

Lee Lake Wells Project

Initial Study / Environmental Checklist

Draft Mitigated Negative Declaration

Prepared for:

Elsinore Valley Municipal Water District
31315 Chaney St
Lake Elsinore, CA 92530

Prepared by:

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August 2019

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1.0 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970, as amended, and the CEQA Guidelines, as revised. This IS/MND evaluates the environmental effects of the Lee Lake Wells Project (project or proposed project). Elsinore Valley Municipal Water District (EVMWD or District) is the lead agency for the proposed project, with the IS/MND including the following components:

- A Draft MND and the formal findings made by the District that the project would not result in significant effects on the environment, as identified in the IS Checklist.
- A detailed project description.
- The CEQA IS Checklist, which provides standards to evaluate the potential for significant environmental impacts from the proposed project, as adapted from Appendix G of the CEQA Guidelines. The project is evaluated in 21 environmental issue categories to determine whether the project's environmental impacts would be significant in any category. Brief discussions are provided that further substantiate the project's anticipated environmental impacts in each category.

The proposed project fits into the definition of a “project” under Public Resources Code Section 21065 requiring discretionary approvals by EVMWD and could result in a significant effect on the environment; therefore, the project is subject to CEQA review. The IS Checklist was prepared to determine the appropriate environmental document to satisfy CEQA requirements: an Environmental Impact Report (EIR), an MND, or a Negative Declaration. The analysis in this IS Checklist supports the conclusion that the project would not result in significant environmental impacts with the incorporation of mitigation measures; therefore, an MND has been prepared.

This IS/MND will be circulated for 30 days for public and agency review, during which time individuals and agencies may submit comments on the adequacy of the environmental review. Following the public review period, the EVMWD Board of Directors will consider comments received on the IS/MND when deciding whether to adopt the MND.

2.0 DRAFT MITIGATED NEGATIVE DECLARATION

Project Name: Lee Lake Wells Project

Project Location: Approximately 1,200 feet southeast of the intersection of Temescal Canyon Road and Horsethief Canyon Road in unincorporated Riverside County, California

Project Description: The proposed project would result in the construction and operation of two wells and associated systems on the approximately 15.9-acre project site. The proposed project includes the construction of two up-to-140-foot-deep, 400-gallon-per-minute (gpm) wells and a centralized disinfection facility and a booster pump station. The raw water piping would be routed from the wells to a centralized disinfection facility located approximately 300 feet from each well site. The centralized disinfection facility would be in undeveloped land southeast of existing dairy/cattle yard remnants on the project site. A new booster pump station would convey treated water into EVMWD's Temescal Valley Pipeline. The Temescal Valley Pipeline is a transmission pipeline in Temescal Canyon Road, which runs adjacent to the project site.

Construction of the proposed project is expected to begin in the first or second quarter of 2020 with drilling/construction of the wells. Equipping of the wells and construction of the disinfection facilities and booster pump station is expected to begin late summer/early fall of 2020. Construction activities would occur over a 24-month period and would consist of drilling/constructing the two wells; trenching; installing pipelines; site grading; equipping the two wells; constructing the mechanical building, booster pump station (located within the mechanical building), and chlorine contact tank; architectural and protective coatings; and paving at pipeline installation locations within Temescal Canyon Road, areas around the disinfection facility, and access to/from the well sites. Pipeline construction activities would include trenching, installing pipes, backfilling, and repaving affected portions of Temescal Canyon Road.

The Lee Lake Wells project is part of the Near-Term Water Supply Program developed by EVMWD to meet anticipated potable water demand, maximize assets in the Lee Lake Groundwater Basin, and ultimately provide a more local, sustainable water supply. The program aims to optimize groundwater resources to increase potable supply while reducing dependence on imported water sources.

Findings: Pursuant to the provisions of CEQA (Public Resources Code, Section 21000 et seq.) and based on the information contained in the attached IS Checklist, the Elsinore Valley Municipal Water District has determined that the project would not have a significant effect on the environment.


Signature of Lead Agency Representative

8/26/2019
Date

3.0 PROJECT DESCRIPTION

1. PROJECT

Lee Lake Wells Project

2. LEAD AGENCY & ADDRESS

Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92530

3. CONTACT PERSON & PHONE

Parag Kalaria, P.E.
Project Manager
Elsinore Valley Municipal Water District
(951) 674-3146 ext. 8201

4. PROJECT LOCATION

The 15.9-acre project site is located within unincorporated Riverside County, within the Sphere of Influence for the City of Lake Elsinore. The project site is located approximately 0.8 mile southwest of Lee Lake and 0.1 mile north of Interstate 15 (I-15) in western Riverside County (Figure 1, *Regional Location*). The project site is situated in Township 5 south, Range 5 west, and Section 17 of the Alberhill, California U.S. Geological Survey (USGS) quadrangle map (Figure 2, *USGS Topography*). More specifically, the project site is located north of Temescal Canyon Road, approximately 1,200 feet southeast of the intersection of Temescal Canyon Road and Horsethief Canyon Road, near the intersection of Temescal Canyon Road and Earthmover Circle (Figure 3, *Aerial Vicinity*). The project site is located on a District-owned parcel (Assessor's Parcel Number 393-130-001). The project site is currently vacant and contains remnants of a dairy/cattle yard consisting of concrete foundations.

5. APPLICANT

Elsinore Valley Municipal Water District

6. GENERAL PLAN DESIGNATION

Rural Residential

7. ZONING

Manufacturing-Service Commercial (M-SC)

8. PROJECT DESCRIPTION

Project Background

Elsinore Valley Municipal Water District is a public non-profit agency that provides water, wastewater, and reclaimed water service to the City of Lake Elsinore, the City of Canyon Lake, portions of the City of Murrieta, and unincorporated portions of the County of Riverside. The District has over 45,650 water connections and serves a population of approximately 158,200. EVMWD provides water services to its Elsinore and Temescal Divisions, which encompass 96 square miles, including the Cities of Lake Elsinore, Canyon Lake, Wildomar, and portions of Murrieta and unincorporated areas of Riverside County. The water system contains 41 pressure zones, with approximately 3,618,000 feet (685) miles of pipelines, 73 storage reservoirs with a storage capacity of approximately 93 million gallons, and 51 booster pump stations. EVMWD water sources include 12 operating groundwater wells, the Canyon Lake Water Treatment Plant, and imported water from The Metropolitan Water District of Southern California (provided via the Auld Valley Pipeline and Temescal Valley Pipeline).

Elsinore Valley Municipal Water District's 2016 Water System Master Plan (WSMP; August 2016) was prepared to provide a guideline for planning of EVMWD's potable water system under existing and future (year 2040) conditions. Based on the evaluation of projected growth and existing water supplies, the WSMP identifies improvements necessary to meet the projected water demand under 2040 conditions. Two wells in the Lee Lake Basin area of the Elsinore Groundwater Basin were identified as planned projects in the WSMP, providing a capacity of 1.2 million gallons per day (mgd). The Lee Lake Wells project is part of the Near-Term Water Supply Program developed by EVMWD to meet anticipated potable water demand, maximize assets in the Lee Lake Groundwater Basin, and ultimately provide a more local, sustainable water supply. The program aims to optimize groundwater resources to increase potable supply while reducing dependence on imported water sources.

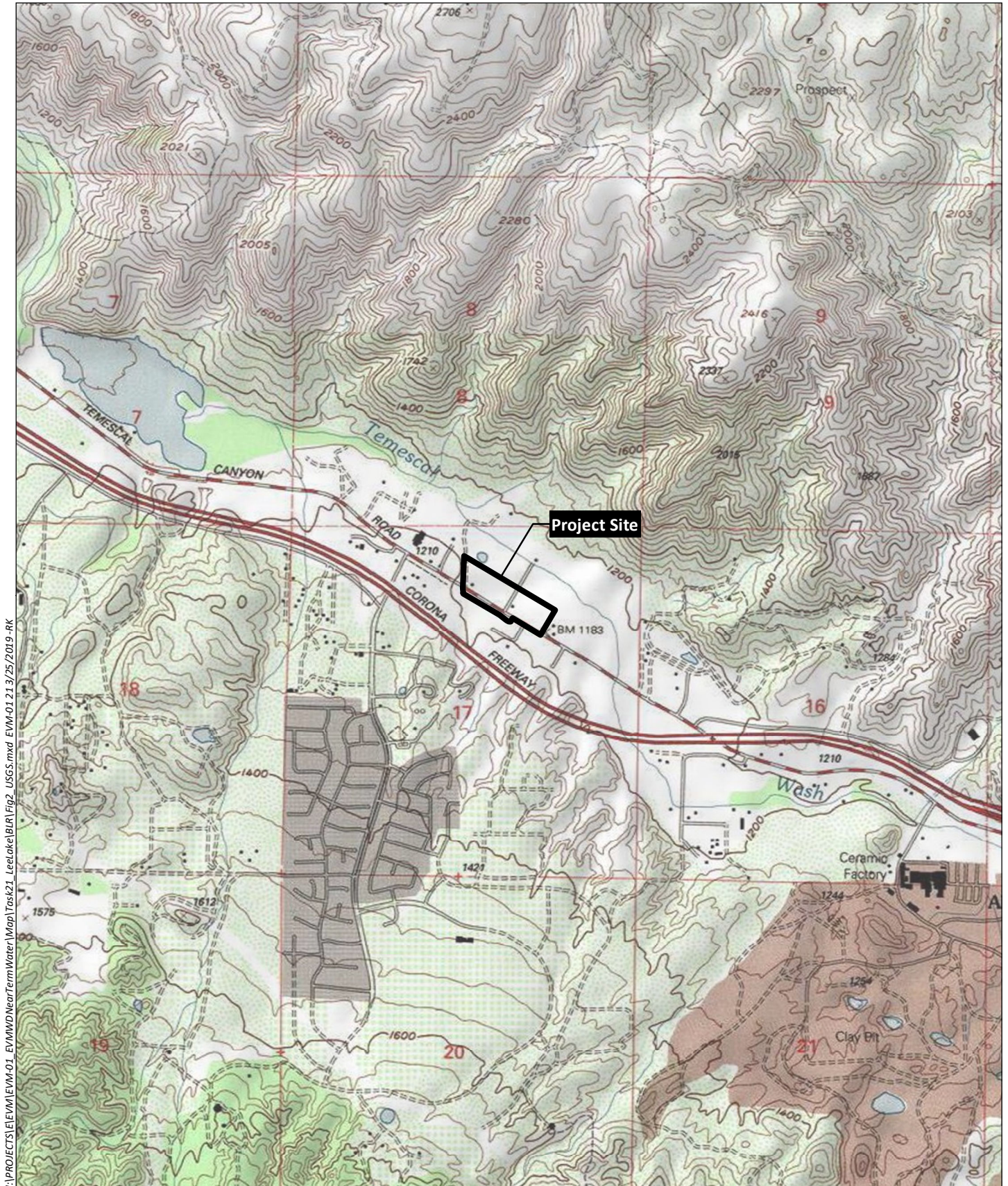
Project Description

Elsinore Valley Municipal Water District proposes the construction and operation of two wells and associated systems at the project site. The proposed project includes the construction of two up-to-140-foot-deep, 400-gpm wells and a centralized disinfection facility and booster pump station (Figure 4, *Project Plans*). The raw water piping would be routed from the wells to a centralized disinfection facility located approximately 300 feet from each well site. The water treatment site would be in undeveloped land south of existing dairy/cattle yard remnants on the project site. A new booster pump station would convey treated water into EVMWD's Temescal Valley Pipeline. The Temescal Valley Pipeline is a transmission pipeline in Temescal Canyon Road, which runs adjacent to the project site. The centralized disinfection facility and booster pump station would include the following main components:

- Flush-to-waste facility for groundwater from the Lee Lake Wells and dechlorinated process water;
- Aboveground welded steel chlorine contact tank;
- Approximately 20-foot-tall, 2,400-square-foot mechanical building to house the required booster pump station, laboratory/work area, electrical and chemical facilities;



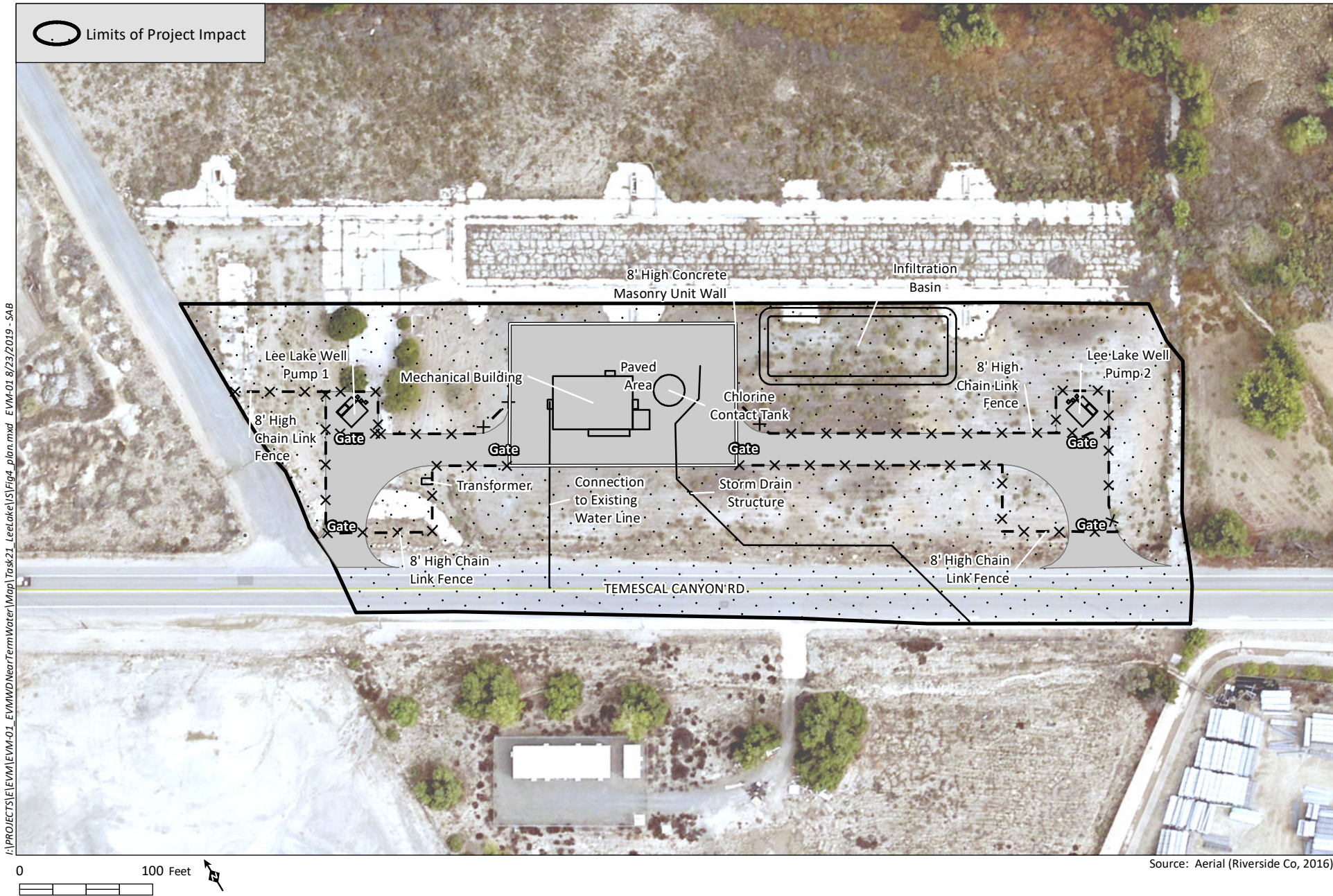
Figure 1



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Source: Alberhill 7.5' Quad (USGS)





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- Chlorine and ammonia chemical storage and feed facilities within the mechanical building;
- Associated piping and appurtenances;
- Associated electrical equipment and connections;
- New site security facilities including 8-foot-high concrete masonry unit perimeter wall and security gate;
- New 8-foot-high, screened chain-link fencing around the perimeter of the well sites and access road areas not encompassed by the concrete masonry perimeter wall, and associated security gates; and
- Associated site civil improvements.

