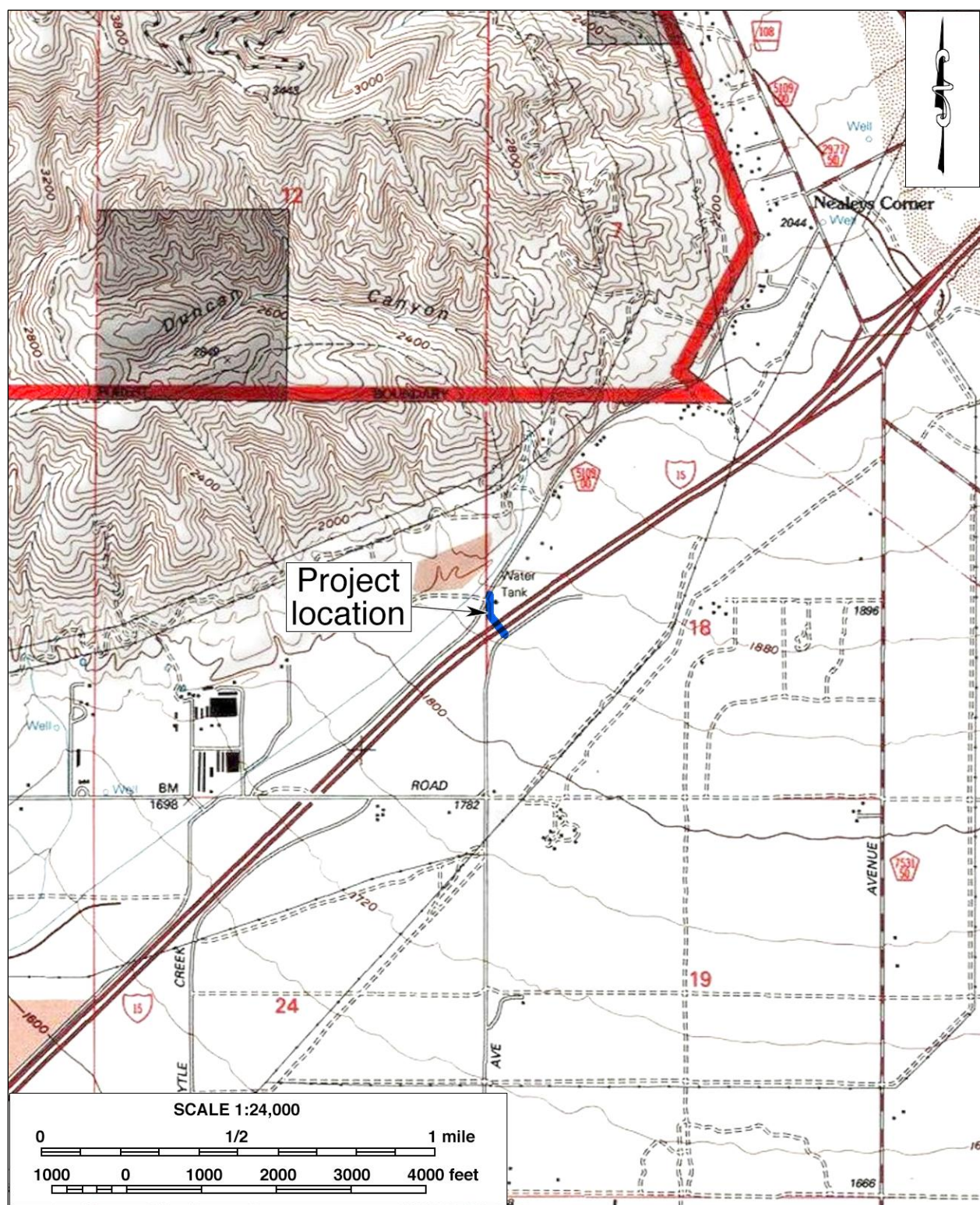




Figure 3. Aerial view of the Area of Potential Effects. (Based on Google Earth imagery)

SETTING

CURRENT NATURAL SETTING

The APE is located in the northeastern portion of the San Bernardino Valley and near the southern base of the San Gabriel Mountains, which constitute a part of the Transverse Range that separate the Los Angeles Basin and the San Bernardino Valley on the south from the Mojave Desert on the north. The natural environment of the San Bernardino Valley is dictated by the typical Mediterranean climate of the southern California lowland country, featuring hot, dry summers and mild, rainy winters. In the vicinity of the APE, summer highs reach well over 110°F, and winter lows sometimes dip below freezing. Average annual precipitation is less than five inches, occurring mostly between December and March.

More specifically, the APE lies on a series of alluvial fans that extend from the San Gabriel Mountains and have blended together near the project location. Approximately 370 feet of the alignment extends south across undeveloped land from Lytle Creek Road to the northwestern side of I-15, where the proposed pipeline will bore underneath the freeway towards the southeast (Fig. 3). On the southeastern side of the freeway, the APE extends roughly 50 feet across another swath of undeveloped land to end at Citrus Avenue.

The terrain along the project alignment is relatively level, at an elevation of approximately 1,855 feet above mean sea level. The native surface soil consists of silty-sandy loam containing coarse-grained sand and small granitic rocks. Vegetation in the APE is sparse and mostly dry, including scattered patches of California buckwheat and datura (Fig. 4). The ground surface in the vicinity has been extensively disturbed in the past, most notably by the construction of I-15, Lytle Creek Road, and a concrete culvert running under the freeway, and by recent weed abatement (Fig. 4).



Figure 4. Typical landscape in the APE. (Photograph taken on September 10, 2021; view to the north toward Lytle Creek Road)

CULTURAL SETTING

Prehistoric Context

The earliest evidence of human occupation in inland southern California was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the San Jacinto Valley, with radiocarbon dates clustering around 9,500 B.P. (Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the Cajon Pass area near the APE, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural prehistory of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of the inland region has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of regional prehistory can be divided into three primary periods:

- **Paleoindian Period (ca. 18,000-9,000 B.P.):** Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- **Archaic Period (ca. 9,000-1,500 B.P.):** Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- **Late Prehistoric Period (ca. 1,500 B.P.-contact):** Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

The APE is generally considered a part of the homeland of the Serrano people, which is centered in the nearby San Bernardino Mountains. Together with that of the Vanyume people, linguistically a subgroup, the traditional territory of the Serrano also includes part of the San Gabriel Mountains, much of the San Bernardino Valley, and the Mojave River valley in the southern portion of the Mojave Desert, reaching as far east as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains. The name of the group, Serrano, was derived from a Spanish term meaning “mountaineer” or

“highlander.” The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978), and the following ethnographic discussion of the Serrano people is based primarily on these sources.

Prior to European contact, native subsistence practices were defined by the surrounding landscape and were based primarily on the cultivating and gathering of wild foods and hunting, exploiting nearly all of the resources available. The Serrano settled mostly on elevated terraces, hills, and finger ridges near where flowing water emerged from the mountains. They were loosely organized into exogamous clans, which were led by hereditary heads, and the clans in turn were affiliated with one of two exogamous moieties, the Wildcat (*Tukutam*) or the Coyote (*Wahiiam*). The exact nature of the clans, their structure, function, and number are not known, except that each clan was the largest autonomous political and landholding unit, the core of which was the patrilineage.

The Serrano had a variety of technological skills that they used to acquire subsistence, shelter, and medicine or to create ornaments and decorations. Common tools included manos and metates, mortars and pestles, hammerstones, fire drills, awls, arrow straighteners, and stone knives and scrapers. These lithic tools were made from locally sourced material as well as those procured through trade or travel. The Serrano also used wood, horn, and bone spoons and stirrers; baskets for winnowing, leaching, grinding, transporting, parching, storing, and cooking; and pottery vessels for carrying water, storage, cooking, and serving food and drink. Much of this material cultural, elaborately decorated, does not survive in the archaeological record. As usual, the main items found archaeologically relate to subsistence activities.

Although contact with Europeans may have occurred as early as 1771 or 1772, direct European influence on Serrano lifeways began in the 1810s, when the mission system expanded to the edge of their territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the San Manuel Band of Mission Indians, the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

Historical Context

In 1772, three years after the beginning of Spanish colonization of Alta California, Pedro Fages, *comandante* of the new province, and a small force of soldiers under his command became the first Europeans to set foot in the San Bernardino Valley (Beck and Haase 1974:15). They were followed in the next few years by two other famed early Spanish explorers, Juan Bautista de Anza and Francisco Garcés, who traveled through the valley in the mid-1770s (*ibid.*). Despite these early visits, for the next 40 years the inland valley received little impact from the Spanish colonization activities in Alta California, which were concentrated predominantly in the coastal regions.

Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became nominally a part of the vast landholdings of that mission. The name “San Bernardino” was bestowed on the region at least by 1819, when a mission *asistencia* and an associated rancho were officially established under that name in present-day Loma Linda (Lerch and Haenszel 1981). After

gaining independence from Spain in 1821, the Mexican government began in 1834 the process of secularizing the mission system in Alta California, which in practice meant the confiscation of the Franciscan missions' landholdings, to be distributed later among prominent citizens of the province. During the 1830s and the 1840s, several large land grants were created in the vicinity of present-day Fontana, but most of the Fontana area was not involved in any of these, and thus remained public land when Alta California became a part of the United States in 1848.

Used primarily as cattle ranches, the ranchos around Fontana saw little development until the mid-19th century, when a group of Mormon settlers from Salt Lake City founded the town of San Bernardino in 1851. In 1861, John Brown, Sr., a prominent early settler in the San Bernardino Valley, built an improved toll road to the north of Fontana in Cajon Canyon, under franchise from the County of San Bernardino (Robinson 1989:51). This was followed by the construction of the California Southern Railroad (a subsidiary of the Atchison, Topeka and Santa Fe Railway) in 1885 (Serpico 1988:21-22), the National Old Trails Highway (U.S. Route 66) in the 1910s-1930s (Scott and Kelly 1988:31; Casebier 1989:149), and finally present-day I-15, all of which run through Cajon Canyon. As a result, the Cajon Canyon area's position as an important nexus of regional and national transportation thoroughfares became the main theme of the historical heritage of what is now the northern portion of Fontana.

After the completion of the Southern Pacific Railroad in the mid-1870s, and especially after the Atchison, Topeka and Santa Fe Railway introduced a competing line in the 1880s, a phenomenal land boom swept through much of southern California, ushering in a number of new settlements in the San Bernardino Valley. In 1887, the Semi-Tropic Land and Water Company purchased a large tract of land near the mouth of Lytle Creek, together with the necessary water rights to the creek, and laid out the townsites of Rialto, Bloomington, and Rosena (Schuiling 1984:90). While Rialto and Bloomington soon began to grow, little development took place at Rosena before the collapse of the 1880s land boom and the ensuing financial destruction of the Semi-Tropic Land and Water Company (*ibid.*:90, 102; Ingersoll 1904:620).

In 1905, Azariel Blanchard "A.B." Miller (1878-1941), widely considered the founder of present-day Fontana, arrived in Rosena from the Imperial Valley and, along with his associates, established Fontana Farms on a tract of land that eventually reached 20,000 acres (Anicic 2005:32-40). By 1910, an irrigation system was constructed and much of the land was planted in grain and citrus crops (Schuiling 1984:102). Miller's Fontana Farms became synonymous to the location, and Rosena was renamed Fontana in 1913.

Up to the early 1940s, Fontana remained primarily an agricultural settlement where citrus cultivation and poultry, hog, and rabbit raising played important roles in the local economy (Schuiling 1984:102). During World War II, however, the establishment of the Kaiser Steel Mill dramatically altered the agrarian setting of the Fontana area. The City of Fontana incorporated in 1952. With other industrial enterprises following Kaiser to the area during and after WWII, Fontana became known for the next four decades as a center of heavy industry (*ibid.*:106). Since the closure of the Kaiser Steel Mill in 1983, and in response to the growing demand for affordable housing, Fontana, like many other cities in the San Bernardino Valley, has increasingly taken on the characteristics of a "bedroom community."

RESEARCH METHODS

RECORDS SEARCH

The historical/archaeological resources records search for this study was conducted by the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System on September 3, 2021. Located on the campus of California State University, Fullerton, SCCIC is the State of California's official cultural resource records repository for the County of San Bernardino. During the records search, SCCIC staff examined the center's digital maps, records, and databases for previously identified cultural resources and existing cultural resources reports within a half-mile radius of the APE. Due to facility closure during the COVID-19 pandemic, records that had not been digitized, including recent surveys and site records, were unavailable to SCCIC staff. Therefore, SCCIC cautions that the records search results "may or may not be complete" (see App. 2).

HISTORICAL BACKGROUND RESEARCH

Historical background research for this study was conducted by CRM TECH principal investigator/historian Bai "Tom" Tang. Sources consulted during the research included published literature in local and regional history, U.S. General Land Office (GLO) land survey plat map dated 1874-1875, USGS topographic maps dated 1901-1988, and aerial photographs taken in 1938-2020. The historic maps are available at the websites of the USGS and the U.S. Bureau of Land Management, and the aerial photographs are available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software.

FIELD SURVEY

On September 10, 2021, CRM TECH archaeologist Salvadore Boites carried out the intensive-level field survey of the APE. The survey was conducted on foot along parallel transects placed on either side of the project centerline, with the exception of the portion of the APE crossing under I-15. In this way, the ground surface in the APE was systematically and carefully examined for any evidence of human activities dating to the prehistoric or historic period (i.e., 50 years ago or older). Ground visibility ranged was generally excellent (90%) except where the surface was completely obscured by pavement.