Wells

The project proposes two new wells. Lee Lake Well 1 would be located in the northwestern portion of the project footprint, as shown on Figure 4. Lee Lake Well 2 would be located approximately 550 feet southeast of Well 1. Concrete demolition associated with existing remnants on site would be required for the Lee Lake Well 1 site. Well pumps would be installed on concrete pads that are four feet by four feet. Each well would be equipped with associated piping, valves, and appurtenances installed above grade on an approximately 20-foot by 10-foot concrete pad, a sand separator installed above grade on an approximately 5-foot by 8-foot concrete pad, and a precast concrete sand pit.

Conveyance Pipelines

The proposed project would include the construction of a conveyance piping system. The well discharge pipeline would consist of approximately 300 feet of piping from each well site to the centralized disinfection facility. The project would include a pump-to-waste and dechlorinated chlorine analyzer sample stream discharge pipeline consisting of approximately 400 feet of piping from the centralized disinfection facility to an existing 24-inch reinforced concrete pipe (RCP) storm drain located south of the project site, within Temescal Canyon Road. A treated water pipeline would consist of approximately 200 feet of 8-inch pipeline from the centralized disinfection facility to its connection point to the Temescal Valley Pipeline in Temescal Canyon Road, adjacent to the project site. Pump to waste (intermittent) would be discharged to an onsite air gap structure and a new 12-inch gravity line would divert the flow to the existing 24-inch RCP storm drain within Temescal Canyon Road. Dechlorinated water from the chlorine tank overflow/drain would be diverted to the 24-inch RCP storm drain in the event of an overflow or planned maintenance activity.

Sodium Hypochlorite Storage and Feed System

Primary and secondary disinfection (chloramine residual for distribution) would be accomplished through the use of 12.5% sodium hypochlorite (SHC). A 1,000-gallon double-wall high-density polyethylene tank would be used to store the SHC. A chemical feed metering system would supply a free chlorine concentration of approximately two milligrams per liter (mg/L) to the injection point prior to entering the chlorine contact tank. Chemical feed pumps would be used

for SHC feed pumping to minimize off-gassing and potential gas binding in the chemical feed system. The SHC solution would be fed upstream of the chlorine contact tank into the static mixer located in the raw water pipe.

The SHC feed point would incorporate the use of an inline static mixer, which requires no power, has relatively low maintenance requirements, and provides consistent mixing performance. The inline static mixer can be equipped with chemical injection ports that would allow the chlorine to be injected directly into the body of the mixer and would be sized to have a maximum pressure drop of five pounds per square inch (psi). The inline mixer would be located aboveground, near the chlorine contact tank, in the mechanical building.

Ammonia Storage and Feed System

The ammonia storage and feed system, using ammonium hydroxide (19% ammonia), would supply ammonia at a chlorine to ammonia ratio of 5:1. A 220-gallon double-wall high-density polyethylene chemical storage tank with secondary containment would store the ammonia. Ammonia would be fed downstream of the chlorine contact tank, prior to the booster pumps, into a static mixer located in the treated water pipeline. Diaphragm feed pumps would be used for ammonia feed pumping to minimize off-gassing and potential gas binding in the chemical feed system. The finished water is anticipated to contain a chloramine residual of two mg/L.

The ammonia feed point would incorporate the use of an inline static mixer similar to that used for the SHC feed. The inline static mixer can be equipped with chemical injection ports that would allow the ammonia to be injected directly into the body of the mixer and would be sized to have a maximum pressure drop of five psi. The inline mixer would be located above grade, near the discharge piping of the chlorine contact tank, in the mechanical building.

Chlorine Contact Tank

A 35,000-gallon welded steel tank would be constructed adjacent to the mechanical building. The approximate dimensions of the chlorine contact tank would be a 22-foot-diameter, 12-foot overall height, with approximately 5.7 feet of freeboard. The chlorine contact tank would be outfitted with an internal baffle system, inlet, outlet, overflow, access manway, and vent. The welded steel tank would include the required Occupational Safety and Health Administration (OSHA)- and EVMWD-preferred safety appurtenances (e.g. vertical ladder, safety rail, and safety cage).

Mechanical Building and Booster Pumps

The project includes the construction of a 2,400-square-foot mechanical building, which would be located between the proposed wells and include the disinfection chemical storage and feed areas, laboratory/work area, electrical room, and booster pump station. The building would be approximately 60 feet by 40 feet. Approximately 200 feet of new 8-inch piping would convey treated water from the centralized disinfection facility to the existing Temescal Valley Pipeline.

The booster pump station would include a three-variable-frequency-drive 400-gpm, 240-horsepower vertical turbine can pumps (two pumps in operation and one pump on standby). A 225 kilovolt-amperes transformer from Southern California Edison would be located onsite.

Summary of Project System

- Lee Lake Wells 1 and 2 would pump groundwater at a constant speed of approximately 400 gpm each to the chlorine contact tank located in between the two wells sites, adjacent to Temescal Canyon Road and the proposed mechanical building.
- The SHC feed pumps contained within the mechanical building would dose chlorine to the groundwater prior to entering the chlorine contact tank.
- Booster pumps (variable frequency driven) would pump disinfected water from the chlorine contact tank to the existing Temescal Valley Pipeline in the following manner:
 - Booster pumps would maintain the minimum water surface elevation in the tank to meet the primary disinfection requirements;
 - Ammonia would be added to the treated water directly after the chlorine contact tank to provide a chloramine residual in the finished potable water; and
 - The booster pump station would be designed to operate between 400 gpm to 800 gpm, conveying potable water to the Temescal Valley Pipeline at a design pressure range of 110 psi to 150 psi.

All proposed facilities would be designed/constructed in conformance with pertinent engineering standards, including applicable elements of EVMWD's *Design Standards and Standard Drawings for the Design and Construction of Potable Water, Recycled Water, and Sewer Facilities* (Design Standards; EVMWD 2017a), current versions of the International Code Council (ICC) *International Building Code* (IBC, formerly the Uniform Building Code), and the related California Building Standards Commission *California Building Code* (CBC).

Construction Equipment, Access, Staging and Schedule

Construction of the proposed project is expected to begin in the first or second quarter of 2020 with drilling/construction of the wells. Equipping of the wells and construction of the disinfection facilities and booster pump station is expected to begin late summer/early fall of 2020. Construction activities would occur over a 24-month period and would consist of drilling/constructing the two wells; trenching; installing pipelines; site grading; equipping the two wells; constructing the mechanical building, booster pump station (located within the mechanical building), and chlorine contact tank; architectural and protective coatings; and paving at pipeline installation locations within Temescal Canyon Road, areas around the disinfection facility, and access road to/from the well sites. Pipeline construction activities would include trenching, installing pipes, backfilling, and repaving affected portions of Temescal Canyon Road.

The proposed project would not require night work and would be limited to the hours of 6:00 a.m. to 6:00 p.m. Depending on the time of year, construction lighting may be required in the time between sundown and 6:00 p.m. The anticipated construction equipment associated with the project is shown in Table 1. The equipment mix is anticipated for construction activity based on typical construction practices for this type of project. The equipment mix is meant to

represent a reasonable conservative estimate of construction activity. The analysis assumes that the equipment would operate 5 days per week (22 days per month).

Table 1 Anticipated Construction Equipment				
Construction Phase	Workers	Equipment	Quantity	Hours/Day
Trenching (pipeline installation)	5	Concrete/industrial saws	1	2
		Plate compactors	1	4
		Tractors/loaders/backhoes	1	8
Paving (pipeline installation)	5	Pavers	1	8
		Paving Equipment, street sweeper and striping machine, Traffic Control	1	8
Grading (disinfection facility and well sites)	5	Tractors/loaders/backhoes/water truck	1	8
Wells and Building Construction (wells, chlorine contact tank, booster pump station, mechanical building, and associated facilities)	8	Forklifts/crane	1	4
		Generator sets	2	8
		Tractors/loaders/backhoes	1	8
		Welders	1	1
		Drill rig	1	8
Architectural and protective coatings (mechanical building and chlorine contact tank)	2	Air compressors	1	6
Site Paving	8	Pavers	1	8
		Paving equipment	1	6
		Rollers	1	6
Site Demolition (concrete)	3	Backhoe/loader/10-wheel dump truck/concrete saw	1	8

Access to the project site area would be provided via existing roadways, including I-15 and Temescal Canyon Road. Project-related traffic would include ingress/egress for construction equipment and vehicles, daily construction worker trips, and occasional material delivery and haul truck trips. Because portions of the project are proposed in public streets (Temescal Canyon Road), appropriate traffic control measures would be implemented as necessary in pertinent areas to maintain access and ensure safety. Such measures would likely include standard efforts such as the use of cones, barriers, signs and flaggers, where applicable. Construction-related equipment/material staging and storage would be located entirely within the project site.

Operation of the Proposed Project

During operation of the project, chemical deliveries would be required and would be conducted by chemical delivery trucks. Deliveries of liquid SHC and liquid ammonia hydroxide would each occur roughly once every 21 days. Chlorine analyzer reagent waste would be stored on site in a fiber-reinforced tank and hauled offsite approximately once or twice per week. Non-reagent analyzer sample flow that is not stored would be recirculated into the chlorine contact tank. Sample sink, fire sprinklers and chemical eyewash station would drain into a holding tank and would be hauled offsite approximately twice per year. Should the holding tank/chlorine contact tank overflow, or need to be drained for maintenance, the water would be de-chlorinated and discharged to the storm drain located in Temescal Canyon Road. Regular inspection and maintenance work by EVMWD staff would occur once per day on weekdays. Long-term operation of the project would include well flushing a maximum of two times per year. This would entail the release of groundwater at a flowrate of approximately 800 gpm to the existing County of Riverside storm drain located in Temescal Canyon Road via the new pipeline added as part of the project. The water from storm drain discharges into the existing Temescal Wash. Electric power requirements for operation of the facility are estimated to be approximately 4,100 kilowatt hours (kWh) per day.

9. SURROUNDING LAND USES & PROJECT SETTING

The project site is located in a small, narrow area of land between I-15 and the Temescal Wash. This small area is characterized by manufacturing and industrial type uses along Temescal Canyon Road. Businesses along this corridor include heavy equipment rentals, construction, communications, stone, and paving companies. Land uses surrounding the project site include Temescal Wash to the northwest, with a recreational company for ziplining to the north beyond the wash, vacant land to the east, equipment rentals and a construction company to the south (beyond Temescal Canyon Road), a vacant graded parcel to the southwest (beyond Temescal Canyon Road), and a concrete-paver manufacturer to the west of the project site.

10. OTHER REQUIRED AGENCY APPROVALS

Elsinore Valley Municipal Water District is both the project proponent and the Lead Agency under CEQA. In its role as Lead Agency, EVMWD is responsible for ensuring the adequacy of this IS/MND. Review and approval of project construction plans would be conducted internally by EVMWD staff. Applicable permits or approvals required from other agencies for the proposed project would include the following:

- Conformance with the Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) Construction General Permit
- RWQCB Groundwater Discharge Permit
- Final Drinking Water Source Assessment and Protection (DWSAP) acceptance from the California State Water Resources Control Board Division of Drinking Water (DDW)
- Riverside County Fire Department Building Permit
- Riverside County Department of Environmental Health Certified Unified Program Agency (Hazardous Materials)

- Riverside County Transportation Department Encroachment Permit for construction along Temescal Canyon Road
- Riverside County Flood Control and Water Conservation District Encroachment Permit
- South Coast Air Quality Management District (SCAQMD) – Dust Control Plan
- Adoption of the Initial Study/Mitigated Negative Declaration – EVMWD Board of Directors
- Project Bid and Approval of Contractor/Approval of Funds – EVMWD Board of Directors

11. CALIFORNIA NATIVE TRIBE CONSULTATION

Elsinore Valley Municipal Water District has consulted with applicable Native American tribal representatives through written correspondence, based on a contact list provided by the Native American Heritage Commission (NAHC). Additionally, EVMWD staff and HELIX Environmental Planning, Inc. (HELIX) Director of Cultural Resources Mary Robbins-Wade met with representatives from Pechanga Band of Luiseño Mission Indians and Soboba Band of Luiseño Indians to discuss the project and potential effects to significant cultural resources. Consultations with the Pechanga Band of Luiseño Mission Indians and Soboba Band of Luiseño Indians will be completed prior to EVMWD's adoption of the MND and consideration of the project for approval.

12. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

A summary of the environmental factors potentially affected by this project, consisting of a Potentially Significant Impact or Less Than Significant with Mitigation Incorporated, include:

- | | | |
|--|---|--|
| ☐ Aesthetics | ☐ Agriculture/Forestry Resources | ☐ Air Quality |
| ☒ Biological Resources | ☒ Cultural Resources | ☐ Energy |
| ☐ Geology/Soils | ☐ Greenhouse Gas Emissions | ☒ Hazards & Hazardous Materials |
| ☐ Hydrology/Water Quality | ☐ Land Use & Planning | ☐ Mineral Resources |
| ☐ Noise | ☐ Population & Housing | ☐ Public Services |
| ☐ Recreation | ☐ Transportation | ☒ Tribal Cultural Resources |
| ☐ Utilities Systems | ☐ Wildfire | ☒ Mandatory Findings of Significance |

13. DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “less than significant with mitigation incorporated” 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 only analyze the effects that remain to be addressed.
- ☐ I find that 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.



Signature

8/26/2019

Date

4.0 ENVIRONMENTAL CHECKLIST

This section analyzes the potential environmental impacts which may result from the proposed project. For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and answers are provided according to the analysis undertaken as part of the Initial Study. The analysis considers the project's short-term impacts (construction-related), and its operational or day-to-day impacts. For each question, there are four possible responses. They include:

1. *No Impact*. Future development arising from the project's implementation will not have a measurable environmental impact on the environment and no additional analysis is required.
2. *Less-Than-Significant Impact*. The development associated with project implementation will have the potential to impact the environment; these impacts, however, will be less than the levels or thresholds that are considered significant, and no additional analysis is required.
3. *Less-Than-Significant with Mitigation Incorporated*. The development will have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the project's physical or operational characteristics can reduce these impacts to levels that are less than significant.
4. *Potentially Significant Impact*. Future implementation will have impacts that are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less-than-significant levels.

4.1 Aesthetics

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. In non-urbanized areas, substantially degrade the existing visual character or quality 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 and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

- a. *Have a substantial adverse effect on a scenic vista?* **Less-Than-Significant Impact.** The project site is located within the Elsinore Area Plan of Riverside County (County of Riverside 2003). The Elsinore Area Plan identifies the ridgelines of the Santa Ana Mountains and the Gavilan and Sedco Hills as significant visual resources for users of I-15 and occupants of the valley floor. Additionally, the Elsinore Area Plan identifies the Temescal Wash, which is located adjacent to the project site, as a unique feature of the area. Scenic vistas in the project area are primarily associated with the Santa Ana Mountains and the Gavilan and Sedco Hills. The proposed project would result in short-term construction-related aesthetic impacts, including the presence of construction equipment and vehicles at the project site. While this would result in minor alterations to the local visual environment for viewers in the immediate site vicinity, project construction activities would be temporary and minor in nature/extent. Following the completion of construction, the security walls, fencing, gates, wellheads, associated above-grade piping, appurtenances and sand separators, mechanical building, above-ground piping appurtenances, and chlorine contact tank would be the visible components of the project, as the proposed conveyance piping and most of the wells would be located below ground. Although the proposed wellheads and associated facilities would be visible to vehicle passengers along I-15 and Temescal Canyon Road, the project would not substantially obstruct existing scenic vistas, consisting of views to the surrounding hills/mountains. The Santa Ana Mountains are located south of I-15, and the project site is located to the north of I-15. As such, the project would not affect or impede views of scenic vistas associated with the Santa Ana Mountains for users on I-15. Likewise, given the project site's location in a narrow area of developed land between I-15 and the Temescal Wash, development of the project would not impede views of the Santa Ana Mountains or the Gavilan or Sedco Hills for occupants of the valley floor.

The project site would not be visible to valley floor occupants outside of the immediate project vicinity. Adjacent land uses to the project site include manufacturing/industrial-type businesses, many of which include storage yards and material stockpiling, surrounded by fences. Most of the project components would be similar scale to the surrounding uses yard storage and fencing heights. While the proposed mechanical building would be approximately 20 feet in height and the proposed chlorine contact tank would be approximately 12 feet in height, and both would be visible to adjacent properties and users on I-15, these structures would not significantly alter views of the Gavilan and Sedco Hills. Based on the scale of the proposed project, the surrounding/adjacent land uses in the project area, and the scale of scenic vistas identified in the area, the project would result in a less-than-significant impact associated with scenic vistas.

- b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a State-designated scenic highway?* **Less-Than-Significant Impact.** State scenic highways are designated by the California Department of Transportation (Caltrans). According to the Caltrans California Scenic Highway Mapping System, the only identified scenic highway in the project vicinity is I-15, which is located approximately 0.15 mile southwest of the project site and is listed as an Eligible (i.e., not officially designated) State Scenic Highway (Caltrans 2019). The portion of I-15 near the project site is at an elevated level in the project area, and provides views to the project site through vegetation, buildings, and equipment located on the intervening properties between I-15 and the project site. While the project site is visible from I-15, and portions of project

components such as the proposed buildings, the chlorine contact tank, and the 8-foot-tall concrete masonry unit wall, screened chain link fencing, and security gates would likely be visible to motorists passing on I-15, the project does not entail any high-profile surface facilities or facilities that would substantially stand out from the surrounding development. There are no historic buildings or rock outcroppings located within or adjacent to the project site. Based on the described conditions, project-related impacts to scenic resources associated with a state scenic highway would be less than significant.

- c. *In non-urbanized areas, substantially degrade the existing visual character or quality 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 and other regulations governing scenic quality?* **Less-Than-Significant Impact.** The project site is currently vacant and contains remnants of a dairy/cattle yard consisting of concrete foundations. During the approximately 24-month construction period, construction activities associated with the project, including the presence of construction vehicles, equipment, and staging area(s), would result in short-term visual effects to the project site and surrounding areas. However, the proposed construction activities are relatively small scale and would occur in an area consisting of manufacturing/industrial type uses. Due to the short-term and generally minor nature of the proposed construction activities, impacts associated with the existing visual character or quality of the site and surrounding areas during construction activities would be less than significant. During the long-term operation of the site, the above-ground components of the project (wellheads, mechanical building, chlorine contact tank, and concrete masonry unit wall, screened chain-link fencing, and security gates) would result in the alteration of the visual character of the site. The two wells would be constructed on concrete pads measuring four feet by four feet. The proposed mechanical building would be small, approximately 60 feet by 40 feet (approximately 2,400 square feet) and would be 20 feet in height. The chlorine contact tank would have a diameter of 22 feet and a height of 12 feet. As discussed above, the project site is located within a narrow area of development between the I-15 and the Temescal Wash. Adjacent land and nearby land uses consist of manufacturing and industrial-type businesses, many of which include storage yards and material stockpiling, surrounded by fences. While the project would result in changes to the visual character of the site during long-term operation of the project, the proposed water facilities, the concrete masonry unit wall surrounding the site, and the screened chain-link fencing surrounding the well sites and access road areas not encompassed by the concrete masonry unit wall would be similar in appearance to the surrounding properties and their associated fencing and walls. The project site would be visible to neighboring properties, as well as users of I-15 and Temescal Canyon Road. Given the existing setting of the project site and uses on adjacent properties, coupled with the proposed development at the site, the project would not substantially degrade the existing visual character of site or the surrounding areas, and impacts would be less than significant.
- d. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?* **Less-Than-Significant Impact.** As noted in the Project Description, project construction may require the use of lighting from the time between sundown and 6:00 p.m., depending on the time of year construction is occurring. If construction lighting is required, its use would be temporary and restricted to these evening hours. It would therefore

not be a substantial source of light and would not adversely affect views in the area. The project would include lighting at the well sites and at the disinfection facility to illuminate the site corners, mechanical building, and chlorine contact tank areas for security purposes. The proposed security lighting would not substantially increase light or glare at the site. The project site is located within Zone B of the Riverside County Mount Palomar Nighttime Lighting Policy Area and would be required to comply with the lighting requirements of Riverside County Ordinance No. 655 (Regulating Light Pollution) to minimize nighttime light pollution. Zone B restricts the use of certain light fixtures that emit undesirable light rays into the night sky, which may have a detrimental effect on astronomical observation and research at the Mt. Palomar Observatory. Development within that zone requires that the project maintain preservation of the night sky. Additionally, the project would not include surface structures with the potential to generate substantial glare (e.g., higher profile glass or stainless steel facilities). Compliance with County lighting requirements contained in Ordinance No. 655 would ensure impacts related to light or glare would remain less than significant.

4.2 Agriculture and Forestry Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
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 as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency?* **No Impact.** There are no areas within or adjacent to the project site designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (California Department of Conservation [CDC] 2016a). The project site is designated as Farmland of Local Importance by the CDC (2016a). Adjacent land includes land designated as Urban and Built-Up Land and Other Land to the south, Other Land and Farmland of Local Importance to the west and east, and Grazing Land to the north of the project site. The project site and adjacent land are not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program. As such, the project would not result in the conversion of Prime or Unique Farmland or Farmland of Statewide Importance to a non-agricultural use. Implementation of the proposed project would not convert farmland to a different land use, however, because the site is currently vacant and is not planned to be used as farmland. No impact would occur.
- b. *Conflict with existing zoning for agricultural use, or a Williamson Act Contract?* **No Impact.** There are no areas zoned for agriculture or designated Williamson Act Contract lands within or adjacent to the project site (CDC 2016b). The project site is designated as Non-Enrolled Land, and adjacent areas are designated as Non-Enrolled Land and Urban and Built-Up Land. As a result, no associated impacts would result from implementation of the proposed project.
- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?* **No Impact.** The project site is not designated or zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not conflict with existing zoning for such lands, and no impact would occur.
- d. *Result in the loss of forest land or conversion of forest land to non-forest use?* **No Impact.** As previously stated, the project site is not located within or adjacent to areas designated or zoned as forest land. As a result, project implementation would not convert forest land to non-forest use, and no impact would occur.
- 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?* **No Impact.** As described above for Responses 4.2a through 4.2d, there are no pertinent agricultural- or forestry-related uses or designations located within or adjacent to the project site. Accordingly, the proposed project would not involve changes that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, and no associated impacts would occur.

4.3 Air Quality

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Where available, the significance criteria established by the applicable air quality management district 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?	☐	☐	☐	☒
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under the applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

- a. *Conflict with or obstruct implementation of the applicable air quality plan?* **No Impact.** The project is located within the South Coast Air Basin (Basin) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD develops and administers local regulations for stationary air pollutant sources within the Basin and develops plans and programs to meet attainment requirements for both federal and State Ambient Air Quality Standards (AAQS). SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin (SCAQMD 2017). The AQMP is a series of plans adopted for the purpose of reaching short- and long-term goals for those pollutants that the Basin is designated as a “nonattainment” area because the Basin does not meet federal and/or state AAQS. To determine consistency between the project and the AQMP, the project must comply with applicable SCAQMD rules and regulations; comply with proposed or adopted control measures; and be consistent with the growth forecasts utilized in preparation of the AQMP, which are based on regional population, housing, and employment projections prepared by SCAG.

The project would not result in a significant air quality impact from operational activity, as described below. Moreover, as discussed under Section 4.14, *Population and Housing*, the proposed project does not include growth-generating components, but rather would accommodate existing and planned growth. As such, the project would be consistent with growth projections contained in the County’s General Plan and SCAG and AQMP forecasts. Based on these considerations and pursuant to SCAQMD guidelines, project-related emissions are accounted for in the AQMP, and no impact would occur.

- b. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under the applicable federal or state ambient air quality standard?* **Less-Than-Significant Impact.** The SCAQMD establishes significance thresholds to assess the regional impact of project-related air pollutant emissions in the SCAQMD. Table 2, *SCAQMD Criteria Pollutant Mass Emissions Significance Thresholds*,

summarizes the SCAQMD's mass emissions thresholds, which are presented for both short-term construction and long-term operational emissions. A project with emissions rates below these thresholds is considered to have a less-than-significant impact on air quality.

Table 2 SCAQMD CRITERIA POLLUTANT MASS EMISSIONS SIGNIFICANCE THRESHOLDS		
Criteria Pollutant	Emission Threshold (pounds per day)	
	Construction	Operation
Volatile Organic Compounds (VOC)	75	55
Oxides of Nitrogen (NO _x)	100	55
Carbon Monoxide (CO)	550	550
Particulate Matter (PM ₁₀)	150	150
Particulate Matter (PM _{2.5})	55	55
Oxides of Sulfur (SO _x)	150	150

Source: SCAQMD 2015

Regional Construction Impacts

The proposed project would result in emissions during construction activities, including emissions associated with concrete demolition; grading; pipeline trenching, installation, and backfill; paving; building, tank, and well construction; and application of architectural and protective coatings. These emissions would be limited and short term in nature. Additionally, construction emissions include those associated with the transport of construction materials and equipment to the site, and emissions associated with equipment operation and soil movement at the site. Other construction-related emissions would occur from workers' vehicles traveling to and from the project site for construction activities. EVMWD prepared an Initial Study for a similar project in 2017, the Flagler Well Conversion Pipeline Project. That project included components that were nearly identical to the currently proposed Lee Lake Wells Project, with two primary exceptions: (1) the Flagler Well Conversion Pipeline Project included the demolition of an old fire station, which is not proposed as part of the Lee Lake Wells Project, and (2) the currently proposed project would construct two new wells, while the Flagler Well Conversion Pipeline Project converted two existing agricultural wells. For this reason, the emissions calculated for the Flagler Well Conversion Pipeline Project would be similar to those associated with the proposed project. For the purposes of assessing the environmental impacts of the project associated with air quality, the construction emissions from the Flagler Well Conversion Pipeline Project are presented below. Because the proposed project has nearly identical components, construction emissions would be similar; however, the project is expected to have reduced emissions compare to Flagler Well Conversion Pipeline Project because it does not include the demolition of a building (the proposed project includes demolition of concrete), as the Flagler Well Conversion Pipeline Project did. Construction emissions calculated for the Flagler Well Conversion Pipeline Project occurred over a 12-month period. Construction activity for the proposed project would occur over a 24-month period, which would further reduce daily construction emissions or the proposed project as compared to the Flagler Well Conversion Pipeline Project. Dust control by watering was assumed, consistent with the requirements of

SCAQMD Rule 403. The anticipated construction equipment mix is shown in the Project Description section of this Initial Study (Table 1).