NATIVE AMERICAN PARTICIPATION

On July 13, 2021, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. Following the NAHC's recommendations and previously established consultation protocol, CRM TECH further contacted a total of 12 Native American representatives in the region in writing on August 4, 2021, for additional information on potential Native American cultural resources in the project vicinity. Follow-up telephone solicitations were carried out between August 20 and August 30, 2021. Correspondence between CRM TECH and the Native American representatives is summarized below and attached to the report in Appendix 3.

GEOARCHAEOLOGICAL ANALYSIS

As part of the research procedures, CRM TECH archaeologist Deirdre Encarnación pursued geoarchaeological analysis to assess the APE's potential for the deposition and preservation of subsurface cultural deposits from the prehistoric period, which cannot be detected through a standard surface archaeological survey. Sources consulted for this purpose included primarily topographic and geologic maps and reports pertaining to the surrounding area. Findings from these sources were used to develop a geomorphologic history of the APE and address geoarchaeological sensitivity of the vertical APE.

RESULTS AND FINDINGS

RECORDS SEARCH

According to SCCIC records, the APE was included in the geographic scope of five previous studies compiled between 1983 and 2017. These studies included a historical overview of the nearby settlement of Grapeland, two research-oriented projects, and two linear surveys along I-15 and Lytle Creek Road. Due to their nature and formats, these studies did not involve a systematic field survey that included the APE in its entirety. For statutory compliance purposes, therefore, the APE remained unsurveyed prior to this study. SCCIC records further indicate that no historical/archaeological resources were previously recorded within or adjacent to the APE (see App. 2).

Within the half-mile scope of the records search, SCCIC records identify seven other previous studies. As a result of these and other similar studies in the vicinity, 12 historical/archaeological sites have been recorded within the half-mile radius, as listed in Table 1. One of these sites was prehistoric (i.e., Native American) in nature, consisting of two rock circles located approximately 0.15 mile to the southwest of the project location. All of the other sites dated to the historic period, including water conveyance features, power transmission lines, homestead and other building remains, and a row of Eucalyptus trees planted as a wind break. None of these known sites were found in the immediate vicinity of the APE. Therefore, none of them require further consideration during this study.

Table 1. Previously Recorded Cultural Resources within the Scope of the Records Search		
Primary #	Trinomial	Description
36-004296	CA-SBR-4296	Rock circles
36-007296	CA-SBR-7296H	Wood-and-concrete water reservoir
36-007694	CA-SBR-7694H	LADWP Boulder Dam to Los Angeles Transmission Line
36-008857	CA-SBR-8857H	SCE Lugo-Mira Loma No.1 500kV Transmission Line
36-011678	CA-SBR-11678H	Historic-period homestead remains
36-012736	N/A	Historic-period talc mine
36-012739	CA-SBR-12366H	Stone foundation of Perdew School
36-012740	CA-SBR-12367H	Waters homestead site
36-015376	N/A	Grapeland Homestead and Water Works Historic District
36-027084	CA-SBR-17099H	Historic-period homestead remains
36-027085	CA-SBR-17100H	Water cistern and pipeline
36-031276	CA-SBR-31276H	Eucalyptus wind breaks

HISTORICAL BACKGROUND RESEARCH

Historical maps and aerial photographs consulted for this study reveal no evidence of any settlement or land development activities in the immediate vicinity of the APE between the 1850s and the 1970s but demonstrate that the general vicinity has served as part of an important travel corridor since at least the mid-19th century (Figs. 5-8; NETR Online 1938-1980). During the 1850s-1890s era, the main road to Cajon Pass, a distant forerunner of present-day I-15, traversed generally east-west across the northern end of the APE (Figs. 5, 6). By the 1930s, with most of the traffic diverted to the famed U.S. Route 66 (now Foothill Boulevard) a few miles to the south, the road at this location became a part of Lytle Creek Road (Fig. 7).

In the 1930s-1960s, Lytle Creek Road approached the APE from the northeast as it does today but turned south along the northern portion of the APE to meet Citrus Avenue further to the south (Figs. 7, 8; NETR Online 1938-1966). This was changed when I-15 was constructed across the southern portion of the APE in the 1970s (NETR Online 1980). With its original route truncated by the freeway, Lytle Creek Road was realigned from the northern end of the APE to extend southwest along the current route (*ibid.*). The portion of Lytle Creek Road to the west of the project location, therefore, is a modern feature.

Other than these various roads at different times in history, no notable human-made features are known to have been present in the APE (Figs. 5-8; NETR Online 1938-2018; Google Earth 1994-2020). The aerial photographs, in particular, show the rest of the land to be undeveloped and largely unused throughout the historic period and to the present time (NETR Online 1938-2018; Google Earth 1994-2020).

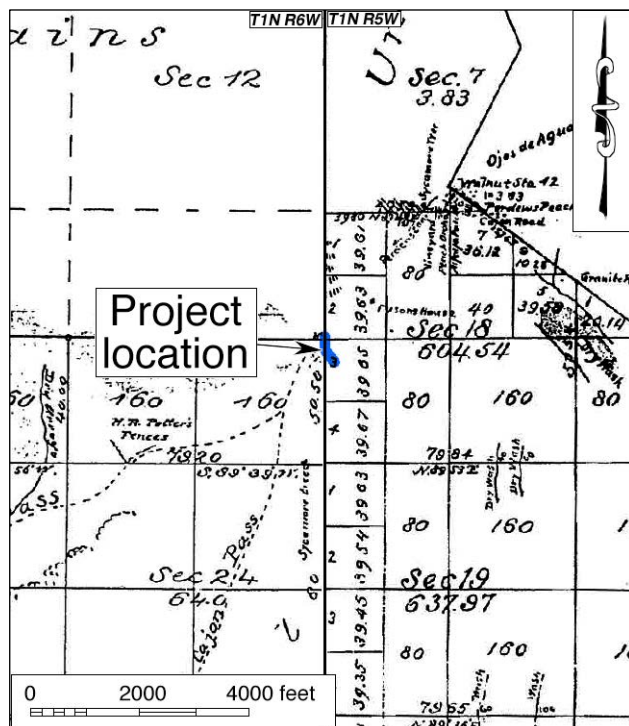


Figure 5. The project location in 1852-1875. (Source: GLO 1874; 1875)

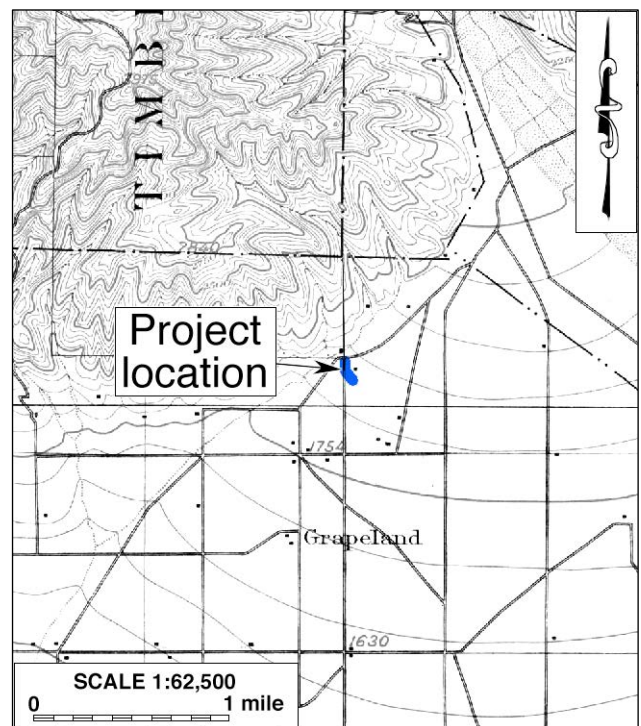


Figure 6. The project location in 1893-1894. (Source: USGS 1901)

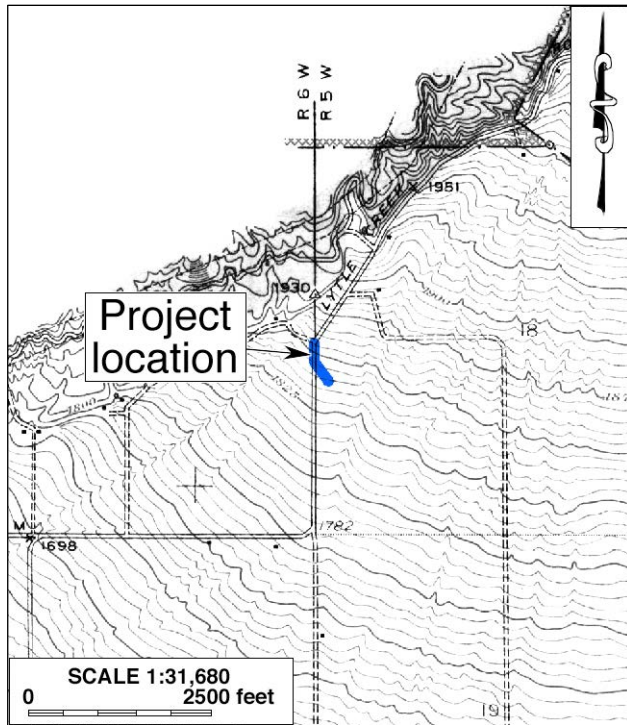


Figure 7. The project location in 1936. (Source: USGS 1941)

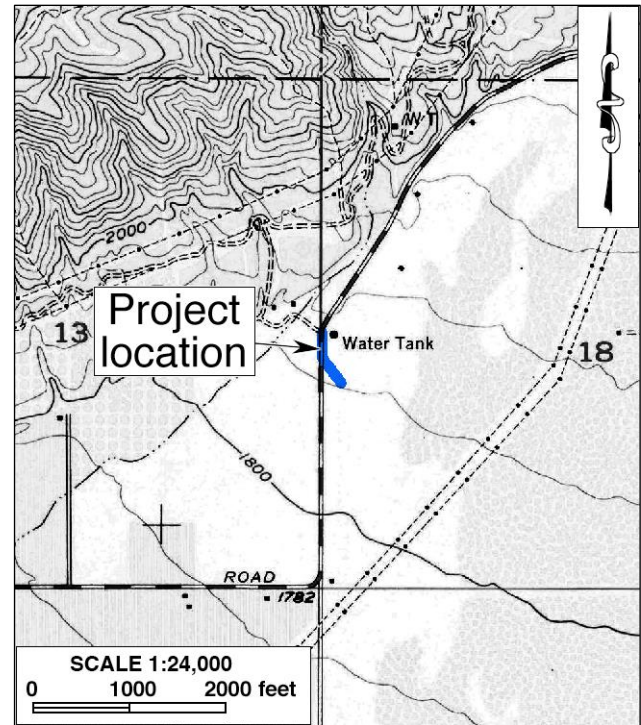


Figure 8. The project location in 1952-1954. (Source: USGS 1954)

FIELD SURVEY

During the field survey, the small segment of Lytle Creek Road across the northern end of the APE, measuring roughly 100 feet in total length, was recorded into the California Historical Resources Inventory and given the temporary designation of Site 3755-1H, pending assignment of an official identification number once the California Historical Resources Information System resumes normal operation (see App. 4). The site represents the southwestern end of the portion of Lytle Creek Road that still follows its pre-1970s alignment, which dated at least to the 1930s, as noted above. The segment of the pre-1970s alignment extending south along the northern portion of the APE has been completely removed and has left no discernable physical remains today.

In its current configuration, Lytle Creek Road at this location is a two-lane, asphalt-paved country highway with hard shoulders on both sides, measuring approximately 35 feet in total width (Fig. 9). Due to the relatively recent alterations and regular maintenance, it exhibits no distinctively historical characteristics. No other potential “historic properties”/“historical resources” were identified within or adjacent to the APE.

NATIVE AMERICAN PARTICIPATION

On July 30, 2021, the NAHC replied to CRM TECH’s request in writing that the Sacred Lands File identified unspecified Native American cultural resource(s) in the vicinity of the APE but did not reveal the location or nature of the resource(s). Instead, the NAHC referred further inquiries to the



Figure 9. Current condition of Lytle Creek Road at the northern end of the APE. (Photograph taken on September 10, 2021; view to the southwest)

Gabrieleno Band of Mission Indians-Kizh Nation. Meanwhile, the NAHC also recommended consulting with other local Native American groups and provided a list of potential contacts in the region for that purpose (see App. 3).

Upon receiving the NAHC's reply, CRM TECH initiated consultation with all 12 tribal organizations on the referral list (see App. 3). In some cases, the designated tribal spokespersons on cultural resources issues were contacted in lieu of individuals recommended by the NAHC, as recommended in the past by the appropriate tribal government staff. The Native American representatives contacted during this study are listed below:

- Patricia Garcia-Plotkin, Tribal Historic Preservation Officer, Agua Caliente Band of Cahuilla Indians;
- Andrew Salas, Chairperson, Gabrieleño Band of Mission Indians-Kizh Nation;
- Sandonne Goad, Chairperson, Gabrielino/Tongva Nation;
- Robert F. Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council;
- Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians;
- Charles Alvarez, Chairperson, Gabrielino-Tongva Tribe;
- Ann Brierty, Tribal Historic Preservation Officer, Morongo Band of Mission Indians;
- Jill McCormick, Tribal Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation;
- Jessica Mauck, Director of Cultural Resources Department, San Manuel Band of Mission Indians;

- Vanessa Minott, Tribal Administrator, Santa Rosa Band of Cahuilla Indians;
- Mark Cochrane, Co-Chairperson, Serrano Nation of Mission Indians;
- Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians.