Maximum daily emissions during the peak work day, based on the Flagler Wells Conversion Pipeline Project are shown in Table 3, *Estimated Maximum Daily Construction Emissions*. As shown in Table 3, criteria pollutant emissions would not exceed the respective screening thresholds. In addition, actual emissions could be less than those identified for the Flagler Wells Conversion Pipeline Project due to the fact that no building demolition is required for the proposed project, and construction activities would occur over a 24-month period versus the 12-month period analyzed for the Flagler Well Conversion Pipeline Project. As shown in Table 3, construction emissions associated with the Flagler Wells Conversion Pipeline Project were far below SCAQMD thresholds. As the proposed project would be expected to have similar, although potentially reduced emissions as compared to the Flagler Wells Conversion Pipeline Project, construction-related air quality impacts would be less than significant.

Table 3						
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS						
	Pollutant Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Year 1 of Construction	2.73	25.28	15.27	0.03	1.79	1.42
Year 2 of Construction	3.43	15.56	12.39	0.03	1.19	0.90
Maximum Daily Emissions	3.43	25.28	15.27	0.03	1.79	1.42
SCAQMD Regional Thresholds	75	100	550	150	150	55
Significant Impact?	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2015 (Thresholds); Flagler Wells Conversion Pipeline Project Initial Study 2017 (Estimated Pollutant Emissions)

PM10 and PM2.5 estimates reflect control of fugitive dust required by SCAQMD Rule 403.

Localized Construction Impacts

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look up tables and project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: nitrogen dioxide (NO₂), CO, PM₁₀, and PM_{2.5}. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. For PM₁₀ and PM_{2.5}, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The SCAQMD provides LST mass rate look-up tables for projects that are one acre, two acres, or five acres. For projects that exceed five acres, the five-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis.

When quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Consistent with the SCAQMD's LST methodology guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. The LSTs for a five-acre site located in Source Receptor Area 25, Lake Elsinore, with receptors at a distance of 25 meters were used (25 meters is a conservative distance, given that residences are located at a distance of 0.3 mile, or 482 meters, from the site). The results of the LST analysis are provided in Table 4, *Localized Construction Emissions*. As shown in Table 4, localized emissions for all criteria pollutants would be less than their respective SCAQMD LST significance thresholds. Thus, associated impacts would be less than significant.

To reduce potential effects to sensitive receptors, the project would comply with SCAQMD Rule 403, which requires fugitive dust control measures, including the use of an on-site water truck to wet down active grading areas and roads at least twice daily.

Table 4 LOCALIZED CONSTRUCTION EMISSIONS				
	Pollutant Emissions (pounds per day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Maximum Daily Emissions	25	15	2	1
SCAQMD LSTs	371	1,965	13	8
<i>Significant Impact?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2009 (Thresholds)

Operational Impacts

Emissions associated with operation of the project would result from daily EVMWD maintenance trips, chlorine analyzer reagent waste hauling (approximately once or twice per week), and chemical truck deliveries (SHC liquid trucks roughly every 21 days and liquid ammonium hydroxide truck once roughly every 21 days). No generators would be used during operation, as the wells would be powered by electricity provided by existing Southern California Edison facilities. The operational scenario for Flagler Wells Conversion Pipeline Project (EVMWD 2017b) is similar to the proposed Lee Lake Wells project. Thus, the emissions calculated for the Flagler Wells Conversion Pipeline Project are shown in Table 5, *Maximum Daily Operational Emissions*. The proposed project would result in similar operational emissions. As shown in Table 5, maximum daily operational emissions generated by the project would be substantially lower than the regional and LST screening level thresholds for criteria pollutants. Therefore, operational-related air quality impacts would be less than significant.

Table 5 ESTIMATED MAXIMUM DAILY OPERATIONAL EMISSIONS						
	Pollutant Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Vehicular source emissions – employee trips	0.00	0.04	0.07	0.00	0.00	0.01
Vehicular source emissions – truck deliveries	0.02	0.57	1.75	0.00	0.01	0.02
Maximum Daily Emissions	0.02	0.61	1.82	0.00	0.01	0.03
SCAQMD Regional Thresholds	55	55	550	150	150	55
SCAQMD LSTs	N/A	371	1,965	N/A	4	2
Significant Impact?	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2009 and 2015 (Thresholds); Flagler Wells Conversion Pipeline Project Initial Study 2017 (Estimated Pollutant Emissions)

The SCAQMD’s approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed in response 4.3a above, the proposed project would be consistent with the AQMP, which is intended to bring the Basin into attainment for all criteria pollutants. In addition, daily emissions would be localized within the immediate project vicinity, with the majority of project-related emissions being temporary and below established SCAQMD thresholds. Accordingly, impacts to air quality would be less than significant.

- c. *Expose sensitive receptors to substantial pollutant concentrations?* **Less-Than-Significant Impact.** Sensitive populations (i.e., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than the general population. Land uses considered sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. The project site is not located within an area containing sensitive receptors. The closest sensitive receptors are located approximately 0.3 mile from the project site, on the south side of I-15. During the 24-month project construction period, diesel exhaust particulate matter would be generated from construction equipment and vehicles. Diesel exhaust particulate matter is known by the State of California to include carcinogenic compounds, and long-term exposure to diesel exhaust emissions has the potential to result in adverse health effects. The risks associated with exposure to carcinogenic substances are typically evaluated based on a lifetime of chronic exposure, however, which is defined in the California Air Pollution Control Officers’ Association Air Toxics “Hot Spots” Program Risk Assessment Guidelines as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Accordingly, due to the short-term nature of project construction, the fact that long-term operation would entail only minimal emissions generation as described, and the distance to the nearest sensitive receptors, potential impacts related to exposure of sensitive receptors to substantial pollutant concentrations (including diesel exhaust emissions) would be less than significant.
- d. *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?* **Less-Than-Significant Impact.** During the construction period, emission-related odors from construction equipment/vehicles (particularly diesel exhaust)

may occur temporarily in the immediately surrounding area. Specifically, construction equipment and vehicles could intermittently emit diesel exhaust perceptible by nearby receptors along roadways (i.e., from transport vehicles) and near the project site during construction. These odors would not affect a substantial number of people, as construction activities (including vehicle trips) would be minor in duration and extent as previously described. Diesel-powered construction equipment and vehicles would also be required to comply with the State Airborne Toxics Control Measure (ATCM) standards for diesel particulate matter emissions, including a five-minute idling limit. Based on the described conditions, exposure of local receptors to diesel exhaust emissions and odors would be minimized. Operation of the wells, pipelines, and booster pump station would not result in the generation of odors. The chlorine contact tank would store chlorinated water, but no water treatment or odor-causing activities would be associated with the tank. Ammonium hydroxide has the potential to off-gas during transfer from the delivery truck to the storage tank (and thus, result in odors), which would be conducted on site as part of normal operations. The storage tank would be equipped with a camlock connection to provide a secured, sealed connection between a chemical feed hose from the delivery truck to the tank. The storage tank would be a closed system and would be installed with a submerged vent connected to a water bath to prevent vapors from escaping into the atmosphere. The transfer and storage measures described would prevent odors associated with the ammonia feed and storage system during long-term operation of the site. As such, the project would not create odors that would affect a substantial number of people, and associated potential impacts would be less than significant.

4.4 **BIOLOGICAL RESOURCES**

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
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?	☐	☒	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☐	☐	☒
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?	☐	☒	☐	☐

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

A Biological Resources Letter Report was prepared for the project by HELIX (HELIX 2019a; Appendix A) to summarize the existing biological resources within the site and provide an analysis of the proposed impacts in accordance with CEQA and applicable federal, state, and local policy, including consistency with the adopted Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The following discussion of impacts to biological resources associated with the project is based on the Biological Resources Letter Report.

- 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?* **Less-Than-Significant with Mitigation Incorporated.**

Sensitive Species

A general biological survey and reviews of United States Fish and Wildlife Service (USFWS) species records, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database, and the California Native Plant Society (CNPS) Electronic Inventory were conducted to determine the potential presence of sensitive species within the project site and surrounding area. Based on the reviews, 73 special-status plant species are known to occur within the records search assessment area. Eighteen of the 73 plant species have potential to occur in the project vicinity, including two listed species, the federally listed as endangered San Diego ambrosia (*Ambrosia pumila*) and the federally and state-listed as endangered San Diego button-celery (*Eryngium aristulatum* var. *parishii*). The San Diego ambrosia has a moderate potential to occur, and the San Diego button-celery has low potential to occur in the project vicinity. The project site was assessed for potential to support sensitive plant species on January 31, 2019. The assessment included documenting the habitats and soils that occur on site, along with documenting plants observed within and adjacent to the project site. Sensitive plant species have potential to occur on the east side of the project site. The project proposes to restrict activities to the west side of the project site that is essentially void of vegetation. Based on the habitat assessment, the potential to support sensitive plant species does not occur within the proposed project impact area. As such, no impact to habitat with potential to support sensitive plants would occur.

Fifty-six listed or sensitive animal species are known to occur in the general vicinity of the project site. A total of 17 of the 56 have moderate or low potential to occur in the project vicinity, including the federally and state-listed as endangered least Bell's vireo (*Vireo bellii*

pusillus). The other 16 species include 3 mammals, 8 birds, and 5 reptiles and amphibians. The project site was assessed for potential to support sensitive plant species on January 31, 2019. Based on this assessment, burrowing owl is the only listed or sensitive animal species that has the potential to occur within the project site. The project site area is mostly void of vegetation and thus void of habitat that would be used by most of the species with potential to occur in the project vicinity. The project area includes a few fossorial mammal burrows of appropriate size to support burrowing owls. No sign of burrowing was observed during the habitat assessment or the four protocol surveys conducted in February, April, May, and June 2019. Impacts to burrowing owls, if present prior to construction, would be potentially significant and mitigation is required. Implementation of mitigation measure BIO-1 would reduce impacts to a less-than-significant level. While the least Bell's vireo is not expected to occur on the project site due to lack of habitat, the least Bell's vireo is known to occur in the riparian habitat along Temescal Wash. Refer to response 4.4(d) for further a discussion of impacts to least Bell's vireo breeding habitat.

Nesting Birds

The study area contains some trees, shrubs, and other vegetation that provide potential nesting habitat for common birds, including birds and raptors protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code). Construction of the proposed project could occur during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds and violation of the MBTA and CFG Code. Direct impacts could occur as a result of removal of vegetation or soil supporting an active nest. Indirect impacts could occur as a result of construction noise impacting nearby trees or rocky beach areas, if they supported an active nest. Impacts would be considered significant if construction occurs within 300 feet of an active passerine nest or within 500 feet of an active raptor nest. Implementation of mitigation measure BIO-2 would reduce potentially significant impacts on nesting birds and raptors to less-than-significant levels. In addition, although protocol burrowing owl surveys were negative, the study area supports potential burrowing owl habitat, and therefore a pre-construction survey is required in order to avoid impacts on burrowing owls, as detailed in mitigation measure BIO-1 below.

BIO-1 Burrowing Owl. In compliance with the CDFW *Staff Report on Burrowing Owl Mitigation* (2012), a protocol four-visit survey has been conducted for the project, with surveys conducted in April, May, and June 2019. No burrowing owls or signs of burrowing owl were identified at the project site during the surveys. A take avoidance survey shall be conducted on the project site no more than 14 days prior to ground disturbance to determine presence of burrowing owl. If the take avoidance survey is negative and burrowing owl is confirmed to be absent, then ground-disturbing activities shall be allowed to commence, and no further mitigation would be required.

If burrowing owl are observed during the take avoidance survey, active burrows shall be avoided by the project, in accordance with the CDFW's Staff Report (2012). The CDFW shall be immediately informed of any burrowing observations. A Burrowing Owl Protection and Relocation Plan (plan) shall be prepared by a qualified biologist, which must be sent for approval by CDFW prior to initiating

ground disturbance. The plan shall detail avoidance measures that shall be implemented during construction and passive or active relocation methodology. Relocation shall only occur outside of the nesting season for burrowing owl (February 1 through August 31).

BIO-2 Nesting Bird and Raptor Avoidance. If initial grading and vegetation removal activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird breeding season for migratory birds and raptors (January 15 through September 15), the project applicant shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of the activities. If the qualified biologist determines that no active migratory bird or raptor nests occur within 300 feet of the impact site (500 feet for raptors), the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or until noise barriers have been installed that adequately protect the nest, as determined by the qualified biologist.

- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?* **Less-Than-Significant with Mitigation Incorporated.** The project biological study area supports seven vegetation communities or land cover types, four of which are considered sensitive natural communities, including: riparian scrub, riparian woodland, southern willow scrub, and emergent wetland. All temporary and permanent project impacts would occur within disturbed habitat and developed land. Temporary impacts would be associated with the construction staging areas and trenching for underground pipes. Permanent impacts would be associated with the wells, booster pump station, centralized disinfection facility, and security walls and fencing.

Potentially significant indirect impacts could occur if storm water runoff is not controlled at the construction site, and sediment, toxics, and/or other materials are inadvertently carried into adjacent or downstream sensitive habitats. Further, if the construction work areas are not properly fenced, inadvertent encroachment into adjacent sensitive habitat could occur. Compliance with existing regulations for water quality, storm water management, and implementation of mitigation measure BIO-3 would reduce potentially significant impacts to sensitive natural communities to less-than-significant levels.

BIO-3 Construction Fencing. Temporary construction fencing shall be installed at the limits of project impacts (including construction staging areas and off-street access routes) adjacent to sensitive habitat to prevent sensitive habitat impacts and to prevent the spread of silt from the construction zone into adjacent habitats. Temporary fencing shall be located on the eastern and northern boundary of the

impact area. Fencing shall be installed in a manner that does not impact habitats to be avoided.

Construction crews shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint. Equipment maintenance, staging, and dispensing of fuel, oil, coolant, or other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located as to prevent runoff from entering adjacent habitat and shall be shown on the construction plans. Contractor equipment shall be checked for leaks prior to operation and repair, as necessary. “No-fueling zones” shall be designated on construction plans.