As of this time, eight of the 12 tribes contacted have responded either in writing or via telephone (see App. 3). Among them, the Agua Caliente Band, the Soboba Band, and the Quechan Tribe deferred to other tribes located in closer proximity to the APE, while the Santa Rosa Band had no comments regarding this undertaking. The Serrano Nation and the Gabrielino Tongva Indians requested immediate notification if any prehistoric artifacts and/or human remains were uncovered during ground-disturbing activities. The Gabrieleño Band of Mission Indians-Kizh Nation requested contact information for the lead agency, which CRM TECH provided via e-mail on August 4.

The San Manuel Band, meanwhile, expressed “great concern” over this undertaking. According to the tribe’s reply, the APE is located less than a quarter-mile from a known rock cairn feature, presumably Site 36-004296 (see Table 1). Therefore, the San Manuel Band indicated that they would seek further consultation with the WVWD under provisions of AB 52.

GEOARCHAEOLOGICAL ANALYSIS

Geologic maps of the project vicinity identify the surface sediments in the APE as *Qyf4* and *Qyf5*, representing young alluvial-fan deposits of early Holocene age with slightly dissected surfaces and well-developed soils (Morton and Matti 2001; Morton and Miller 2006). These sediments are described as unconsolidated to moderately consolidated silt, sand, coarse-grained sand containing some boulders, and boulder alluvial-fan deposits (*ibid.*). In light of their relatively young age and alluvial origin, the subsurface sediments in the APE exhibit the potential to contain buried deposits of prehistoric cultural remains.

Geospatial analyses of known prehistoric sites in inland southern California suggest that longer-term residential settlements of the Native population were more likely to occur in sheltered areas near the base of hills and on elevated terraces, hills, and finger ridges near permanent or reliable sources of water, while the level, unprotected valley floor was used mainly for resource procurement, travel, and occasional camping during these activities. This is corroborated by the ethnographic literature that identifies foothills as the preferred settlement environment for Native Americans of the inland region (Bean and Smith 1978). Based on this settlement pattern, the geographic setting of the APE fits more closely the profile of a resource procurement area, while the finger ridges in the foothills just to the north and northwest of the project location would have provided a more favorable setting for long-term habitation.

The location of the APE beneath the finger ridges and between more recent drainage channels places it in a direct path of deposition for any cultural material washed down from areas of higher elevation. Conversely, this also suggests that any subsurface cultural materials encountered in or near the APE may not be *in situ* and thus lack provenience. Furthermore, the ground surface within the APE exhibits extensive disturbance from recent construction and maintenance activities associated with I-15, Lytle Creek Road, and Citrus Avenue. Due to this disturbed condition, along with the compromised depositional integrity, the subsurface sediments within the vertical APE are considered to be low in sensitivity for potentially significant archaeological deposits of prehistoric origin.

DISCUSSION

The purpose of this study is to identify any “historic properties” or “historical resources” that may exist within the APE. “Historic properties,” as defined by the Advisory Council on Historic Preservation, include “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior” (36 CFR 800.16(l)). The eligibility for inclusion in the National Register is determined by applying the following criteria, developed by the National Park Service as per provision of the National Historic Preservation Act:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (d) that have yielded, or may be likely to yield, information important in prehistory or history. (36 CFR 60.4)

For CEQA-compliance considerations, the State of California’s Public Resources Code (PRC) establishes the definitions and criteria for “historical resources,” which require similar protection to what NHPA Section 106 mandates for “historic properties.” “Historical resources,” according to PRC §5020.1(j), “includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.”

More specifically, CEQA guidelines state that the term “historical resources” applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria of historical significance, CEQA guidelines mandate that “generally a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources” (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC §5024.1(c))

In summary of the research results presented above, Site 3755-1H, representing the small segment of Lytle Creek Road at the northern end of the project alignment, is the only potential “historic property”/“historical resource” identified within or adjacent to the APE. As noted previously, the site marks the southwestern end of the portion of Lytle Creek Road that follows its 1930s-1970s alignment, and the rest of the road along the historical alignment in the APE is no longer extant.

Despite the long history of Lytle Creek Road, and despite it being the successor to a 19th century wagon road to Cajon Pass, the present study has discovered no evidence that this segment of the road is closely associated with any important person or significant event in national, state, or local history. As a nondescript infrastructure feature of standard design and construction, Lytle Creek Road demonstrates no notable qualities in architecture, engineering, or aesthetics, nor is it known to embody the work of a prominent designer or builder. For the same reason, the road does not hold the promise for any important archaeological information.

Based on these considerations, Site 3755-1H does not appear to meet any of the criteria for listing in the National Register of Historic Places or the California Register of Historical Resources. Furthermore, as a result of major alterations in the 1970s, including partial realignment, and regular maintenance throughout the modern era, the road segment no longer retains sufficient integrity to relate to its period of origin, or the historic period in general. Therefore, Site 3755-1H does not meet the definition of a “historic property” or a “historical resource,” as outlined above.

Meanwhile, the subsurface sediments in the vertical APE appear to be relatively low in sensitivity for potentially significant archaeological deposits of prehistoric origin. Although the NAHC reported the presence of known Native American cultural resource(s) in the general vicinity, local tribes consulted during the study identified no such resources within or adjacent to the boundaries of the APE. In light of these findings, the present study concludes that no “historic properties” or “historical resources” exist within or adjacent to the APE.

CONCLUSION AND RECOMMENDATIONS

Section 106 of the National Historic Preservation Act mandates that federal agencies take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate any adverse effects on such properties (36 CFR 800.1(a)). Similarly, CEQA establishes that a project that may cause a substantial adverse change in the significance of a “historical resource” is a project that may have a significant effect on the environment (PRC §21084.1). “Substantial adverse change,” according to PRC §5020.1(q), “means demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired.”

As stated above, the segment of Lytle Creek Road recorded across the northern end of the APE does not appear to meet the definition of a “historic property” or a “historical resource,” and no other potential “historic properties” or “historical resources” were identified within or adjacent to the APE. The subsurface sediments in the vertical extent of the APE appear to be low in sensitivity for potentially significant archaeological remains in buried deposits. Therefore, pursuant to 36 CFR 800.4(d)(1) and Calif. PRC §21084.1, CRM TECH presents the following recommendations to the WVWD and other responsible agencies:

- No “historic properties” or “historical resources” are present within or adjacent to the APE, and thus no “historic properties” or “historical resources” will be affected by the proposed project.
- No further cultural resources investigation will be necessary for the project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are discovered inadvertently during earth-moving operations associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the find.

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APPENDIX 1 PERSONNEL QUALIFICATIONS

PRINCIPAL INVESTIGATOR/HISTORIAN Bai “Tom” Tang, M.A.

Education

- | | |
|-----------|--|
| 1988-1993 | Graduate Program in Public History/Historic Preservation, University of California, Riverside. |
| 1987 | M.A., American History, Yale University, New Haven, Connecticut. |
| 1982 | B.A., History, Northwestern University, Xi'an, China. |
| | |
| 2000 | “Introduction to Section 106 Review,” presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno. |
| 1994 | “Assessing the Significance of Historic Archaeological Sites,” presented by the Historic Preservation Program, University of Nevada, Reno. |

Professional Experience

- | | |
|-----------|---|
| 2002- | Principal Investigator, CRM TECH, Riverside/Colton, California. |
| 1993-2002 | Project Historian/Architectural Historian, CRM TECH, Riverside, California. |
| 1993-1997 | Project Historian, Greenwood and Associates, Pacific Palisades, California. |
| 1991-1993 | Project Historian, Archaeological Research Unit, University of California, Riverside. |
| 1990 | Intern Researcher, California State Office of Historic Preservation, Sacramento. |
| 1990-1992 | Teaching Assistant, History of Modern World, University of California, Riverside. |
| 1988-1993 | Research Assistant, American Social History, University of California, Riverside. |
| 1985-1988 | Research Assistant, Modern Chinese History, Yale University. |
| 1985-1986 | Teaching Assistant, Modern Chinese History, Yale University. |
| 1982-1985 | Lecturer, History, Xi'an Foreign Languages Institute, Xi'an, China. |

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California's Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., Registered Professional Archaeologist #28576644

Education

- 1991 Ph.D., Anthropology, University of California, Riverside.
- 1981 B.S., Anthropology, University of California, Riverside; with honors.
- 1980-1981 Education Abroad Program, Lima, Peru.

- 2002 “Section 106—National Historic Preservation Act: Federal Law at the Local Level,”
UCLA Extension Course #888.
- 2002 “Recognizing Historic Artifacts,” workshop presented by Richard Norwood,
Historical Archaeologist.
- 2002 “Wending Your Way through the Regulatory Maze,” symposium presented by the
Association of Environmental Professionals.
- 1992 “Southern California Ceramics Workshop,” presented by Jerry Schaefer.
- 1992 “Historic Artifact Workshop,” presented by Anne Duffield-Stoll.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
- 1999-2002 Project Archaeologist/Field Director, CRM TECH, Riverside, California.
- 1996-1998 Project Director and Ethnographer, Statistical Research, Inc., Redlands, California.
- 1992-1998 Assistant Research Anthropologist, University of California, Riverside.
- 1992-1995 Project Director, Archaeological Research Unit, U.C. Riverside.
- 1993-1994 Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C.
Riverside, Chapman University, and San Bernardino Valley College.
- 1991-1992 Crew Chief, Archaeological Research Unit, U.C. Riverside.
- 1984-1998 Project Director, Field Director, Crew Chief, and Archaeological Technician for
various southern California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural Diversity.

Cultural Resources Management Reports

Principal investigator for, author or co-author of, and contributor to numerous cultural resources management study reports since 1986.

Memberships

Society for American Archaeology; Society for California Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Deirdre Encarnación, M.A.

Education

2003 M.A., Anthropology, San Diego State University, California.
2000 B.A., Anthropology, minor in Biology, with honors; San Diego State University, California.

2021 Certificate of Specialization, Kumeyaay Studies, Cuyamaca College/KCC.
2001 Archaeological Field School, San Diego State University.
2000 Archaeological Field School, San Diego State University.

Professional Experience

2004- Project Archaeologist/Report Writer, CRM TECH, Riverside/Colton, California.
2001-2003 Part-time Lecturer, San Diego State University, California.
2001 Research Assistant for Dr. Lynn Gamble, San Diego State University.
2001 Archaeological Collection Catalog, SDSU Foundation.

PROJECT ARCHAEOLOGIST
Salvadore Z. Boites, M.A.

Education

2013 M.A., Applied Anthropology, California State University, Long Beach.
2003 B.A., Anthropology/Sociology, University of California, Riverside.
1996-1998 Archaeological Field School, Fullerton Community College, Fullerton, California.

Professional Experience

2014- Project Archaeologist, CRM TECH, Colton, California.
2010-2011 Adjunct Instructor, Anthropology, Everest College, Anaheim, California.
2003-2008 Project Archaeologist, CRM TECH, Riverside/Colton, California.
2001-2002 Teaching Assistant, Moreno Elementary School, Moreno Valley, California.
1999-2003 Research Assistant, Anthropology Department, University of California, Riverside.

Research Interests

Cultural Resource Management, Applied Archaeology/Anthropology, Indigenous Cultural Identity, Poly-culturalism.

APPENDIX 2

SUMMARY OF CULTURAL RESOURCES RECORDS SEARCH RESULTS

South Central Coastal Information Center

California State University, Fullerton
Department of Anthropology MH-426
800 North State College Boulevard
Fullerton, CA 92834-6846
657.278.5395 / FAX 657.278.5542

sccic@fullerton.edu

California Historical Resources Information System
Orange, Los Angeles, and Ventura Counties

9/3/2021

Records Search File No.: 22681.8856

Nina Gallardo
CRM TECH
1016 E. Cooley Drive, Suite A/B
Colton CA 92324

Re: Records Search Results for the 3755 L Creek Road Bore Project

The South Central Coastal Information Center received your records search request for the project area referenced above, located on the Devore, CA USGS 7.5' quadrangle. Due to the COVID-19 emergency, we have implemented new records search protocols, which limits the deliverables available to you at this time. **WE ARE ONLY PROVIDING DATA THAT IS ALREADY DIGITAL AT THIS TIME.** Please see the attached document on COVID-19 Emergency Protocols for what data is available and for future instructions on how to submit a records search request during the course of this crisis. If your selections on your data request form are in conflict with this document, we reserve the right to default to emergency protocols and provide you with what we stated on this document. You may receive more than you asked for or less than you wanted. The following reflects the results of the records search for the project area and a ½-mile radius:

As indicated on the data request form, the locations of resources and reports are provided in the following format: ☒ custom GIS maps ☐ shape files ☐ hand-drawn maps

Resources within project area: 0	None
Resources within ½-mile radius: 12	SEE ATTACHED MAP or LIST
Reports within project area: 5	SB-01407, SB-02621, SB-05178, SB-08099, SB-08269
Reports within ½-mile radius: 7	SEE ATTACHED MAP or LIST

Resource Database Printout (list):

☐ enclosed ☒ not requested ☐ nothing listed

Resource Database Printout (details):

☐ enclosed ☒ not requested ☐ nothing listed

Resource Digital Database (spreadsheet):

☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (list):

☐ enclosed ☒ not requested ☐ nothing listed

Report Database Printout (details):

☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database (spreadsheet):

☒ enclosed ☐ not requested ☐ nothing listed

Resource Record Copies:

☒ enclosed ☐ not requested ☐ nothing listed

Report Copies:

☒ enclosed ☐ not requested ☐ nothing listed

OHP Built Environment Resources Directory (BERD) 2019: ☒ available online; please go to https://ohp.parks.ca.gov/?page_id=30338

Archaeo Determinations of Eligibility 2012: ☒ enclosed ☐ not requested ☐ nothing listed

Historical Maps: ☒ not available at SCCIC; please go to <https://ngmdb.usgs.gov/topoview/viewer/#4/39.98/-100.02>

Ethnographic Information: ☒ not available at SCCIC

Historical Literature: ☒ not available at SCCIC

GLO and/or Rancho Plat Maps: ☒ not available at SCCIC

Caltrans Bridge Survey: ☒ not available at SCCIC; please go to <http://www.dot.ca.gov/hq/structur/strmaint/historic.htm>

Shipwreck Inventory: ☒ not available at SCCIC; please go to http://shipwrecks.slc.ca.gov/ShipwrecksDatabase/Shipwrecks_Database.asp

Soil Survey Maps: (see below) ☒ not available at SCCIC; please go to <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the [California](#) [Historical](#) [Resources](#) [Information](#) [System](#),

Michelle Galaz
Assistant Coordinator

Enclosures:

(X) Covid-19 Emergency Protocols for San Bernardino County Records Searches – 2 pages

(X) Custom Maps – 1 page

(X) Resource Digital Database (spreadsheet) – 12 lines

(X) Report Digital Database (spreadsheet) – 12 lines

(X) Resource Record Copies – (all) – 339 pages

(X) Report Copies – (within project area) – 453 pages

(X) Archaeological Determinations of Eligibility (2012) – 1 page

(X) National Register Status Codes – 1 page

(X) Invoice #22681.8856

Emergency Protocols for San Bernardino County Records Searches

These instructions are for qualified consultants with a valid Access and Use Agreement.