If work occurs beyond the fenced or demarcated limits of impact, work shall cease until the problem has been remedied to the satisfaction of EVMWD. Impacts that occur to sensitive areas beyond the approved fence shall be mitigated as determined by EVMWD and, as applicable based on the jurisdiction of the affected resources, in coordination with the USFWS, U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW. Temporary construction fencing shall be removed upon project completion.

- c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? **No impact.*** Jurisdictional waters and wetlands include waters of the U.S. regulated by the USACE pursuant to Clean Water Act (CWA) Section 404; waters of the State regulated by the RWQCB pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; streambed and riparian habitat regulated by the CDFW pursuant to Sections 1600 *et seq.* of CFG Code; and/or Riparian/Riverine Areas defined in Section 6.1.2 of the MSHCP.

HELIX’s jurisdictional delineation determined that the small pipe outlets on the northern side of the project site drains toward the riparian habitat that comprises Temescal Wash. The riparian habitat associated with Temescal Wash occurs outside of the project site. Additional riparian habitats and streambed were mapped on the eastern side of the project site, outside of the project impact area. A concrete channel occurs on the south side of Temescal Canyon Road and connects to the natural stream that is tributary to Temescal Wash. The concrete channel appears to be a channelization of a naturally occurring stream. Waters collected from the west side of I-15 are conveyed underground and emerge in the concrete channel west of Temescal Canyon Road. Flows in the channel connect to the streambed on the east side of Temescal Canyon Road, and then to Temescal Wash.

Pump-to-waste water associated with the proposed project would be routed to an air gap onsite. The water would gravity flow to the existing County of Riverside storm drain within Temescal Canyon Road. As such, the proposed project would not discharge to or have a substantial adverse effect on federally protected wetlands. No impact would occur.

- 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?* **Less-Than-Significant Impact with Mitigation**

Incorporated. The study area occurs adjacent to Temescal Wash. The project impacts will not interfere with the movement of resident or migratory fish or wildlife species. Noise from project construction has potential to affect breeding habitat for least Bell's vireo.

BIO-4 Least Bell's Vireo Nesting. Least Bell's vireo are known to occur in the riparian habitat along Temescal Wash. Between March 15 and September 15, which represents the least Bell's vireo breeding season, the increase in ambient noise levels due to construction shall not exceed 3 dBL_{eq} (one-hour average) at the nearest active least Bell's vireo nest. In the absence of U.S. Fish and Wildlife Service-protocol least Bell's vireo surveys to determine specific nest locations, this noise limit shall apply to the near edge of the riparian habitat that occurs to the northeast of the proposed project limits of construction. This limit on noise increases may be achieved by conducting the loudest construction activities (e.g., well drilling and grading) prior to March 15, altering construction equipment to make it quieter (e.g., using flashes instead of beeps as a backup alarm), erecting noise-reducing barriers between the limits of construction and the riparian habitat, placing stationary equipment (e.g., generators) as far from the riparian habitat as feasible, or some combination of these methods.

If construction noise monitoring indicates that construction during the least Bell's vireo breeding season is causing an increase in excess of 3 dBL_{eq} at the nearest nest or edge of the riparian habitat, as applicable, additional/larger noise barriers and/or additional changes to reduce construction noise generation will be required until the noise level increase is reduced to 3 dBL_{eq} or less.

Modeling of projected construction noise indicates that a 10-foot-high noise barrier would be adequate to prevent construction-related noise levels from generating an increase of 3 dBL_{eq} or higher in the potential least Bell's vireo habitat near the proposed project footprint.

- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?* **No Impact.** The project would not conflict with local policies or ordinances protecting biological resources.
- 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?* **No Impact.** The project occurs within the boundaries of the adopted MSHCP. Although EVMWD is not subject to the MSHCP, the project would be consistent with the MSHCP. The project would not impact land targeted for conservation to contribute to assembly of the MSHCP preserve. For the complete MSHCP consistency analysis, see the Biological Resources Letter Report included as Appendix A. No impacts related to the MSHCP would occur.

4.5 CULTURAL RESOURCES

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5 of CEQA?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

A Cultural Resources Survey Report for the project was prepared by HELIX (HELIX 2019b; Appendix B) to document existing cultural resource conditions within the project site and vicinity, identify the presence of sensitive resources, and evaluate the potential for project-related impacts. The results and conclusions of the Cultural Resources Survey Report are summarized herein as appropriate.

- a. *Cause a substantial adverse change in the significance of a historical resource as pursuant to Section 15064.5 of CEQA?* **No Impact.** The project's Cultural Resources Survey Report assessed the potential for the presence of historical resources in and around the project site through a records search at the Eastern Information Center (EIC), a review of historical photographs, and a pedestrian survey. The only archaeological resources identified within the project area are the remnants of a cattle yard/dairy dating to the mid-1960s. The end date of the cattle yard is not known, but the buildings and structures were removed by the mid-1990s. These features were recorded at EIC as a single resource. The cattle yard/dairy does not meet the criteria for listing on the California Register of Historical Resources or the National Register of Historic Places; it is not associated with events that have made a significant contribution to the broad patterns of our history; is not known to be associated with the lives of persons significant in our past; does not embody the distinctive characteristics of a type, period or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; and has not yielded, nor may be likely to yield, information important in prehistory or history. Therefore, the cattle yard/dairy is not a historical resource under CEQA or a historic property under the National Historic Preservation Act, and impacts to it do not constitute significant effects. As such, the project would not cause a substantial adverse change in the significance of a historical resource and no impact would occur.
- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?* **Less-Than-Significant with Mitigation Incorporated.** The project's Cultural Resources Survey Report assessed the potential for the presence of archaeological resources in and around the project site through a records search

at the EIC, Native American outreach, and a pedestrian survey. The investigation indicated that despite the lack of recorded cultural resources within and immediately adjacent to the project site, numerous resources have been recorded within one mile of the project site. In addition, representatives of the Pechanga Band of Luiseño Indians indicated that the area is part of Traditional Cultural Property and is sensitive in terms of cultural resources. Representatives of the Rincon Band of Luiseño Indians have identified the area as being within the Traditional Cultural Landscape of the Luiseño people, and within Rincon's specific area of Historic interest. Further, the Rincon Band of Luiseño Indians indicated that the City of Lake Elsinore is considered by the Rincon Band to be a Traditional Cultural Place (TCP) within a Traditional Cultural Landscape (TCL), as it is associated with the Luiseño Creation Story and traditional practices and the Temescal Valley Road is believed by Rincon to be a trading route, utilized by the Luiseno people for thousands of years. The Soboba Band of Luiseño Indians indicated that although the project site is outside of the existing reservation, the project area is within the bounds of Soboba's Tribal Traditional Use Areas, is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba. Soboba requested to initiate consultation with the project proponents and lead agency and the transfer of information to Soboba regarding the progress of the project. Soboba also requested to continue to act as a consulting tribal entity for the project, for Native American Monitors from the Soboba Band of Luiseño Indians to be present during any ground disturbing proceedings, proper procedures be taken, and requests of the tribe be honored. It is therefore recommended that a cultural resource monitoring program be implemented for the project, as described below in mitigation measures CR-1 through CR-9. With the inclusion of mitigation measures CR-1 through CR-9, impacts associated with archaeological resources would be less than significant.

CR-1 Monitor Ground-disturbing Activities. At least 30 days prior to grading, excavation and/or other ground-disturbing activities on the Project site, EVMWD shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology and listed on the Register of Professional Archaeologists (RPA) or the County of Riverside list of qualified archaeologists to monitor ground-disturbing activities.

CR-2 Tribal Monitoring Agreements. At least 30 days prior to grading, excavation, and/or other ground-disturbing activities EVMWD shall contact both the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians to notify each Tribe of excavation activities and coordinate with the Tribes to develop Monitoring Agreements. The Agreements shall address the designation, responsibilities, and participation of Native American tribal monitors during excavation and other ground disturbing activities and construction scheduling.

CR-3 Develop a Cultural Resources Monitoring Plan. The Project Archaeologist, in consultation with the Monitoring Tribe(s) and EVMWD, shall develop a Cultural Resources Monitoring Plan (CRMP) to address the details, timing and responsibility of archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:

- a. Project grading and development scheduling;
- b. The coordination of a monitoring schedule as agreed upon by the Monitoring Tribe(s), the Project archaeologist, and EVMWD; and
- c. The protocols and stipulations that EVMWD, the Monitoring Tribe(s) and the Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including newly discovered cultural resources.

CR-4 Cultural Resources Sensitivity Training. Prior to grading, excavation and/or other ground-disturbing activities on the project site, the project archaeologist and the Monitoring Tribe(s) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. EVMWD's construction manager shall ensure that construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance.

CR-5 Authority to Stop and Redirect Excavation. In accordance with the agreement required in CR-2, the Project archaeologist and designated tribal monitor(s) assigned to the project by the Luiseño Tribe(s) shall have the authority to stop and redirect excavation in order to evaluate the significance of archaeological resources discovered on the property.

CR-6 Evaluation of Discovered Artifacts. All artifacts discovered at the development site shall be inventoried and analyzed by the project archaeologist and Native American monitor(s). If artifacts of Native American origin are discovered, activities in the immediate vicinity of the find (within a 50-foot radius) shall stop. The project archaeologist and Native American monitor(s) shall analyze the Native American artifacts for identification as everyday life and/or religious or sacred items, cultural affiliation, temporal placement, and function, as deemed possible. The significance of Native American resources shall be evaluated in accordance with the provisions of CEQA and shall consider the religious beliefs, customs, and practices of the Luiseño tribes. All items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling.

EVMWD shall relinquish ownership of all cultural resources. Native American artifacts that cannot be avoided or relocated at the project site shall be prepared in a manner for curation. Within a reasonable amount of time, the project archaeologist, following consultation with the Monitoring Tribe(s), shall deliver the materials to a qualified repository in Riverside County that meets or exceeds federal standards per 36 CFR Part 79 and which shall be made available to qualified researchers and tribal representatives.

CR-7 Inadvertent Discovery of Resources. If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, EVMWD and the

project archaeologist with the Monitoring Tribes shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. The determination as to the significance or the mitigation for such resources will be based on the provisions of CEQA and shall take into account the religious beliefs, customs, and practices of the Monitoring Tribes.

CR-8 Sacred Sites. All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.

CR-9 Final Archaeological Report. The project archaeologist shall prepare a final archaeological report within 60 days of completion of the project. The report shall follow Archaeological Resource Management Report (ARMR) Guidelines (California Office of Historic Preservation 1990) and EVMWD requirements and shall include at a minimum: a discussion of monitoring methods and techniques used, the results of the monitoring program including artifacts recovered, an inventory of resources recovered, updated Department of Parks and Recreation (DPR) forms, if any, and any other site(s) identified, final disposition of the resources, and any additional recommendations. A final copy shall be submitted to EVMWD, EIC, and the Monitoring Tribe(s).

- c. *Disturb any human remains, including those interred outside of formal cemeteries?* **Less-Than-Significant with Mitigated Incorporated.** As noted in Response 4.5b, no cultural resources (including human remains) were observed within or immediately adjacent to the project site during the pedestrian survey. Although not anticipated, the potential exists to encounter human remains during project implementation. If human remains are discovered, impacts would be potentially significant. As such, mitigation measures CR-1 through CR-9 listed in Response 4.5b, as well as mitigation measure CR-10 below, are required, and would reduce impacts related to human remains to a less-than-significant level.

CR-10 Human Remains. If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours. Subsequently, the NAHC shall identify the person or persons it believes to be the “most likely descendant.” The most likely descendant may then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

4.6 Energy

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

- a. *Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*
Less-Than-Significant Impact. Project construction would occur over a period of 24 months. During construction, there would be a temporary consumption of energy resources (ie. fuel) through the operation of construction equipment, trucks, and worker vehicle traffic. During the long-term operation of the project, energy would be consumed through the electric power used to operate the facility as well as the fuel usage associated with daily worker maintenance trips and the chemical delivery truck trips. Average electricity usage at the site is anticipated to be 4,100 kWh per day from operation of the 225 kilovolt-amperes Southern California Edison transformer that would operate the two well pumps, two booster pumps, and disinfection facilities. The annual electricity usage (assuming 365 days of operation) was estimated to be 1,500,000 kilowatt-hours per year. The project is part of the Near-Term Water Supply Program developed by EVMWD which aims to optimize groundwater resources to increase potable supply while reducing dependence on imported water sources. Increased dependence on local water supplies would reduce energy consumption associated with the import of water. The temporary consumption of fuel during project construction, as well as the fuel and electrical requirements associated with the operation of the project would not be considered wasteful, inefficient, or unnecessary and would not result in a potential significant environmental impact. Impacts would be less than significant.
- b. *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency??*
No Impact. The project would be built and operated in accordance with existing, applicable regulations. Construction equipment and operational equipment would be maintained to allow for continuous energy-efficient operations. Accordingly, the project would not conflict with existing energy standards or regulations, and no impact would occur.

4.7 Geology and Soils

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Directly or indirectly cause 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 California Geological Survey Special Publication 42)?; or, (ii) strong seismic ground shaking?; or, (iii) seismic-related ground failure, including liquefaction?; or, (iv) landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

a. *Expose people or structures to 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 California Geological Survey Special Publication 42)?* **Less-Than-Significant Impact.** The proposed project is located approximately 1.5 mile from the Glen Ivy North Fault, which is part of the Elsinore Fault Zone (California Geological Survey [CGS] 2010). Other nearby faults include the Wildomar and Willard Faults. A large magnitude earthquake along local segments of these faults could potentially result in local ground rupture effects which could damage the facilities. While the probability of such an occurrence is considered low, due to the location of the proposed facilities and the active nature and seismicity potential of the Elsinore Fault Zone, the proposed project's design includes measures that would minimize the potential for pipeline rupture and associated damages.

The potential impacts related to the proximity of the proposed project to local and regional fault zones would be addressed through conformance with associated

regulatory and industry standards, including applicable elements of the IBC and CBC. Compliance with these requirements would reduce impacts to less than significant.

- ii) *Strong seismic ground shaking? **Less-Than-Significant Impact.*** As noted above, the proposed project is located near the Elsinore Fault Zone, which is a seismically active region subject to potential ground acceleration (ground shaking) effects from earthquake events along associated faults. While the project site and proposed facilities could potentially be subject to moderate or severe ground shaking effects from earthquakes along the noted (or other regional) fault structures, they would be designed and constructed in conformance with applicable elements of the IBC and CBC. Specifically, these standards typically involve incorporating seismic factors into facility design, through efforts such as remedial grading (e.g., removal and/or reconditioning unsuitable soils), appropriate slope design and drainage, and use of properly engineered fill. Conformance with pertinent regulatory and industry standards as noted, would reduce the potential effects of seismic ground shaking on proposed facilities to less-than-significant levels.
- iii) *Seismic-related ground failure, including liquefaction? **Less-Than-Significant Impact.*** Liquefaction and related effects such as dynamic settlement can be caused by seismic ground shaking. Loose (cohesionless), saturated, and granular (low clay/silt content) soils with relative densities of less than approximately 70 percent are the most susceptible to these effects. Liquefaction results in a rapid pore-water pressure increase and a corresponding loss of shear strength, with affected soils behaving as a viscous liquid. Surface and subsurface manifestations from these events can include loss of support for structures, excessive (dynamic) settlement, the occurrence of sand boils (i.e., sand and water ejected at the surface), and other effects such as lateral spreading (horizontal displacement on sloped surfaces as a result of underlying liquefaction).

According to the Riverside County General Plan Elsinore Area Plan, the project site has low to moderate liquefaction potential due to shallow groundwater and susceptible sediments. A site-specific liquefaction evaluation was performed by Leighton Consulting which determined that the liquefaction potential at the project site is considered to be low (Leighton Consulting 2018). The effects of liquefaction can be reduced through standard design and construction techniques similar to those described above under the discussion of seismic ground shaking. As previously noted, the proposed project would be designed and constructed in conformance with associated regulatory and industry standards, including applicable elements of the IBC and CBC. Based on these considerations, potential impacts associated with liquefaction and related hazards from implementation of the proposed project would be less than significant.

- iv) *Landslides? **Less-Than-Significant Impact.*** The occurrence of landslides and other types of slope failures (e.g., rock falls and mudflows) is influenced by a number of factors, including slope grade, geologic and soil characteristics, moisture levels and vegetation cover. Landslides can be triggered by a variety of potentially destabilizing conditions or events, such as gravity, fires, precipitation, grading and seismic activity. The project site is not located within an area identified by the Elsinore Area Plan as

containing existing landslides, or areas of susceptibility to seismically induced landslides (Figure 14 of the Elsinore Area Plan). The project site and surrounding areas are relatively flat, at approximately 1,200 feet above mean sea level (AMSL); therefore, the occurrence of landslides is not likely. The proposed project would be designed and constructed in conformance with associated regulatory and industry standards as previously described, including applicable elements of the IBC and CBC. Based on these considerations and general site conditions, potential impacts related to landslide hazards from implementation of the proposed project would be less than significant.

- b. *Result in substantial soil erosion or the loss of topsoil? **Less-Than-Significant Impact.***
- Implementation of the proposed project would increase the potential for erosion and transport of eroded material (sedimentation) both within and around the project site. Specifically, proposed activities would involve: (1) removal of surface stabilizing features (e.g., vegetation); (2) excavation of previously undisturbed and compacted materials; and (3) redeposition of backfill in proposed development areas. While these areas would be stabilized through efforts such as paving/repaving and revegetation/landscaping, erosion potential would be higher in the short-term than during pre-construction conditions. Potential erosion and sedimentation effects are primarily associated with the project construction period and are not considered to be significant long-term concerns, as developed areas would be stabilized as noted. The off-site transport of sediment could also potentially result in effects to downstream receiving waters, such as increased turbidity and the provision of a transport mechanism for other contaminants that tend to adhere to sediment particles (e.g., hydrocarbons). Additional discussion of potential water quality effects associated with project-related erosion and sedimentation is provided below in Response 4.10a.

Short-term erosion and sedimentation impacts would be addressed through conformance with applicable elements of the NPDES Construction General Permit and related County requirements, including the County grading and water quality ordinances. Specifically, this would entail measures such as implementing an approved SWPPP, an associated Construction Site Monitoring Program (CSMP), employee training, and minimum best management practices (BMPs), as well as a Rain Event Action Plan (REAP) for applicable projects (i.e., those in Risk Categories 2 or 3 outlined below). Under the Construction General Permit, project sites are designated as Risk Level 1 through 3 based on site-specific criteria (e.g., erosion potential and receiving water risk), with Risk Level 3 sites requiring the most stringent controls. While specific BMPs would be determined during the SWPPP process based on site-specific characteristics (soils, slopes, etc.), typical erosion and sediment control measures that may be required in the project SWPPP include: (1) seasonal grading restrictions during the rainy season (October 1 to April 30) for applicable areas; (2) preparation and implementation of a CSMP and, if applicable, a REAP to provide enhanced erosion and sediment control measures prior to predicted storm events; (3) use of erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, or soil binders; (4) use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as silt fencing, fiber rolls, gravel bags, temporary sediment basins, street sweeping, stabilized construction access points and sediment stockpiles, and use of properly fitted covers for sediment transport vehicles; (5) compliance with local dust control measures; and (6) implementation of additional BMPs as necessary to ensure adequate erosion/sediment control and regulatory conformance.

Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, the project SWPPP and related County and NPDES requirements, associated potential erosion and sedimentation impacts from implementation of the proposed project would be less than significant.

- 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?* **Less-Than-Significant Impact.** Refer to Response 4.7a above, regarding potential impacts related to landslides, lateral spreading, and liquefaction. Land subsidence is the lowering of the ground surface due to groundwater withdrawal or seismic activity. The project site is located within an area identified as susceptible to subsidence (County of Riverside 2019a) and the project would result in groundwater withdrawal in the Lee Lake Basin area of the Elsinore Groundwater Basin. According to EVMWD's Elsinore Basin Groundwater Plan (EVMWD 2005), groundwater withdrawal is the most likely mechanism or cause for land subsidence in the Elsinore Basin. EVMWD implements a Groundwater Monitoring Plan, which collects information and provides guidance for adjusting management parameters according the monitoring results. The monitoring program includes land subsidence monitoring (EVMWD 2005). Based on the long-term planning of EVMWD, as well as EVMWD's active groundwater management and conjunctive use programs, that includes monitoring for subsidence, the project is not expected to result in significant impacts associated with subsidence. Impacts would be less than significant.

An additional potential issue related to geologic and soil instability involves proposed pipeline trenches and related safety effects for construction workers. Trench excavations typically involve vertical or near-vertical walls and can exhibit instability and the potential for collapse related to loose or unstable soil and geologic materials. These potential hazards would be addressed through required conformance with applicable U.S. Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal-OSHA) requirements. These standards include criteria related to factors such as trench slope limitations and dimensions; use of appropriate shoring, shielding, and benching to provide trench stability; and restrictions on adjacent uses (e.g., heavy equipment use). Conformance with these regulatory standards would avoid or reduce potential impacts related to trench stability below a level of significance.

- 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?* **Less-Than-Significant Impact.** Expansive (or shrink-swell) behavior in surface or near-surface materials is attributable to the water holding capacity of clay materials. Such behavior can adversely affect structural integrity (including underground pipelines) through shifting of support materials during the shrink-swell process. Soil types mapped at the project site include Gorgonio loamy sand, 0 to 8 percent slopes and Hanford coarse sandy loam, 2 to 8 percent slopes (U.S. Department of Agriculture 2018). Gorgonio loamy sand and Hanford coarse sandy loam both have a low shrink-swell potential (U.S. Department of Agriculture 1971). If expansive soils are present/encountered during project implementation, however, associated potential impacts would be addressed through conformance with regulatory and industry standards, including applicable elements of the IBC, CBC and related County requirements.

Specifically, this may include efforts such as removal of expansive soils and replacement with engineered fill. Conformance with the described regulatory standards would reduce potential impacts related to expansive soils to less-than-significant levels.

- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?* **No Impact.** While the proposed project would store chlorine analyzer reagent waste onsite and haul the waste offsite approximately once or twice per week, the proposed project does not include the use or placement of septic tanks or alternative wastewater disposal systems, and no associated impacts would occur.
- f. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* **Less-Than-Significant Impact.** According to the Riverside County Map My County website, the project site is within an area of low paleontological sensitivity (County of Riverside 2018). Based on the low sensitivity of the area and the relatively minor scale of project-related excavation of native soils and bedrock, impacts to paleontological resources would be less than significant.

4.8 Greenhouse Gas Emissions

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?* **Less-Than-Significant Impact.** Global climate change refers to changes in average climatic conditions, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone, and certain hydro-fluorocarbons. These gases, known as greenhouse gases (GHGs), allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contributing to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative, as direct impacts cannot be evaluated due to the fact that the impacts themselves are global rather than localized impacts.

California Health and Safety Code Section 38505(g) defines GHGs to include the following compounds: CO₂, CH₄, N₂O, ozone, chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). As individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO₂e) units for comparison. The CO₂e is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure.¹ The most common GHGs related to the project are those primarily related to energy usage: CO₂, CH₄, and N₂O.

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. The California Air Resources Board, SCAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. The County has adopted a Climate Action Plan (County of Riverside 2018) that follows the state's adopted AB 32 GHG reduction target of reducing emissions back to 1990 levels by 2020. The County Climate Action Plan identifies a threshold value of 3,000 metric tons (MT) CO₂e for screening small development projects that would be considered less than significant and would not require use of the Climate Action Plan Screening Tables or alternative GHG mitigation analysis.

Construction Impacts

Project construction would generate GHG emissions associated with construction equipment and construction worker vehicle trip exhaust. CO₂ from gasoline and diesel fuel combustion would be the main GHG emission during the construction period. As discussed in response 4.3b, EVMWD prepared an Initial Study for a similar project in 2017. The Flagler Well Conversion Pipeline Project includes components that are nearly identical to the proposed Lee Lake Wells Project, with two exceptions: (1) the Flagler Well Conversion Pipeline Project included the demolition of an old fire station, which is not proposed as part of the Lee Lake Wells Project, and (2) the currently proposed project would construct two new wells while the Flagler Well Conversion Pipeline Project converted two existing agricultural wells. For this reason, the GHG emissions calculated for the Flagler Well Conversion Pipeline Project would be similar to those associated with the proposed project. For the purposes of assessing the GHG impacts of the project, the construction GHG emissions from the Flagler Well Conversion Pipeline Project are presented below. Because the proposed project has nearly identical components, construction emissions would be similar; however, the Lee Lake Wells Project is expected to have reduced emissions compare to Flagler Well Conversion Pipeline Project because the Lee Lake Wells Project does not include the demolition of a building, as the Flagler Well Conversion Pipeline Project did. Total GHG emissions from project construction are presented in Table 6 *Total Estimated Construction*

¹ The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere, and is expressed as a function of how much warming would be caused by the same mass of CO₂. For instance, CH₄ has a global warming potential of 21, meaning that 1 gram of CH₄ traps the same amount of heat as 21 grams of CO₂. N₂O has a global warming potential of 310.

GHG Emissions. As shown in Table 6, the proposed construction activities would contribute a total of approximately 210 MT of CO₂e. Amortized over 30 years, the proposed construction activities would contribute approximately 7 MT CO₂e per year. GHG emissions generated during project construction would be short term, during the 24-month construction period and would not result in a long-term source of GHGs. Impacts associated with construction GHG emissions would be less than significant.

Table 6				
TOTAL ESTIMATED CONSTRUCTION GHG EMISSIONS				
Year	MT CO₂	MT CH₄	MT N₂O	MT CO₂E
Construction Year 1	142.16	0.02	0	142.66
Construction Year 2	66.77	0.01	0	66.96
Total	208.93	0.03	0	209.62

Source: Flagler Wells Conversion Pipeline Project Initial Study 2017 (Table 4-5, Estimated Annual Construction Greenhouse Gas Emissions)

Operational Impacts

The proposed project's operational scenario is similar to the operational scenario for the Flagler Well Conversion Pipeline Project. Operational GHG emissions for the Flagler Well Conversion Pipeline Project (EVMWD 2017b) are presented in Table 7, *Total Estimated Operational GHG Emissions*, below. Long-term operational emissions would result from mobile sources (employees' vehicles, chlorine analyzer reagent waste hauling, and delivery trucks traveling to and from the site), electricity usage from the transformer at the project site, and as-need maintenance activities. Vehicle trips to and from the site include a daily round trip during the work week from EVMWD staff, chlorine analyzer reagent waste hauling approximately once or twice per week, a chemical delivery truck of liquid SHC once every 21 days, and one chemical delivery truck of liquid ammonium hydroxide once every 21 days. Average electricity usage at the site is anticipated to be 4,100 kilowatt-hours per day from operation of the 225 kilovolt-amperes Southern California Edison transformer that would operate the two well pumps, two booster pumps, and disinfection facilities. The annual electricity usage (assuming 365 days of operation) was estimated to be 1,500,000 kilowatt-hours per year. Average electricity usage at the site is reduced as compared to the Flagler Wells Conversion Pipeline Project, and thus, the project would result in lower GHG emissions associated with electricity usage than that identified in Table 7. Potential maintenance or repair of pipelines would be temporary and would not result in a substantial source of GHG operational emissions. As shown in Table 7, the project would result in annual GHG emissions of approximately 828 MT CO₂e. This would be substantially lower than the 3,000 MT CO₂e per year screening threshold, and impacts would be less than significant.

Table 7 TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS	
Operational Activity	Emissions (MT/year CO ₂ e)
Vehicular source emissions – employee trips	2.69
Vehicular source emissions – truck deliveries	2.21
Electricity usage at the booster pump station	816.43
Construction (amortized over 30 years)	6.99
Total	828.32

Source: Flagler Wells Conversion Pipeline Project Initial Study 2017 (Table 4-6 Estimated Annual Operational Greenhouse Gas Emissions)

- b. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?* **Less-Than-Significant Impact.** The proposed project would not result in emissions that would adversely affect state-wide attainment of GHG emission reduction goals as described in AB 32, Executive Order S-21-09, Senate Bill (SB) 32, and the County Climate Action Plan. As shown in response 4.8a above, project GHG emissions would be below the screening threshold established in the County Climate Action Plan and further GHG analysis would not be required. Project emissions would therefore have a less than cumulatively considerable contribution to global climate change impacts, and the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant.