WE ARE ONLY PROVIDING DATA THAT IS ALREADY DIGITAL AT THIS TIME. WE ARE NOT PROVIDING SHAPEFILE DATA FOR SAN BERNARDINO COUNTY; YOU WILL ONLY RECEIVE A CUSTOM DIGITAL MAP.

We can only provide you information that is already in digital format; therefore, your record search may or may not be complete. Some records are only available in paper formats and so may not be available at this time. This also means that there may be data missing from the database bibliographies; locations of resource and report boundaries may be missing or mis-mapped on our digital maps; and that no pdf of a resource or report is available or may be incomplete.

As for the GIS mapped data, bibliographic databases, and pdfs of records and reports; not all the data in our digital archive for San Bernardino County was processed by SCCIC, therefore, we cannot vouch for its accuracy. Accuracy checking and back-filling of missing information is an on-going process under normal working conditions and cannot be conducted under the emergency protocols.

This is an extraordinary and unprecedented situation. Your options will be limited so that we can help as many of you as possible in the shortest amount of time. You may not get everything you want and/or you may get more than you want. We appreciate your patience and resilience.

Please send in your request via email using the data request form along with the associated shape files and pdf map of the project area. If you have multiple SBCO jobs for processing, you may not get them all back at the same time. Use this data request form:

<http://web.sonoma.edu/nwic/docs/CHRISDataRequestForm.pdf>

Please make your selections on the data request form based on the following instructions.

1. Keep your search radius as tight as possible, but we understand if you have a requirement. The wider the search radius, the higher the cost. You are welcome to request a Project area only search, but please make it clear on the request form that that is what you are seeking.

2. You will get custom maps of resource locations for the project area and the radius that you choose. We will only be providing maps of report locations for the project area and up to a ¼-mile radius. If you need bibliographic information for more than ¼-mile radius – you will be charged for all report map features within your selected search radius. You can opt out of having us create custom maps but you still pay for the map features in the project area or the selected search radius if you want the associated bibliographic information or pdfs of resources or reports.
3. You can request copies of site records and reports if they are digitally available.
4. You will also get the bibliographies (List, Details, Spreadsheet) that you choose for resources and reports. Because the bibliographic database is not yet complete, you will only get what is available at the time of your records search.
5. If you request more than what we are offering here, we may provide it if it is available or we reserve the right to default to these instructions. If you want copies of resources and reports that are not available digitally at the time of the search, you can send us a separate request for processing when we are allowed to return to the office. Fees will apply.
6. **You will need to search the OHP BERD yourself for your project area and your search radius.** This replaces the old OHP HPD. It is available online at the OHP website.
7. You can go online to find historic maps, so we are not providing them at this time.
8. Your packet will be sent to you electronically via Dropbox. We use 7-zip to password protect the files so you will need both on your computers. We email you the password. If you can't use Dropbox for some reason, then you will need to provide us with your Fed ex account number and we will ship you a disc with the results. As a last resort, we will ship on a disc via the USPS. You may be billed for our shipping and handling costs.
9. We will be billing you at the staff rate of \$150 per hour and you will be charged for all resources and reports according to the "custom map charges", even if you don't get a custom or hand-drawn map. You will also be billed 0.15 per pdf page, as usual. Quad fees will apply if your research includes more than 2 quads. The fee structure for custom maps was designed to mimic the cost of doing the search by hand so the fees are comparable.
10. **A copy of the digital fee structure is available on the Office of Historic Preservation website under the CHRIS tab. If the digital fee structure is new to you or you don't understand it; please ask questions before we process your request, not after. Thank you.**

APPENDIX 3

**CORRESPONDENCE WITH
NATIVE AMERICAN REPRESENTATIVES***

* Twelve local Native American representatives were contacted during this study; a sample letter is included in the appendix.

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION

915 Capitol Mall, RM 364

Sacramento, CA 95814

(916) 653-4082

(916) 657-5390 (fax)

nahc@pacbell.net

Project: West Valley Water District 18-inch Transmission Main Installation Project (CRM TECH No. 3755)

County: San Bernardino

USGS Quadrangle Name: Devore, Calif.

Township 1 North **Range** 5 West **SB BM; Section(s):** 18

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA

Zip: 92324

Phone: (909) 824-6400

Fax: (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to install approximately 650 linear feet of 18-inch transmission main that will connect to an existing 18-inch transmission main at Lytle Creek Road, bore under the I-15 freeway and terminate at Citrus Avenue on the southeast side of the freeway. The project location is in and near the City of Fontana, San Bernardino County, California.

July 13, 2021



NATIVE AMERICAN HERITAGE COMMISSION

July 30, 2021

Nina Gallardo
CRM TECHVia Email to: ngallardo@crmtech.usCHAIRPERSON
Laura Miranda
LuiseñoVICE CHAIRPERSON
Reginald Pagaling
ChumashSECRETARY
Merri Lopez-Keifer
LuiseñoPARLIAMENTARIAN
Russell Attebery
KarukCOMMISSIONER
William Mungary
Paiute/White Mountain
ApacheCOMMISSIONER
Julie Tumamait-Stenslie
ChumashCOMMISSIONER
[Vacant]COMMISSIONER
[Vacant]COMMISSIONER
[Vacant]EXECUTIVE SECRETARY
Christina Snider
PomoNAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov**Re: Proposed West Valley Water District 18-inch Transmission Main Installation Project, San Bernardino County**

Dear Ms. Gallardo:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
San Bernardino County
7/30/2021**

Agua Caliente Band of Cahuilla Indians

Jeff Grubbe, Chairperson
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Gabrielino Tongva Indians of California Tribal Council

Christina Conley, Tribal
Consultant and Administrator
P.O. Box 941078 Gabrielino
Simi Valley, CA, 93094
Phone: (626) 407 - 8761
christina.marsden@alumni.usc.edu

Agua Caliente Band of Cahuilla Indians

Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive Cahuilla
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Gabrielino-Tongva Tribe

Charles Alvarez,
23454 Vanowen Street Gabrielino
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com

Gabrieleno Band of Mission Indians - Kizh Nation

Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org

Morongo Band of Mission Indians

Robert Martin, Chairperson
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5110
Fax: (951) 755-5177
abrierty@morongo-nsn.gov

Gabrieleno/Tongva San Gabriel Band of Mission Indians

Anthony Morales, Chairperson
P.O. Box 693 Gabrielino
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com

Morongo Band of Mission Indians

Ann Brierty, THPO
12700 Pumarra Road Cahuilla
Banning, CA, 92220 Serrano
Phone: (951) 755 - 5259
Fax: (951) 572-6004
abrierty@morongo-nsn.gov

Gabrielino /Tongva Nation

Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., Gabrielino
#231
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com

Quechan Tribe of the Fort Yuma Reservation

Jill McCormick, Historic
Preservation Officer
P.O. Box 1899 Quechan
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Gabrielino Tongva Indians of California Tribal Council

Robert Dorame, Chairperson
P.O. Box 490 Gabrielino
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Proposed West Valley Water District 18-inch Transmission Main Installation Project, San Bernardino County.

**Native American Heritage Commission
Native American Contact List
San Bernardino County
7/30/2021**

Manfred Scott, Acting Chairman
Kw'wits'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Jessica Mauck, Director of
Cultural Resources
26569 Community Center Drive Serrano
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

Lovina Redner, Tribal Chair
P.O. Box 391820
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
Isaul@santarosa-nsn.gov

Wayne Walker, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Mark Cochrane, Co-Chairperson
P. O. Box 343 Serrano
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Joseph Ontiveros, Cultural
Resource Department
P.O. BOX 487
San Jacinto, CA, 92581
Phone: (951) 663 - 5279
Fax: (951) 654-4198
jontiveros@soboba-nsn.gov

Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Proposed West Valley Water District 18-inch Transmission Main Installation Project, San Bernardino County.

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Wednesday, August 4, 2021 8:50 AM
To: admin@gabrielenoindians.org;
Subject: Information Regarding Positive NAHC Response for Proposed West Valley Water District 18-inch Transmission Main Installation Project in and near the City of Fontana (CRM TECH No. 3755)

Hello Mr. Salas,

I'm emailing to inform you that CRM TECH will be conducting a cultural resources study for the proposed West Valley Water District 18-inch Transmission Main Installation Project in and near the City of Fontana, San Bernardino County. We have received a positive SLF response from the Native American Heritage Commission. In the response, the NAHC recommended specifically contacting the Gabrieleño Band of Mission Indians–Kizh Nation for further information (see attached).

I'm contacting you to see if the Gabrieleno Band of Mission Indians- Kizh Nation has any information regarding cultural sites in the project vicinity (see enclosed map). We would appreciate any information that the tribe can provide to us and please feel free to call or email us back.

Thanks for your time and input on this project.

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
1016 E. Cooley Drive, Ste. A/B
Colton, CA 92324
(909) 824-6400

August 4, 2021

RE: Proposed West Valley Water District 18-inch Transmission Main Installation Project
Approximately 650 Linear Feet of Pipeline Alignment in and near the City of Fontana
San Bernardino County, California
CRM TECH Contract #3755

Dear Tribal Representative:

I am writing to bring your attention to an ongoing CEQA Plus study for the proposed project referenced above, which entails the installation of approximately 650 linear feet of 18-inch transmission main pipeline in and near the City of Fontana, San Bernardino County, California. The Area of Potential Effects (APE) for the project consists of the proposed pipeline alignment from Lytle Creek Road, across (underneath) Interstate Highway 15, and terminating at Citrus Avenue. The accompanying map, based on the USGS Devore, Calif., 7.5' quadrangle, depicts the APE in Section 18, T1N R5W, SBBM.

In a letter dated July 30, 2021, the Native American Heritage Commission reports that the results of the Sacred Lands File search were positive for tribal cultural resources in the vicinity and recommends contacting local tribes, specifically the Gabrieleño Band of Mission Indians–Kizh Nation, for further information (see attached). As part of the cultural resources study for this project, I am writing to request your input on any specific information that you can provide regarding the Sacred Lands File search results.

Please respond at your earliest convenience if you have any specific knowledge of sacred/religious sites or other sites of Native American traditional cultural value in or near the APE, or any other information to consider during the cultural resources investigations. Any information or concerns may be forwarded to CRM TECH by telephone, e-mail, facsimile, or standard mail. Requests for documentation or information we cannot provide will be forwarded to our client and/or the lead agency, namely the West Valley Water District.

We would also like to clarify that, as the cultural resources consultant for the project, CRM TECH is not involved in the AB 52-compliance process or in government-to-government consultations. The purpose of this letter is to seek any information that you may have to help us determine if there are cultural resources in or near the project area that we should be aware of and to help us assess the sensitivity of the APE. Thank you for your time and effort in addressing this important matter.

Respectfully,

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
Email: ngallardo@crmtech.us

From: Vanessa Minott
To: ngallardo@crmtech.us
Date: Wednesday, August 4, 2021 9:39:09 AM
Subject: RE: NA Scoping Letter for the Proposed WVWD 18-inch Transmission Main Installation Project in and near the City of Fontana; CRM TECH No. 3755

Acha'i Tamit,

Santa Rosa does not have any comments at this time. Thank you.

Respectfully,
Vanessa Minott
Tribal Administrator
Santa Rosa Band of Cahuilla Indians
W - 951-659-2700 ext. 102
C – 760-668-0460
F – 951-659-2228
65199 State Hwy. 74
Mountain Center, CA 92561
P.O. Box 391820
Anza, CA 92539

Please note that my email has changed to vminott@santarosa-nsn.gov

From: Gonzalez Romero, Arysa (TRBL)
To: ngallardo@crmtech.us
Date: Wednesday, August 4, 2021 9:20:52 AM
Subject: RE: NA Scoping Letter for the Proposed WVWD 18-inch Transmission Main Installation Project in and near the City of Fontana; CRM TECH No. 3755

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

Arysa Gonzalez Romero, M.S., RPA.
Historic Preservation Technician
Agua Caliente Band of Cahuilla Indians
Tribal Historic Preservation Office
Main (760)-883-1327 | Cell (760)-831-2484

From: Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>
Sent: Wednesday, August 4, 2021 10:38 AM
To: ngallardo@crmtech.us
Subject: RE: NA Scoping Letter for the Proposed WVWD 18-inch Transmission Main Installation Project in and near the City of Fontana; CRM TECH No. 3755

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

From: Gabrieleno Administration <admin@gabrielenoindians.org>
Sent: Wednesday, August 4, 2021 11:03 AM
To: Nina Gallardo
Subject: RE: Information Regarding Positive NAHC Response for Proposed West Valley Water District 18-inch Transmission Main Installation Project in and near the City of Fontana (CRM TECH No. 3755)

Hello Nina

Thank you for your email. Can you please provide me with the lead agencies contact information?

Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

From: Nina Gallardo <ngallardo@crmtech.us>
Sent: Wednesday, August 4, 2021 12:06 PM
To: 'Gabrieleno Administration'
Subject: RE: Information Regarding Positive NAHC Response for Proposed West Valley Water District 18-inch Transmission Main Installation Project in and near the City of Fontana (CRM TECH No. 3755)

Hello,

I'm sending along the lead agency's contact information. The lead agency is West Valley Water District, and their contact person for this project is Ms. Rosa Gutierrez. Her email is rgutierrez@wvwd.org and her phone is (909) 875-1322 x 327.

Thanks for your time and input on this project.

Nina Gallardo
Project Archaeologist/Native American liaison
CRM TECH
1016 E. Cooley Drivem Ste. A/B
Colton, CA 92324
(909) 824-6400

From: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>
Sent: Friday, August 20, 2021 5:56 PM
To: ngallardo@crmtech.us
Subject: RE: NA Scoping Letter for the Proposed WVWD 18-inch Transmission Main Installation Project in and near the City of Fontana; CRM TECH No. 3755

Hey Nina,

Thank you for reaching out to the San Manuel Band of Mission Indians concerning the proposed project area. SMBMI appreciates the opportunity to review the project documentation received by the Cultural Resources Management Department on August 20, 2021. The proposed project is located less than a ¼ mile from a known cairn feature. The area is of great concern to SMBMI and are very interested to consult whenever this project moves into AB52/CEQA territory.

Thank you again for your correspondence, if you have any additional questions or comments please reach out to me at your earliest convenience.

Respectfully,

Ryan Nordness

CULTURAL RESOURCE ANALYST

Email: Ryan.Nordness@sanmanuel-nsn.gov

O: (909) 864-8933 Ext 50-2022

Internal: 50-2022

M: (909) 838-4053

26569 Community Center Dr Highland California 92346

TELEPHONE LOG

Name	Tribe/Affiliation	Telephone Contacts	Note
Patricia Garcia-Plotkin, Director, Tribal Historic Preservation Office	Agua Caliente Band of Cahuilla Indians	None	Arysa Gonzalez Romero, Historic Preservation Technician for the tribe, responded by e-mail on August 4, 2021 (copy attached).
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation	9:48 am, August 20, 2021; 4:00 pm, August 30, 2021	Left messages; no response to date.
Andrew Salas, Chairman	Gabrieleño Band of Mission Indians–Kizh Nation	None	The tribe responded by e-mail on August 4, 2021 (copy attached).
Anthony Morales, Chairperson	Gabrieleno/Tongva San Gabriel Band of Mission Indians	9:50 am, August 20, 2021; 4:12 pm, August 30, 2021	According to Mr. Morales, the tribe had not yet reviewed the request for input, but he noted that this project involved minimal ground disturbance.
Charles Alvarez, Chairperson	Gabrielino-Tongva Tribe	10:01 am, August 20, 2021; 4:23 pm, August 30, 2021	Mr. Alvarez stated that the cultural resource department was reviewing the request and would send any comments as soon as possible. No further response has been received.
Robert F. Dorame, Tribal Chairman	Gabrielino Tongva Indians of California	9:56 am, August 20, 2021; 4:19 pm, August 30, 2021	Mr. Dorame requested notification if any prehistoric artifacts and/or human remains were uncovered during ground-disturbing activities.
Jill McCormick, Historic Preservation Officer	Quechan Tribe of the Fort Yuma Reservation	None	Ms. McCormick responded by e-mail on August 4, 2021 (copy attached).
Ann Brierty, Tribal Historic Preservation Officer	Morongo Band of Mission Indians	10:05 am, August 20, 2021; 4:27 pm, August 30, 2021	Left messages; no response to date.
Jessica Mauck, Director of Cultural Resources Management	San Manuel Band of Mission Indians	10:16 am, August 20, 2021	Ryan Nordness, Cultural Resource Analyst for the tribe, responded by e-mail on August 20, 2021 (copy attached).
Vanessa Minott, Tribal Administrator	Santa Rosa Band of Cahuilla Indians	None	Ms. Minott responded by e-mail on August 4, 2021 (copy attached).
Mark Cochrane, Co-Chairperson	Serrano Nation of Mission Indians	10:18 am, August 20, 2021; 4:31 pm, August 30, 2021	Mr. Cochrane requested to be notified immediately if any Native American cultural resources or human remains were discovered during the project.
Joseph Ontiveros, Tribal Historic Preservation Officer	Soboba Band of Luiseño Indians	10:22 am, August 20, 2021; 4:38 pm, August 30, 2021	The tribe deferred to the San Manuel Band of Mission Indians and the Gabrieleno/Tongva San Gabriel Band of Mission Indians for this location.

APPENDIX 4

**CALIFORNIA HISTORICAL RESOURCES INVENTORY
RECORD FORM**

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary #
HRI #

Trinomial

NRHP Status Code 6Z

Other Listings
Review Code

Reviewer

Date

Page 1 of 4

*Resource Name or # (Assigned by recorder) CRM TECH 3755-1H

P1. Other Identifier: Lytle Creek Road

*P2. Location: Not for Publication ☒ Unrestricted *a. County San Bernardino

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Devore, Calif. Date 1966, photorevised 1988

T1N; R5W; NW 1/4 of NW 1/4 of SW 1/4 of Sec 18 ; S.B. B.M.

Elevation: Approximately 1,865 feet above mean sea level

c. Address N/A Census Designated Place Lytle Creek Zip

d. UTM: (Give more than one for large and/or linear resources) Zone 11 ; 458195 mE/ 3781360 mN;

UTM Derivation: USGS Quad GPS ☒ Google Earth

e. Other Locational Data: (e.g., parcel #, directions to resource, etc., as appropriate) Approximately 250 feet northwest of Interstate Highway 15

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The site consists of a small segment of Lytle Creek Road that will be impacted by a proposed water main pipeline installation project. It marks the southwestern end of the portion of Lytle Creek Road that still follows its pre-1970s alignment, which dated at least to the 1930s. Further to the southwest, the road was completely realigned as a result of the construction of Interstate Highway 15 nearby in the 1970s, and the original alignment, extending south from this location to meet Citrus Avenue, has been removed and has left no discernable physical remnants today. In its current configuration, Lytle Creek Road at this location is a two-lane, asphalt-paved country highway with hard shoulders on both sides, measuring approximately 35 feet in total width. Due to the relatively recent alterations and regular maintenance, it exhibits no distinctively historical characteristics.

*P3b. Resource Attributes: (List attributes and codes) AH7: Road

*P4. Resources Present: Building Structure Object Site District Element of District
Isolate ☒ Other (linear feature)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.) (See p. 2)

P5b. Description of Photo: (view, date, accession #)

*P6. Date Constructed/Age and Sources: ☒ Historic Prehistoric Both Pre-1936

*P7. Owner and Address: San Bernardino County Department of Public Works, Transportation Division, 825 East Third Street, San Bernardino, CA 92415

*P8. Recorded by: (Name, affiliation, and address) Salvadore Z. Boites, CRM TECH, 1016 East Cooley Drive, Suite A/B, Colton, CA 92324

*P9. Date Recorded: September 10, 2021

*P10. Survey Type: (Describe) Intensive-level survey for Section 106- and CEQA-compliance purposes

*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Bai "Tom" Tang, Deirdre Encarnación, and Salvadore Boites (2021): Identification and Evaluation of Historic Properties: West Valley Water District 18-inch Transmission Main Installation Project, in and near the City of Fontana, San Bernardino County, California

*Attachments: None ☒ Location Map Sketch Map ☒ Continuation Sheet Building, Structure, and Object Record
Archaeological Record District Record ☒ Linear Resource Record Milling Station Record Rock Art Record
Artifact Record Photograph Record Other (List):

State of California--The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LINEAR FEATURE RECORD

Primary #
HRI #
Trinomial

Page 2 of 4

*Resource Name or # (Assigned by recorder) CRM TECH 3755-1H

- L1. **Historic and/or Common Name:** Lytle Creek Road
- L2a. **Portion Described:** Entire Resource ☒ Segment ☐ Point Observation ☐ **Designation:** _____
- b. **Location of Point or Segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map.) See Item P2 on p. 1.
- L3. **Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.) See Item P3a on p. 1.

- L4. **Dimensions:** (In feet for historic features and meters for pre-historic features)
- a. **Top Width** 35 feet
- b. **Bottom Width** N/A
- c. **Height or Depth** N/A
- d. **Length of Segment** 100 feet
- L5. **Associated Resources:** None

L4e. **Sketch of Cross-Section** (Include scale)
Facing: _____

N/A

- L6. **Setting** (Describe natural features, landscape characteristics, slope, etc. as appropriate) The site is located in a rural area on the northern edge of the City of Fontana and within the Interstate Highway 15 corridor, surrounded by undeveloped open land. The ground surface in the immediate vicinity has been extensively disturbed by construction and maintenance activities associated with both Lytle Creek Road and the nearby freeway as well as the installation of accompanying utility lines and presently hosts a sparse growth of California buckwheat and datura. The native surface soil consists of silty-sandy loam containing coarse-grained sand and small granitic rocks. A water tank (Site 36-007296) is located approximate 60 feet to the east.
- L7. **Integrity Considerations:** As a working component of the modern transportation infrastructure, this segment of Lytle Creek Road reflects in its current configuration and appearance repeated upgrading and regular maintenance in modern times. Furthermore, the portion of the road to the southwest of this location is a modern feature that resulted from realignment in the 1970s. As such, the road no longer retains sufficient integrity to relate to its period of origin, or the historic period in general, and does not appear to meet any of the criteria for listing in the National Register of Historic Places or the California Register of Historical Resources.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing** (View, scale, etc.)
Overview to the southwest; taken on September 10, 2021

L9. **Remarks:** _____

L10. **Form Prepared by:** (Name, affiliation and address): Salvadore Z. Boites, CRM TECH, 1016 East Cooley Drive, Suite A/B, Colton, CA 92324

L11. **Date:** September 10, 2021

State of California - Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary #

HRI#

Trinomial

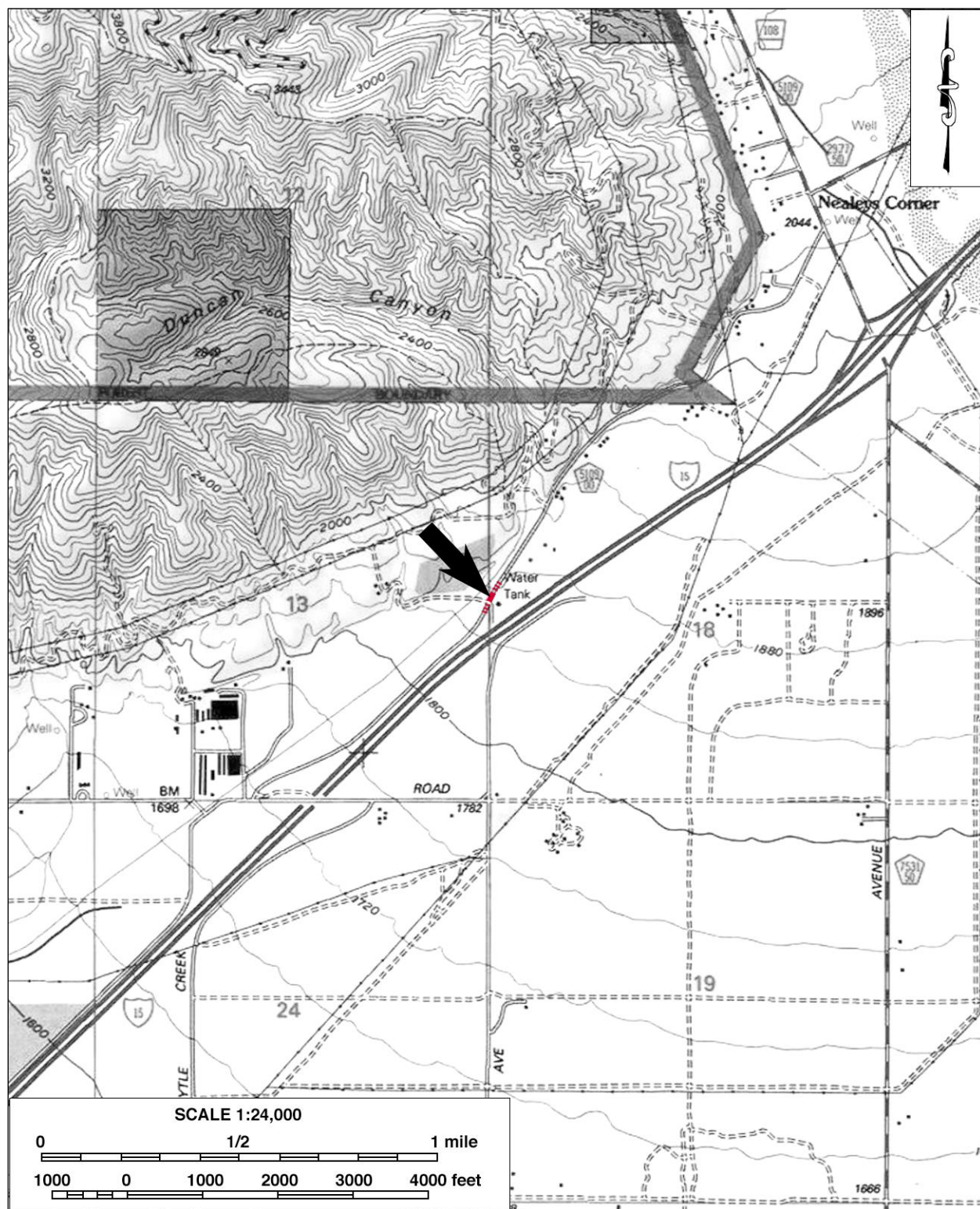
Page 3 of 4

*Resource Name or # (Assigned by recorder) CRM TECH 3755-1H

*Map Name: Devore, Calif.