4.9 Hazards and Hazardous Materials

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☒	☐	☐
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?	☐	☐	☐	☒

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **Less-Than-Significant Impact.*** During the project construction period, small amounts of hazardous substances such as fuels and lubricants would be used and/or stored onsite. During the operation of the project, liquid SHC and liquid ammonium hydroxide would be transported to the site and would be stored and used at the project site. Deliveries of liquid SHC and liquid ammonium hydroxide would occur roughly once every 21 days, each. Chlorine analyzer reagent waste would be stored onsite in a fiber-reinforced plastic tank and would be hauled offsite approximately once or twice per week. The volume of each chemical stored on site would be consistent with the storage requirements and limits established in the California Fire Code. Ammonium hydroxide has the potential to off-gas during transfer from a delivery truck to the storage tank, which would be conducted on site as part of normal operations. The storage tank would be equipped with a camlock connection to provide a secured, sealed connection between a chemical feed hose from the delivery truck to the tank. The storage tank would be a closed system and would be installed with a submerged vent connected to a water bath to prevent vapors from escaping into the atmosphere. Both the SHC storage tank and the ammonium hydroxide storage tank would have secondary containment, pursuant to California Fire Code requirements. As discussed in the project description, the chlorine contact tank would be equipped with an internal baffle system, inlet, outlet, overflow, access manway, and vent, as well as the required OSHA and EVMWD safety appurtenances, including a vertical ladder, safety rail, and safety cage. While the project would result in the routine transport, use, storage, and disposal of hazardous materials as part of the long-term operation of the site, these chemicals would be transported, stored, handled, and disposed of in accordance with federal, state, and local regulatory requirements. Based on the described conditions, including compliance with federal, state, and local laws regulating hazardous materials, as well as compliance with OSHA and EVMWD safety protocols, potential impacts associated with the routine transport, use, and disposal of hazardous materials would be less than significant.
- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? **Less-Than-Significant Impact.*** As described in Response 4.9a, hazardous materials would be present at the project site during the construction and operation of the project. EVMWD provides initial and annual training to employees in safety procedures in the event of a release or threatened release of a hazardous material. The training includes identification of the location and availability of the hazardous material management plan, evacuation procedures, and spill containment equipment. Hazardous materials present at the

project site would be handled, stored, and disposed of in accordance with federal, state, and local regulatory requirements. Compliance with regulatory requirements, as well as EVWMD training and requirements would ensure that impacts associated with the release of hazardous materials into the environment would remain less than significant.

- c. *Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?* **No Impact.** No existing or proposed school facilities are located within a one-quarter mile radius of the project site. The nearest school is Luiseno Elementary School, located approximately 0.9 mile south of the project site. Therefore, no impact associated with hazardous materials within one-quarter mile of a school would occur.
- 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?* **Less-Than-Significant Impact With Mitigation Incorporated.** Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the State Water Resources Control Board (SWRCB) GeoTracker database (SWRCB 2019) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2019) were searched for hazardous materials sites in the project site and vicinity (within 1,000 feet). The results of these searches indicated that no listed hazardous material sites are located within or adjacent to the project site. While it is not anticipated that contaminated soil would be encountered during construction activities associated with the project, in the event that contaminated soils are encountered during construction, the following mitigation measure would be implemented to ensure that impacts would be less than significant:

HAZ-1 Hazardous Waste Handling. To reduce potentially hazardous conditions and minimize impacts from the handling of potentially hazardous material, EVMWD will include the following measures as requirements in the construction contract documents for this project:

The contractor(s) shall:

- Monitor soil for the presence of discolored or odorous soil during excavation and construction activities. If impacted soil is encountered, the site shall be evaluated by a qualified hazardous material professional and handled in accordance with applicable environmental laws and regulations. During excavation and construction activities, environmental monitoring for the presence of contamination and impacted groundwater shall be conducted. Health and safety measures shall be followed to minimize the risk of human exposure to contaminants during excavation and construction activities. Additionally, impacted soil shall be exported to an approved off-site disposal or recycling facility. However, if impacted soil is encountered and planned to be used as backfill, such a scenario must be evaluated by a local regulatory agency such as the RWQCB. The stockpiling and reuse of impacted soil would likely be subject to Waste Discharge Requirements mandated by the RWQCB. If construction of the project requires export of excavated soil, the construction

contractor shall be required to screen the soil for potential contaminants prior to removal from the site.

- Prepare a *Health and Safety Plan* in compliance with the requirements of Chapter 6.95, Division 20 of the Health and Safety Code (§§ 25500 – 25532). The plan shall include measures to be taken in the event of an accidental spill.
- Enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, and regularly inspect all construction equipment for leaks.
- Design the construction staging area to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters (e.g., Temescal Wash) or storm drain inlets. Additionally, the construction staging area shall be located within the temporary construction fencing limits.

- 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?* **No Impact.** The nearest public-use airport, the Perris Valley Airport, is a privately owned airport open to public use and is located approximately 12 miles east of the project site. The proposed project site is not within two miles of a public airport, and no related impacts would occur.
- f. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?* **Less-Than-Significant Impact.** As noted in the Project Description, project construction would occur within Temescal Canyon Road. Traffic control measures would be implemented in applicable locations to maintain access and ensure public safety. In addition, if trenching is to occur within Temescal Canyon Road, it would be done in a manner that would allow one side of the road to be open to traffic at all times. Based on the described conditions, as well as the small scale and short duration of proposed construction, project implementation would not substantially impair or interfere with emergency access or evacuation, and impacts would be less than significant.
- g. *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?* **Less-Than-Significant Impact.** The project site is mapped as a Moderate Fire Hazard Severity Zone, with small areas of Very High Fire Hazard along the boundary of the project site (adjacent to Temescal Canyon Road) and at the northeastern corner of the project site (County of Riverside 2019a). The project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires because the proposed project is the construction and operation of water supply infrastructure. It does not include habitable structures. The construction phase of the project could potentially increase the risk of wildland fires on a short-term basis, if, for example, equipment-related fires were accidentally started at the site. The probability for such fires to occur is low, however, and construction equipment would be outfitted with spark arrestors and other fire protection features such as on-board fire extinguishers. As a result, potential

impacts associated with short-term wildland fire hazards from project construction would be less than significant. During the long-term operation of the project, employees would be on-site once per weekday for routine maintenance activities and security checks. The project does not include components that would require the presence of a high number of employees or employees at the site for long periods of time. As such, implementation of the project would not result in exposure of people or structures to significant risk of loss, injury or death involving wildland fire. Impacts would be less than significant.

4.10 Hydrology and Water Quality

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river through the addition of impervious surfaces, in a manner which would:	☐	☐	☒	☐
i Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
ii Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?	☐	☐	☒	☐
iii Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?	☐	☐	☒	☐
iv Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

- a. *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?* **Less-Than-Significant Impact.** Short-term construction activities would have potential water quality impacts due to erosion and sedimentation, as well as the presence of hazardous materials (such as oil/lubricants) associated with typical construction activities. Potential construction-related water quality impacts would be avoided or reduced below a level of significance through conformance with the existing NPDES Construction General Permit and related County requirements. Specifically, this would entail implementing a SWPPP and related BMPs in conformance with applicable regulatory requirements. The noted SWPPP would also address project-

related use and storage of construction-related hazardous materials, through the use of appropriate BMPs in accordance with applicable regulatory standards. While detailed BMPs would be determined as part of the NPDES/SWPPP process based on site-specific parameters, they may include the following types of standard industry measures:

(1) restricting paving operations during wet weather and use of sediment control devices downstream of paving activities; (2) proper containment and disposal of paving wastes and slurry (e.g., use of properly designed and contained washout areas); (3) minimizing the amount of hazardous material storage and restricting storage/use locations to areas at least 50 feet from storm drains and surface waters; (4) using raised (e.g., on pallets), covered and/or enclosed storage facilities for all hazardous materials; (5) maintaining accurate and up-to-date written inventories and labels for all stored hazardous materials; (6) using berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill; (7) placing warning signs in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal; (8) providing training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill; (9) storing absorbent and clean-up materials in appropriate on-site locations where they are readily accessible; (10) properly locating, containing and maintaining portable trash and wastewater facilities; (11) posting regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location such as at or near the job site trailer; (12) regularly (at least weekly) monitoring and maintaining hazardous material use/storage facilities and operations to ensure proper working order; and (13) implementing a CSMP and a REAP (if applicable) pursuant to regulatory guidelines.

Construction would also involve pressure testing and cleaning of the piping that would be installed as part of the project. Water from the pressure testing and cleaning of these pipelines would be held in baker tank and then released to the onsite air gap structure for gravity flow into the 24-inch RCP storm drain within Temescal Canyon Road. The discharge of such water is covered under the General Waste Discharge Requirements for Discharges from Drinking Water Systems to Surface Waters (SWRCB Order No. 2014-194-DWQ; NPDES No. CAG140001). To obtain coverage under this permit, EVMWD must submit a Notice of Intent to the RWQCB including information on locations, frequency, and duration of planned discharges; comply with standard provisions (which include BMPs to address dechlorination and copper and zinc management); implement a monitoring and reporting program; and agree to notify the RWQCB and municipal storm sewer system (MS4) operator (Riverside County Flood Control and Water Conservation District) immediately of unplanned/emergency discharges and describe the corrective measures taken. Compliance with the requirements of the Statewide Construction General Permit, the General Waste Discharge Requirements for Discharges from Drinking Water Systems to Surface Waters, the use of appropriate BMPs as part of a SWPPP, and conformance with applicable NPDES and County requirements would ensure impacts to water quality remain less than significant.

The project would increase the amount of impervious surfaces at the site, in the form of the concrete pads associated with the wells, sand separators and associated above-grade piping, and concrete/paving associated with the access way to the well sites and disinfection facility

and around the mechanical building and chlorine contact tank. During operation of the project, stormwater runoff would be conveyed to onsite treatment/percolation BMPs sized for the first flush.

As discussed in response 4.9a, long-term operation of the site would include the presence of liquid SHC, liquid ammonium hydroxide, and chlorine analyzer reagent waste at the site. An accidental release of these chemicals could result in impacts to water quality; however, as discussed in Section 4.9, the materials would be transported, stored, handled, and disposed of in accordance with existing federal, state, and local regulations related to hazardous materials. Compliance with regulations and the safe handling and storage methods described in Section 4.9 would minimize the potential for release.

Long-term operation of the project would include well flushing a maximum of two times per year. This would entail the release of groundwater at a flowrate of approximately 800 gpm (periodic, twice per year) and approximately 0.2 gpm (continuous flow) of dechlorinated analyzer cycle water not recirculated, and intermittent dechlorinated water to the existing 24-inch County of Riverside storm drain within of Temescal Canyon Road via the new pipeline added as part of the project. The water from this line discharges into Temescal Wash. Thus, during well flushing, non-stormwater discharges to surface waters would occur. These discharges would be covered under the General Waste Discharge Requirements for Discharges from Drinking Water Systems to Surface Waters. Compliance with the requirements of the permit would ensure that the well flushing activities would not violate water quality standards or waste discharge requirements.

Additionally, the project would produce limited amounts of wastewater during operational activities. Wastewater would consist of approximately 0.07 gpm from the proposed chlorine analyzers and laboratory sink waste, and up to 45 gpm (intermittently) from fire sprinklers in the sodium hypochlorite room, chemical eye wash, building drain, or facility washdown. This wastewater would be diverted to an onsite storage tank and periodically hauled off site for disposal in accordance with applicable state and federal regulations.

In summary, compliance with hazardous materials regulations and NPDES requirements described above would ensure that the operation of the project would not result in significant impacts to water quality.

Project implementation would not result in direct or indirect impacts to groundwater quality through activities such as underground storage of hazardous materials or discharge of contaminated runoff that could percolate into local aquifers. For construction-related dewatering, the project would be required to obtain a NPDES groundwater extraction and waste discharge permit and conform to requirements therein. Requirements under such permits are generally applicable to all groundwater discharge regardless of volume, with certain exceptions as noted in the permit text. Specific requirements for permit conformance may include: (1) implementing an appropriate sampling and analysis/monitoring program; (2) providing at least 30 days notification to the appropriate local agency prior to discharging to a municipal storm drain system; (3) conforming with applicable water quality standards, including (but not limited to) the Water Quality Control Plan for the Santa Ana Basin (RWQCB 2016), CWA, and State Porter-Cologne Water Quality Control Act; and

(4) submitting applicable monitoring reports. Conformance with applicable requirements under the NPDES groundwater permit would ensure that associated regulatory standards are met and would reduce potential construction-related water quality impacts from groundwater extraction/disposal (if required) below a level of significance. No impact to groundwater quality from operational activities would occur. EVMWD collects water quality samples from their existing wells on an annual basis and has a Groundwater Monitoring Plan, which contains specified recommended parameters, locations, and frequency for water quality and water level monitoring (EVMWD 2005). The proposed wells would be included in EVMWD's Groundwater Monitoring Plan and wells would be monitoring as required by the Plan to ensure water quality.