*Scale: 1:24,000

*Date of Map: 1966/1988



CONTINUATION SHEET

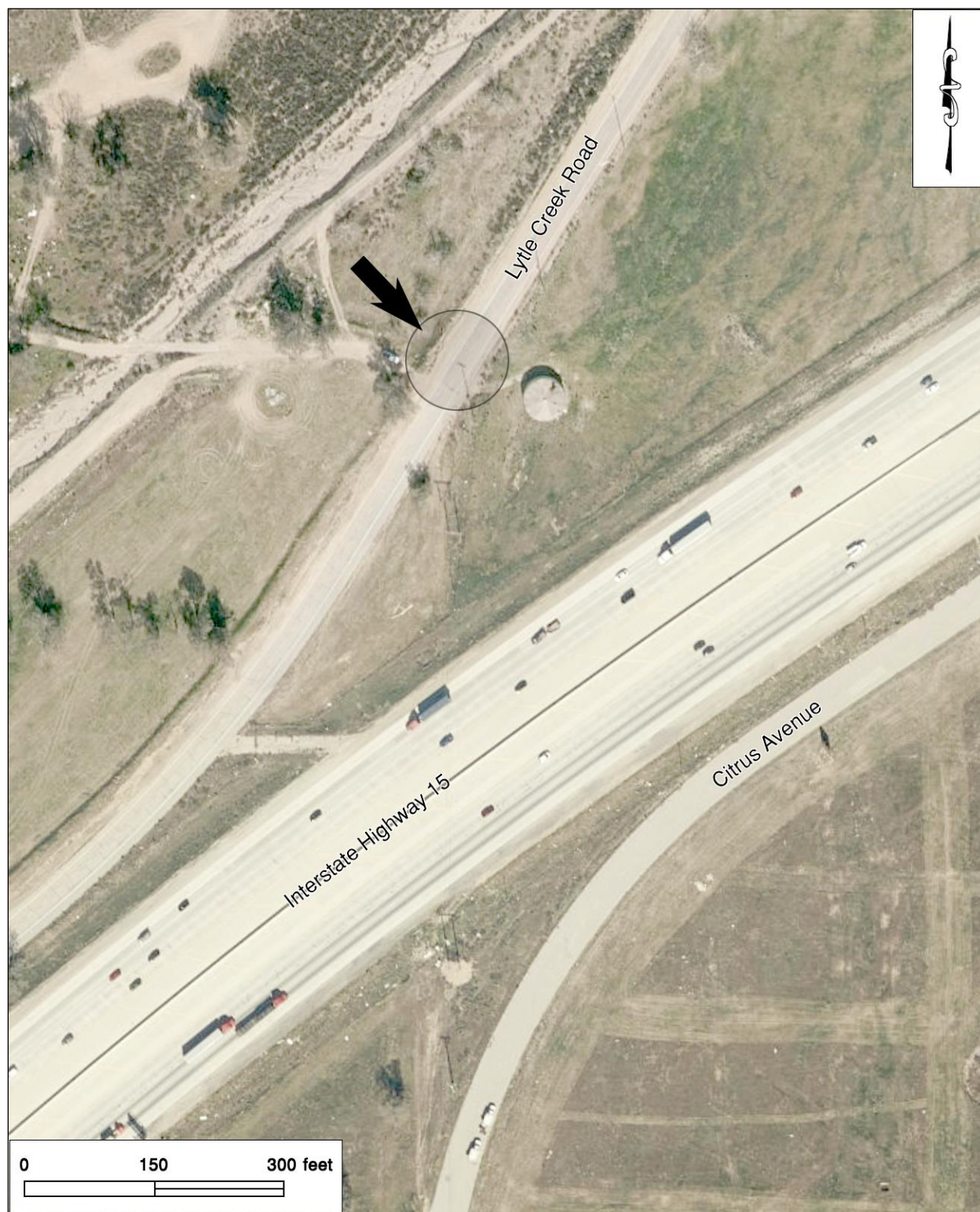
Primary #

HRI#

Trinomial

Page 4 of 4

*Resource Name or # (Assigned by recorder) CRM TECH 3755-1H



APPENDIX 4a



780 N. 4th Street
El Centro, CA 92243
(760) 370-3000
landmark@landmark-ca.com

77-948 Wildcat Drive
Palm Desert, CA 92211
(760) 360-0665
gchandra@landmark-ca.com

April 23, 2021

Mr. Siming Zhang
Albert A Webb Associates
3788 McCray Street
Riverside, CA 92506

Geotechnical Report
Proposed 18-inch Transmission Main Waterline
Fontana, California
LCI Report No.: LP21010

Dear Mr. Zhang:

As per your request, *LandMark Consultants, Inc.* is providing the following geotechnical report for the proposed transmission main waterline project located along future Right-of-Way from Lytle Creek Road to Citrus Avenue in northern Fontana, California.

Project Description

This report presents the findings of our geotechnical investigation for proposed waterline development located along future Right-of-Way from Citrus Avenue to Lytle Creek Road in northern Fontana, California (See Vicinity Map, Plate A-1). The proposed development will consist of installation of 18-inch transmission water main with steel casing under I-15 Ontario Freeway. A site plan for the proposed development was provided by your office on March 2021.

Purpose of Work

The purpose of this study was to investigate the upper 31.5 feet of subsurface soil at selected locations within the site for evaluation of physical/engineering properties. From the analysis of the field and laboratory data, professional opinions were developed and are provided in this report regarding geotechnical conditions at this site and the effect on design and construction.

Field Exploration

Subsurface exploration was performed on March 30, 2021 using 2R Drilling of Ontario, California to advance two (2) borings to depths of 20.5 and 31.5 feet below existing ground surface. The borings were advanced with a truck-mounted, CME-75 drill rig using 8-inch diameter, hollow-stem, continuous-flight augers. The approximate boring locations were established in the field and plotted on the site map by sighting to discernable site features. The boring locations are shown on the Site and Exploration Plan (Plate A-2).

Our geo-technician observed the drilling operations and maintained a log of the soil encountered and sampling depths, visually classified the soil encountered during drilling in accordance with the Unified Soil Classification System, and obtained drive tube and bulk samples of the subsurface materials at selected intervals. Relatively undisturbed soil samples were retrieved using a 2-inch outside diameter (OD) split-spoon sampler or a 3-inch OD Modified California Split-Barrel (ring) sampler. The samples were obtained by driving the sampler ahead of the auger tip at selected depths.

The drill rig was equipped with a 140-pound CME automatic hammer with a 30-inch drop for conducting Standard Penetration Tests (SPT) in accordance with ASTM D1586. The number of blows required to drive the samplers the last 12 inches of an 18-inch drive length into the soil is recorded on the boring logs as “blows per foot”. Blow counts reported on the boring logs represent the field blow counts. No corrections have been applied for effects of overburden pressure, automatic hammer drive energy, drill rod lengths, liners, and sampler diameter. When samples were not able to be driven an 18 inches depth, sampler penetration depth was recorded for 50 blows with a 140-lbs drive hammer.

After logging and sampling the soil, the exploratory boring was backfilled with the excavated material. The backfill was loosely placed and was not compacted to the requirements specified for engineered fill.

The subsurface logs are presented on Plates B-1 and B-2 in Appendix B. A key to the log symbols is presented on Plate B-3. The stratification lines shown on the subsurface logs represent the approximate boundaries between the various strata. However, the transition from one stratum to another may be gradual over some range of depth.

Laboratory Testing

Laboratory tests were conducted on selected bulk soil samples to aid in classification and evaluation of selected properties of the site soils. The tests were conducted in general conformance to the procedures of the American Society for Testing and Materials (ASTM) or other standardized methods as referenced below. The laboratory testing program consisted of the following tests:

- < Amount of Material Finer than 75- μ m (No. 200) Sieve in Soils by Washing (ASTM D1140)
- < Unit Dry Densities (ASTM D2937) and Moisture Contents (ASTM D2216)
- < Chemical Analyses (soluble sulfates & chlorides, pH, and resistivity)

The laboratory test results are presented on the subsurface logs (Appendix B) and Appendix C. Engineering parameters of soil strength, compressibility, and relative density utilized for developing design criteria provided within this report were extrapolated from data obtained from the field and laboratory testing program.

Site Conditions

The project site is located in northern Fontana, California at the intersection of the Interstate 5 Freeway and Citrus Avenue. The proposed pipeline will extend under the I-5 Freeway. The project site is undeveloped with a power line running parallel to the proposed pipeline.

The project site lies at an elevation between approximately 1835 to 1855 feet above mean sea level (MSL) in the Fontana area of Southern California. Annual average rainfall in this region is approximately 11 inches with average summertime temperature highs above 90°F and lows in the mid 50's to low 60's. Average winter temperature highs are in the high 60's with lows in mid 30's to low 40's.

Subsurface Soils

Subsurface soils encountered during the field exploration conducted on March 30, 2021 consist of medium dense to very dense interbedded silty sands (SM) and sands (SP and SP-SM) with gravel and cobbles to a depth of 31.5 feet, the maximum depth of exploration. The near surface soils are non-expansive in nature.

The subsurface logs (Plates B-1 and B-2) depict the stratigraphic relationships of the various soil types. Refusal was encountered in Boring B-2 at a depth of 20.5 feet.

Groundwater

Groundwater was not encountered in the borings during the time of exploration. The well information collected near the subject site (Well 341475N1174729W001), has indicated that the ground water level ranges from 705 feet to 732 feet below the ground surfaces in the last 5 years.

Groundwater levels may fluctuate with precipitation, irrigation of adjacent properties, drainage, and site grading. The groundwater level noted should not be interpreted to represent an accurate or permanent condition. Based on the regional topography, groundwater flow is assumed to be generally towards the southeast within the site area. Flow directions may vary locally in the vicinity of the site.

Systematic Settlements

Systematic settlements are primarily caused by the collapse of the overcut, or annular space, between the jacking pipe and the excavation, and to a lesser extent by elastic deformations of the soil ahead of the advancing tunnel. During tunneling, or after the tunnel is completed, the soil may collapse or squeeze onto the pipe, resulting in settlements at the surface. Systematic settlements generally decrease with distance above the crown of the pipe and with lateral distance from the centerline of the pipe. Systematic settlements decrease as the annular overcut decreases, and the soil consistency (density/stiffness) increase, also, decrease as pipe diameter decreases.

Systematic settlements were evaluated using methodology developed by Birger, Schimdt and Peck (1969) and modified by Cording (1993) as presented in the Design Information Bulletin No. 83-04 (Caltrans Supplement to FHWA Culvert Repair Practices Manual). The following table provides systematic settlements with borehole diameters ranging from 30-¼ to 31 inches, ground cover from 10 to 15 feet above the steel sleeve pipe, and an estimated Angle of Internal Friction of 32°.

Systematic Settlements for a 30-inch Steel Pipe Sleeve

Borehole Diameter, db, (in)	Depth of Cover Above Ground, hc, (ft / in)					
	10 / 120	11 / 132	12 / 144	13 / 156	14 / 168	15 / 180
30¼	0.13	0.12	0.11	0.11	0.10	0.10
30½	0.26	0.25	0.23	0.22	0.20	0.19
30¾	0.40	0.37	0.35	0.32	0.31	0.29
31	0.53	0.49	0.46	0.43	0.41	0.39

Maximum systematic settlements were evaluated directly above the centerline of the 30-inch pipe sleeve. As per Design Information Bulletin No. 83-04 (page 126), the maximum systematic settlement of ¼ inch is allowed for the surface in traffic vehicular lanes and ½ inch at the surface with no traffic.

If systematic settlements are higher than the maximum allowed, they can be controlled by limiting the radial overcut, and by filling the annulus with bentonite lubricant during tunneling, and with cement grout after tunneling is completed.

Monitoring points may be required to monitor the surface settlements. In general, subsurface monitoring points should be installed at 5 ft and 10 ft above the crown of the proposed tunnel near the jacking shaft, above utilities, and on shoulders of roadways, to evaluate the Contractor's operations before proceeding under critical locations. Additional points at non-critical locations should be monitored to gain an early indication of Contractor workmanship. Simple subsurface monitoring points that consist of a length of steel rebar installed inside a cased borehole that extends to the desired height above the tunnel crown is shown on Plate D-1 (Appendix D).

Bedding and Backfill of Pipeline

Bedding provides lateral and bearing support to the pipe. The bedding and the backfill and their densification should conform to the "*Standard Specifications for Public Works Construction*" Sections 306-1.2.1 and 306-1.3.1 through 306-1.3.5 or other acceptable standard methods.

Pipe Support: It is assumed that pipeline depths at most locations will vary from 3 to 5 feet below ground surface. At these depths, the soils are predominantly sands and silts. For pipes bedded on the native soils, a modulus of Soil Reaction (E') of 1,000 psi may be used to estimate initial pipe

deflection calculation. Earth dead loads may be assumed to be approximately 125 pounds per cubic foot.

Bearing Capacity of Thrust Blocks

Resistance to lateral forces can be assumed to be provided by friction at the base of thrust blocks and by passive earth pressure. Thrust blocks for the pipeline may be designed using a lateral bearing capacity based on an allowable lateral soil pressure of 250 pcf, computed as an equivalent fluid pressure. An ultimate value of coefficient of friction of 0.35 may be used between the thrust block and the supporting natural soil or compacted fill. The allowable vertical soil pressure may be taken as 2,000 psf.

Utility Trench Backfill

On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill. Backfill should be placed in layers not more than 6 inches in thickness, uniformly moisture conditioned to at least 2% over optimum moisture and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density except for the top 12 inches of the trench which shall be compacted to at least 95%. Native backfill should only be placed and compacted after encapsulating buried pipes with suitable bedding and pipe envelope material. On-site soil free of debris, vegetation, and other deleterious matter may be suitable for use as utility trench backfill.

Backfill within roadways should be placed in layers not more than 6 to 8 inches in thickness, uniformly moisture conditioned to at least 2% of optimum moisture and mechanically compacted to a minimum of 90% of the ASTM D1557 maximum dry density except for the top 12 inches of the trench which shall be compacted to at least 95%. Native backfill should only be placed and compacted after encapsulating buried pipes with suitable bedding and pipe envelope material. Pipe envelope/bedding should either be clean sand (Sand Equivalent SE>30). Precautions should be taken in the compaction of the backfill to avoid damage to the pipes and structures.

Observation and Density Testing

Site preparation and fill placement should be continuously observed and tested by a representative of a qualified geotechnical engineering firm. Near full-time observation services during the excavation and scarification process is necessary to detect undesirable materials or conditions and soft areas that may be encountered in the construction area. The geotechnical firm that provides observation and testing during construction shall assume the responsibility of "*geotechnical engineer of record*" and, as such, shall perform additional tests and investigation as necessary to satisfy themselves as to the site conditions and the recommendations for site development.

Closure

We did not encounter soil conditions that would preclude implementation of the proposed project provided the recommendations contained in this report are implemented in the design and construction of this project.

We appreciate the opportunity to provide our findings and professional opinions regarding geotechnical conditions at the site. If you have any questions or comments regarding our findings, please call our office at (760) 360-0665.

Respectfully Submitted,
LandMark Consultants, Inc.



Greg M. Chandra, P.E., M.ASCE
Principal Engineer



Attachments:

- Appendix A: Vicinity and Site Maps
- Appendix B: Subsurface Soil Logs and Soil Key
- Appendix C: Laboratory Test Results
- Appendix D: Settlement Monitoring Point Detail

APPENDIX A

Project Site

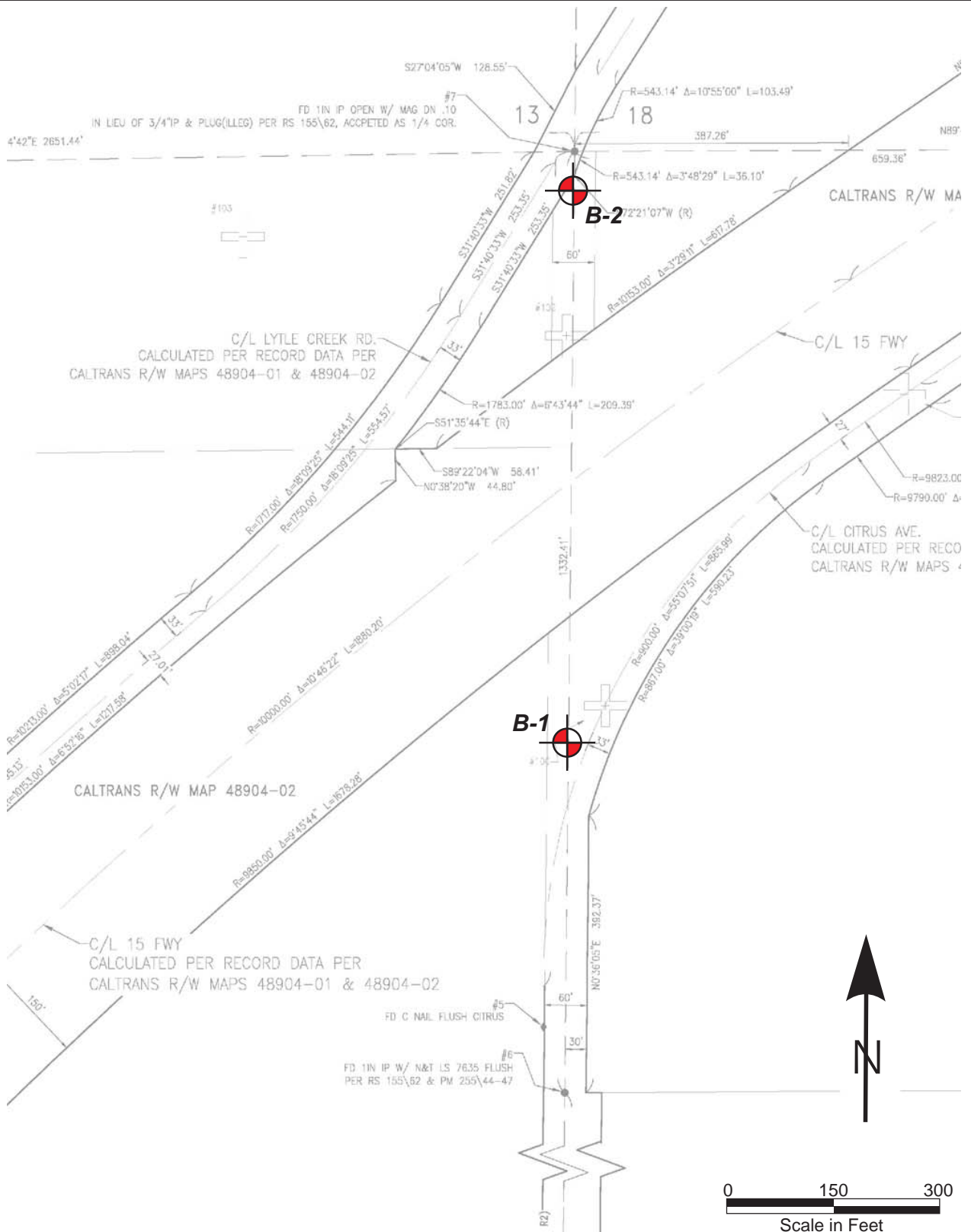


LANDMARK
Geo-Engineers and Geologists

Project No.: LP21010

Vicinity Map

Plate
A-1





117° 27' 24" W



Map Scale: 1:3,320 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84

117° 27' 4" W



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

4/23/2021
Page 1 of 3















LANDMARK
Geo-Engineers and Geologists

Project No.: LP21010

USDA Soil Conservation
Soil Service Map

Plate
A-3

MAP LEGEND

	Area of Interest (AOI) Area of Interest (AOI)		Spoil Area
	Soils Soil Map Unit Polygons		Stony Spot
	Soil Map Unit Lines		Very Stony Spot
	Soil Map Unit Points		Wet Spot
	Special Point Features Blowout		Other
	Borrow Pit		Special Line Features
	Clay Spot		Water Features Streams and Canals
	Closed Depression		Transportation Rails
	Gravel Pit		Interstate Highways
	Gravelly Spot		US Routes
	Landfill		Major Roads
	Lava Flow		Local Roads
	Marsh or swamp		Background Aerial Photography
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California
Survey Area Data: Version 12, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2018—Jun 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HaC	Hanford coarse sandy loam, 2 to 9 percent slopes	21.8	40.4%
ShF	Saugus sandy loam, 30 to 50 percent slopes	0.7	1.3%
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	31.6	58.4%
Totals for Area of Interest		54.1	100.0%



Reference: USGS Topographic Map
Devore, CA Quadrangle
Scale 1:25,000

Site Coordinates
Lat: 34.171N
Long: -117.454W










LANDMARK
Geo-Engineers and Geologists

Project No.: LP21010


Topographic Map








Plate
A-4

APPENDIX B

DEPTH	FIELD				LOG OF BORING No. B-1 SHEET 1 OF 1	LABORATORY		
	SAMPLE	USCS CLASS.	BLOW COUNT	POCKET PEN. (tsf)		DESCRIPTION OF MATERIAL	DRY DENSITY (pcf)	MOISTURE CONTENT (% dry wt.)
5			71/11"		SAND (SP-SM): Dark brown, dry to damp, medium to coarse grained, dense to very dense, some gravels and cobbles No recovery	128.2	2.4	Passing #200 = 6.4%
10			34			141.9	3.4	Passing #200 = 12.0%
15			50/2"					
20			50/6"				2.7	Passing #200 = 6.4%
25			50/6"				2.5	
30			88/9"		Gray	1.9	Passing #200 = 11.4%	
35					Total Depth = 31.5' Groundwater not encountered at time of drilling Backfilled with excavated soil			
40								
45								
50								
55								
60								

DATE DRILLED: 03/30/21	TOTAL DEPTH: 31.5 Feet	DEPTH TO WATER: NA
LOGGED BY: L. Jackson	TYPE OF BIT: Hollow Stem Auger	DIAMETER: 8 in.
SURFACE ELEVATION: Approximately 1855 ft.	HAMMER WT.: 140 lbs.	DROP: 30 in.

PROJECT NO. LP21010		PLATE B-1
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DEPTH	FIELD				LOG OF BORING No. B-2 SHEET 1 OF 1	LABORATORY		
	SAMPLE	USCS CLASS.	BLOW COUNT	POCKET PEN. (tsf)		DRY DENSITY (pcf)	MOISTURE CONTENT (% dry wt.)	OTHER TESTS
5			16		SILTY SAND (SM): Brown, damp to moist, medium to coarse grained, medium dense, some gravels and cobbles	112.0	6.1	Passing #200 = 22.2%
10			38		SAND (SP): Greyish brown, dry, medium to coarse grained, dense, some gravels	125.5	1.2	Passing #200 = 4.0%
15			50/5"		SAND (SP-SM): Brown, dry, medium to coarse grained, very dense, some gravels		2.5	Passing #200 = 5.5%
20			50/5"		Refusal @ 20.5 feet			
25								
30								
35								
40								
45								
50								
55								
60								

Total Depth = 20.5'
Groundwater not encountered at time of drilling
Backfilled with excavated soil
















DATE DRILLED: 03/30/21 TOTAL DEPTH: 20.5 Feet DEPTH TO WATER: NA
 LOGGED BY: L. Jackson TYPE OF BIT: Hollow Stem Auger DIAMETER: 8 in.
 SURFACE ELEVATION: Approximately 1835 ft. HAMMER WT.: 140 lbs. DROP: 30 in.

PROJECT NO. LP21010

LANDMARK
Geo-Engineers and Geologists

PLATE B-2

DEFINITION OF TERMS

PRIMARY DIVISIONS		SYMBOLS		SECONDARY DIVISIONS	
Coarse grained soils More than half of material is larger than No. 200 sieve	Gravels	Clean gravels (less than 5% fines)		GW	Well graded gravels, gravel-sand mixtures, little or no fines
	More than half of coarse fraction is larger than No. 4 sieve	Gravel with fines		GP	Poorly graded gravels, or gravel-sand mixtures, little or no fines
				GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines
	Sands	Clean sands (less than 5% fines)		GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines
				SW	Well graded sands, gravelly sands, little or no fines
		Sands with fines		SP	Poorly graded sands or gravelly sands, little or no fines
				SM	Silty sands, sand-silt mixtures, non-plastic fines
				SC	Clayey sands, sand-clay mixtures, plastic fines
Fine grained soils More than half of material is smaller than No. 200 sieve	Silts and clays			ML	Inorganic silts, clayey silts with slight plasticity
	Liquid limit is less than 50%			CL	Inorganic clays of low to medium plasticity, gravelly, sandy, or lean clays
				OL	Organic silts and organic clays of low plasticity
	Silts and clays			MH	Inorganic silts, micaceous or diatomaceous silty soils, elastic silts
	Liquid limit is more than 50%			CH	Inorganic clays of high plasticity, fat clays
				OH	Organic clays of medium to high plasticity, organic silts
Highly organic soils				PT	Peat and other highly organic soils

GRAIN SIZES

Silts and Clays	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		
	200	40	10	4	3/4"	3"	12"
	US Standard Series Sieve				Clear Square Openings		

Sands, Gravels, etc.	Blows/ft. *
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

Clays & Plastic Silts	Strength **	Blows/ft. *
Very Soft	0-0.25	0-2
Soft	0.25-0.5	2-4
Firm	0.5-1.0	4-8
Stiff	1.0-2.0	8-16
Very Stiff	2.0-4.0	16-32
Hard	Over 4.0	Over 32

* Number of blows of 140 lb. hammer falling 30 inches to drive a 2 inch O.D. (1 3/8 in. I.D.) split spoon (ASTM D1586).

** Unconfined compressive strength in tons/s.f. as determined by laboratory testing or approximated by the Standard Penetration Test (ASTM D1586), Pocket Penetrometer, Torvane, or visual observation.

Type of Samples:



Ring Sample



Standard Penetration Test



Shelby Tube



Bulk (Bag) Sample

Drilling Notes:

1. Sampling and Blow Counts

Ring Sampler - Number of blows per foot of a 140 lb. hammer falling 30 inches.

Standard Penetration Test - Number of blows per foot.

Shelby Tube - Three (3) inch nominal diameter tube hydraulically pushed.

2. P. P. = Pocket Penetrometer (tons/s.f.).

3. NR = No recovery.

4. GWT = Ground Water Table observed @ specified time.

LANDMARK
Geo-Engineers and Geologists

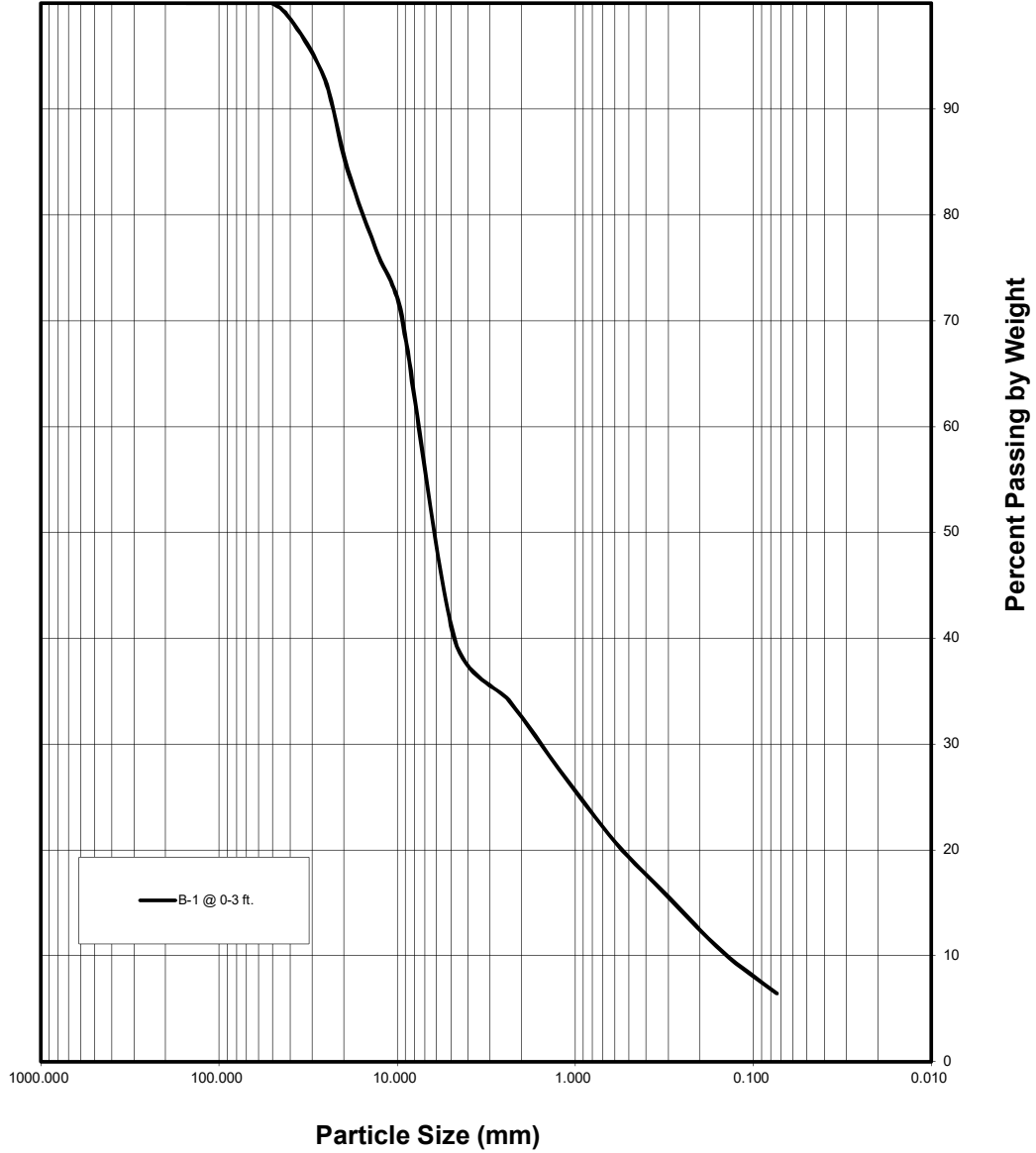
Project No. LP21010

Key to Logs

Plate
B-3

APPENDIX C

SIEVE ANALYSIS					
Cobbles and Boulders	Gravel		Sand		
	Coarse	Fine	Coarse	Medium	Fine



LANDMARK CONSULTANTS, INC.

CLIENT: Albert Webb Associates

PROJECT: MVWD Transmission Main - Fontana, CA

JOB No.: LP21010

DATE: 04/15/21

CHEMICAL ANALYSIS

Boring:	B-1	Caltrans
Sample Depth, ft:	0-3	Method
pH:	8.2	643
Electrical Conductivity (mmhos):	--	424
Resistivity (ohm-cm):	10,500	643
Chloride (Cl), ppm:	50	422
Sulfate (SO₄), ppm:	10	417

General Guidelines for Soil Corrosivity

Material Affected	Chemical Agent	Amount in Soil (ppm)	Degree of Corrosivity
Concrete	Soluble Sulfates	0 - 1,000	Low
		1,000 - 2,000	Moderate
		2,000 - 20,000	Severe
		> 20,000	Very Severe
Normal Grade Steel	Soluble Chlorides	0 - 200	Low
		200 - 700	Moderate
		700 - 1,500	Severe
		> 1,500	Very Severe
Normal Grade Steel	Resistivity	1 - 1,000	Very Severe
		1,000 - 2,000	Severe
		2,000 - 10,000	Moderate
		> 10,000	Low

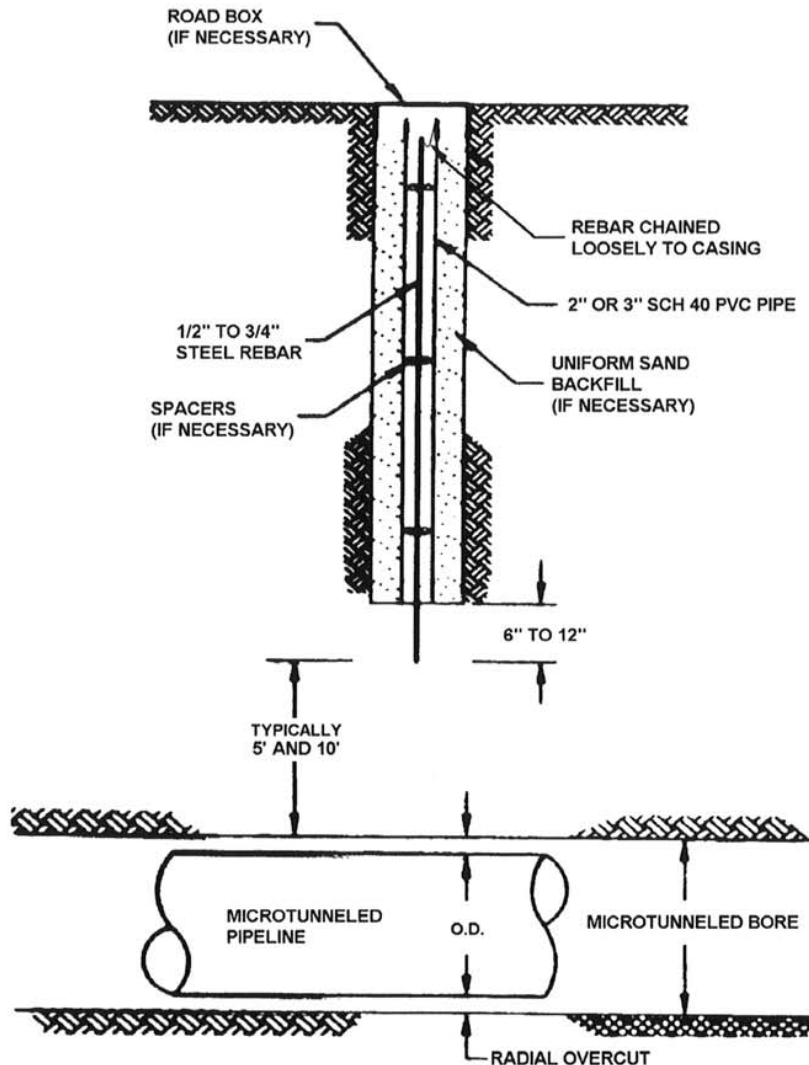


Project No.: LP21010

Selected Chemical Test Results

**Plate
C-2**

APPENDIX D

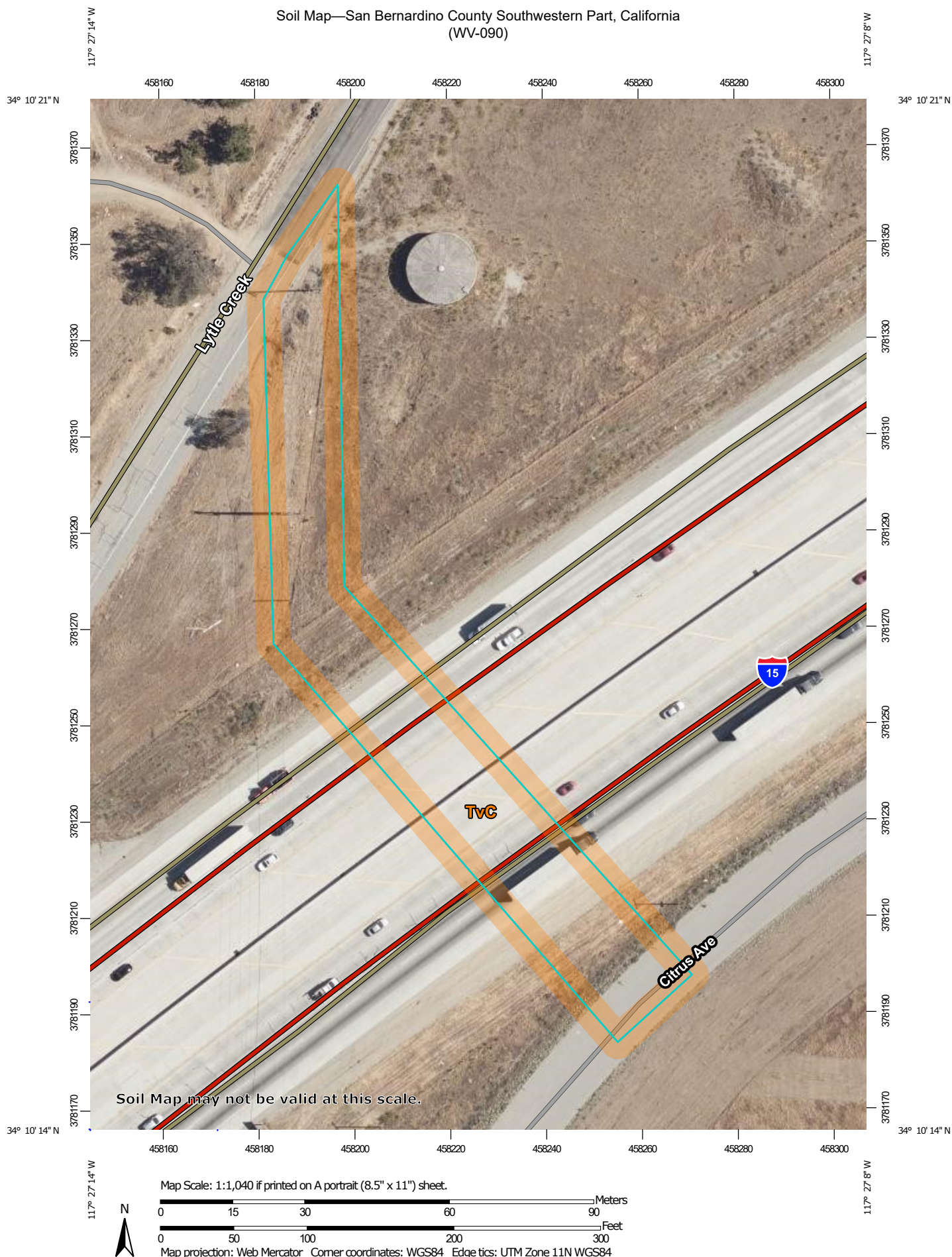


SETTLEMENT MONITORING POINT DETAIL

The materials needed are 1/2- to 3/4- inch diameter rebar and 2-inch diameter, Schedule 40, PVC pipe installed in a vertical borehole drilled to the desired depth of the settlement point. The casing should be covered with a cap to protect it from the weather and a road box can be used if the point is installed inside a traffic area. The casing is installed at 5 feet or 10 feet above the proposed tunnel crown, and the rebar is inserted into the casing and driven 6 inches to 12 inches below the bottom of the casing, into undisturbed soil. In this way, the response of the ground can be monitored very closely as the microtunneling or tunneling machine passes beneath the point.

APPENDIX 4b

Soil Map—San Bernardino County Southwestern Part, California
(WV-090)



Soil Map may not be valid at this scale.

Map Scale: 1:1,040 if printed on A portrait (8.5" x 11") sheet.

0 15 30 60 90 Meters

0 50 100 200 300 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge ticks: UTM Zone 11N WGS84




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey


7/13/2021
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: San Bernardino County Southwestern Part, California

Survey Area Data: Version 12, May 27, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2018—Jun 30, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
TvC	Tujunga gravelly loamy sand, 0 to 9 percent slopes	0.8	100.0%
Totals for Area of Interest		0.8	100.0%