- b. *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?* **Less-Than-Significant Impact.** The proposed project would pump groundwater from the Lee Lake Basin of the Elsinore Groundwater Basin. Inflow sources of groundwater recharge in the Lee Lake Basin include infiltration of streamflow from Temescal Wash, recharge from precipitation, infiltration beneath Lee Lake, recycled water recharge, and return flow from irrigation in urban areas (Thomas Harder & Co. 2014). Groundwater outflow includes evapotranspiration and groundwater pumping (Thomas Harder & Co. 2014), with groundwater pumping being the primary source of groundwater discharge. Based on the Water Budget for the Lee Lake Groundwater Basin, the Lee Lake Groundwater Basin has been able to support at least 590 acre-feet per year of groundwater production and export during a relatively dry hydrological period without a significant change in groundwater storage (Thomas Harder & Co. 2014). Active groundwater management and conjunctive use programs have been implemented by EVMWD to balance basin inflows and outflows. EVMWD has planned and accounted for existing and future potable water supplies, taking into account the safe yield of specific basins for groundwater pumping wells. EVMWD limits withdrawals to stay within the safe yield of the basin. Based on the long-term planning of EVMWD, as well as EVMWD's active groundwater management and conjunctive use programs, the project is not expected to substantially decrease groundwater supplies. Approximately 33,000 square feet of impervious area would be added to the site as part of the project, consisting of concrete pads for the wells and associated piping and sand separator, chlorine contact tank, mechanical building, and associated paved access to and from the site and around the facilities. Development of the project would result in the addition of new impervious areas to the site; however, approximately 33,000 square feet of new impervious areas at the site would not substantially interfere with groundwater recharge. The project would not substantially deplete groundwater supplies or interfere with groundwater recharge such that the project would impede sustainable groundwater management of the basin. Impacts would be less than significant.
- 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 on or off site?* **Less-Than-Significant Impact.** Implementation of the proposed project would include construction activities to install subsurface pipeline facilities and above-ground project components. The proposed above-

ground components of the project (security walls/fencing/gate, wellheads, mechanical building, and chlorine contact tank) would result in new approximately 33,000 square feet of new impervious surfaces at the site and would not substantially alter the existing drainage pattern of the surrounding area. Disturbed areas associated with pipeline installation would be returned to the original grade and repaved or revegetated, as appropriate. During operation of the project, stormwater runoff would be conveyed to onsite treatment/percolation BMPs sized for the first flush. Runoff in excess of the first flush would sheet flow offsite to the 24-inch RCP County of Riverside storm drain. Further, as discussed in more detail in Response 4.7b, the project would comply with NPDES requirements and implement BMPs at the site. For these reasons, impacts associated with alterations to the drainage pattern and erosion would be less than significant (additional discussion of potential erosion hazards is provided above in Response 4.7b).

ii. *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?* **Less-Than-Significant Impact.** As noted above in Response 4.10c(i), no significant impacts related to drainage alteration would result from the proposed project. The proposed structures for the site would add new impervious areas, but they are minor and would occupy a relatively small footprint. Based on these conditions, potential impacts associated with drainage alteration, including related effects to runoff rates/amounts and flooding hazards, would be less than significant.

iii. *create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?* **Less-Than-Significant Impact.** Based on the discussions provided above in Responses 4.10a, 4.10c(i), and 4.10c(ii), the proposed project would not increase the rate or amount of surface runoff, with no associated effects to the capacity of existing or planned storm water drainage systems. Additionally, as outlined in Responses 4.7b and 4.10a, potential project-related water quality impacts would be avoided or reduced below a level of significance through required conformance with applicable NPDES and County regulatory standards. As a result, potential impacts related to drainage system capacity and the generation of polluted runoff from project implementation would be less than significant.

iv. *impede or redirect flood flows?* **Less-Than-Significant Impact.** Based on review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06065C2006G (FEMA 2008), the majority of the project site is located in an area of minimal flood hazard; however, portions of the site near the northern boundary and in the northwestern corner of the site are located within the Special Flood Hazard Area (Zone AE), which is subject to inundation by the 100-year flood. While portions of the project site are located within mapped 100-year FEMA floodplains, no proposed structures or development activities are proposed within these areas. As such, impacts associated with impeding or redirecting flood flows would be less than significant.

- d. *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?* **Less-Than-Significant Impact.** As discussed in response 4.10c(iv) above, most of the project site is located within an area of minimal flood hazard. Portions of the project

site along the northern boundary and in the northwestern area of the site are within the Special Flood Hazard Area (Zone AE), which is subject to inundation by the 100-year flood. While portions of the site are located within mapped 100-year FEMA floodplains, no structures or improvements are proposed in those areas. Based on the site location (approximately 25 miles inland), no impacts related to inundation by tsunami would result from project implementation. The project site is located adjacent approximately 1 mile southeast of Lee Lake, and approximately 5.5 miles northwest of Lake Elsinore. Based on the distance of the project site from enclosed water bodies, and the lack of habitable structures proposed for the project, the project would not result in significant impacts associated with a seiche. The proposed structures at the site would be located outside of flood hazard areas, are not subject to inundation from a tsunami or seiche, and as such, the project would not result in the risk of release of pollutants due to inundation. Impacts would be less than significant.

- e. *Conflict with or obstruct implementation of water quality control plan or sustainable groundwater management plan?* **Less-Than-Significant Impact.** Refer to Responses 4.10a through 4.10d. The project would comply with all storm water quality standards during construction and operation, and appropriate BMPs would be implemented to address potential water quality impacts and reduce them to less than significant. As discussed in Response 4.10b, active groundwater management and conjunctive use programs have been implemented by EVMWD to balance basin inflows and outflows. EVMWD has planned and accounted for existing and future potable water supplies, taking into account the safe yield of specific basins for groundwater pumping wells and limits withdrawals to stay within the safe yield of the basin. Impacts would be less than significant.

4.11 Land Use and Planning

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause 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?	☐	☐	☐	☒

- a. *Physically divide an established community?* **No Impact.** The proposed project is located within a small, narrow area of development between I-15 and Temescal Wash. There are no homes or an established community located in the immediate project vicinity. As such, project implementation would not affect the physical arrangement of an established community, and no associated impacts would result.
- b. *Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan,*

local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? **No Impact.** The project site is located within unincorporated Riverside County and is located within the Sphere of Influence for the City of Lake Elsinore. The project site is located within the Elsinore Area Plan of the Riverside County General Plan. According to the Elsinore Area Plan, the land use designation of the project site is Rural Residential. The zoning classification for the site is Manufacturing-Service Commercial (M-SC). The project site or portions of the project site are located within two policy areas of the Elsinore Area Plan. The northeastern corner of the project site is located within the Temescal Wash Policy Area and the entire project site is located within the Warm Springs Policy Area. Both of these policy areas contain specific applicable policies to address important issues specific to their location. The Temescal Wash Policy Area covers the same area as the 100-year-flood zone area associated with Temescal Wash. Policies specific to this area include protecting the multipurpose open space attributes of the Wash through adherence to General Plan policies and through encouraging the maintenance of the Wash in its natural state. There is no construction proposed in this portion of the site. The Warm Springs Policy Area covers a rural area within the steep slopes of the Gavilan Hills. The project site is located within this policy area, near the southern boundary, but is not located within steep hillsides or slopes. The policies within this area include one policy related to adherence to the County's Hillside Development and Slope section of the General Plan, among other General Plan policies, mostly specific to hillside development. The project site is not located within or directly adjacent to a steep hill. The remaining policies are specific to Light Industrial and Commercial uses and do not apply to the proposed project. Based on the nature and location of the proposed facilities and on-site land use/zoning designations, project implementation would not conflict with applicable land use plans, policies or land use/zoning designation standards, and no associated impacts would result from project implementation.

4.12 Mineral Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

- 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?* **No Impact.** The project site is not currently used or planned for mineral resources in the Elsinore Area Plan. The area within and surrounding the project site is mapped as Mineral Resource Zone 3 (areas containing known or inferred mineral occurrences of undetermined mineral resource significance) by the CGS (Miller and

Busch 2008); however, one of the policies of the Elsinore Area Plan is to avoid mineral extraction within the Temescal Wash Policy Area (in which a portion of the project site is located). As the project site is not designated for current or planned mineral extraction activities, the proposed project would not have an impact related to the loss of availability of mineral resources.

- 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?* **No Impact.** Refer to Response 4.12a, above.

4.13 **Noise**

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project 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?	☐	☐	☐	☒

- a. *Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?* **Less-Than-Significant Impact.** Noise-related standards in the County of Riverside are contained in the County's Noise Ordinance 847 (County of Riverside 2007). Excessive construction noise is prohibited by the Noise Ordinance. Section 2(h) exempts private construction projects located more than 0.25 mile from an inhabited dwelling. The nearest residences are located approximately 0.3 mile from the project site, on the south side of I-15. Although the nearest residence is located at a greater distance than 0.25 mile, the project construction activities would adhere to the hours contained in Section 2(i) of the Noise Ordinance. The Noise Ordinance restricts construction hours, with no construction activities allowed to occur between the hours of 6:00 p.m. and 6:00 a.m. between June and September and between the hours of 6:00 p.m. and 7:00 a.m. between October and May.

Construction of the proposed project would require the use of heavy equipment for excavation, trenching and pipeline installation, construction of the wells and associated structures, and paving. Construction activities also would involve the use of smaller power

tools, generators, and other sources of noise for construction of the proposed tank, as well as noise from construction-related vehicular traffic. Each construction activity would create elevated short-term construction noise impacts. The nearest existing residence is approximately 0.30 mile from the project site (that is, more than a quarter-mile), with I-15 (and its associated traffic noise) dividing the two. Due to the distance of existing noise-sensitive receptors from the project site, construction noise impacts on the residences would be less than significant. Given the project's location in an industrial area, with I-15 and its associated traffic noise located approximately 700 feet from the project site, and the lack of noise sensitive receptors in the project area, temporary construction impacts would be less than significant. Construction activities would be temporary and limited to daytime hours in accordance with the County Noise Ordinance.

During long-term operation of the site, vehicle trips attributable to the project typically would consist of up to eight weekly round-trips (if both chemical deliveries and reagent waste hauling occur within the same week; there would be fewer trips per week otherwise). The addition of eight round-trips to area roadways over a week-long period would not perceptibly alter traffic noise in the area. Noises associated operations of the site would be minimal. The level of noise generated by maintenance activities at the site and the operation of the equipment is not expected to be substantially perceptible to surrounding uses. The operation of the project is not expected to expose persons to or generate noise levels in excess of standards for residential uses established in the local general plan or noise ordinance, and therefore, impacts associated with operational noise would be less than significant.

- b. *Generation of excessive groundborne vibration or groundborne noise levels? **Less-Than-Significant Impact.*** Ground-borne vibration is a concern for projects that require heavy construction activity such as blasting, pile-driving, and operating heavy earth-moving equipment. Ground-borne vibration can result in a range of impacts, from minor annoyances to people to major shaking that damages buildings. Typically, ground-borne vibration generated by man-made sources attenuates rapidly with distance from the source of vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly and sick), and vibration-sensitive equipment. Construction activities associated with the project, such as the use of heavy tracked vehicles (e.g., excavators), have the potential to result in minor amounts of ground-borne vibration. Vibration from construction activity is typically below the threshold of perception when the activity is more than 50 feet away from receivers. Vibration effects would be temporary, and likely indistinguishable from vibration generated by nearby traffic on area roadways. Impacts associated with construction-related ground-borne vibration would be less than significant.

Ground-borne vibration and ground-borne noise are not typically associated with the operation of wells and associated systems; therefore, operation and maintenance of the proposed project is not expected to produce ground-borne vibration or ground-borne noise levels and no operational impacts would occur.

- c. *For a project 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? **No Impact.*** The nearest private airstrip, the Skylark Field Airport, is located

approximately 10 miles southeast of the project site. The nearest public-use airport, the Perris Valley Airport, is a privately owned airport open to public use and is located approximately 12 miles east of the project site. The proposed project site is not within two miles of a public airport or within an airport land use plan, and no related impacts would occur.

4.14 **Population and Housing**

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project:				
a. Induce substantial unplanned 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)?	☐	☐	☒	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

- a. *Induce substantial unplanned 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)?* **Less-Than-Significant Impact.** The proposed project is part of the Near-Term Water Supply Program developed by EVMWD to meet anticipated potable water demand, maximize assets in the Lee Lake Groundwater Basin, and ultimately provide a more local, sustainable water supply. The project is designed to meet the local service needs of existing and planned development in EVMWD's service area. Because the project would help accommodate existing and planned growth, it would not induce substantial unplanned growth, and impacts would be less than significant.
- b. *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?* **No Impact.** The project site is currently vacant and does not contain any housing. Implementation of the proposed project would not require the removal of existing housing or the associated construction of replacement housing and would not displace people. No impact would occur.

4.15 Public Services

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
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:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

- 1) *Fire Protection? **Less-Than-Significant Impact.*** The construction and operation of the proposed project would not result in an increased need for fire protection services. During construction, fire protection may be required, but these would be short-term demands and would not require permanent increases in the level of public service offered or affect response times associated with fire protection services. Once constructed, the project site would not be more fire-prone than other land uses in the area, and it would not include habitable structures. Based on these factors, the proposed project would result in less-than-significant impacts associated with fire protection services.
- 2) *Police Protection? **Less-Than-Significant Impact.*** Impacts associated with police protection would be similar to those described above for fire protection. During construction, there may be a need for increased police protection associated with potential theft and vandalism at the project site. However, long-term operation of the project would not result in increased need for police protection services. Similar to the low probability and short-term nature of fire protection needs described above, there are no significant impacts related to police protection or service anticipated with implementation of the proposed project. Impacts would be less than significant.
- 3) *Schools? **No Impact.*** The proposed project would not result in new housing or unplanned population growth that would generate increased demand for school services. Accordingly, project implementation would not result in the need for construction of additional school facilities and no associated impacts would occur.
- 4) *Parks? **No Impact.*** Implementation of the proposed project would not affect existing park facilities or increase the demand for additional recreational facilities. As a result, no impacts related to parks would result from the proposed project.

- 5) *Other Public Facilities? No Impact.* No impacts to other public facilities are anticipated to occur with project implementation, for similar reasons as noted in the above public services responses.

4.16 Recreation

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

- 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? No Impact.* The proposed project involves construction of water infrastructure. Implementation of the proposed project would not generate an increase in demand for existing public/private parks or other recreational facilities that would result in or increase physical deterioration of these facilities. As a result, no associated impacts would result from project implementation.
- 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? No Impact.* Implementation of the proposed project would not include recreational facilities or require the construction or expansion of recreational facilities. No associated impacts would result.

4.17 Transportation

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d. Result in inadequate emergency access?	☐	☐	☒	☐

- a. *Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?* **Less-Than-Significant Impact.** Access to the project site is provided via Temescal Canyon Road. Other roadways in the project vicinity that would be likely be utilized during project construction and operation include Horsethief Canyon Road, I-15, I-15 Frontage Road, De Palma Road, and/or Lake Street. The project would generate traffic during construction activities and during the long-term operation of the site. Due to the size of the project, construction traffic would include a relatively small number of vehicles. Project-related construction traffic would include deliveries of equipment and materials and construction employee travel to and from the work site. According to the County of Riverside Traffic Counts (Riverside County 2014), average daily trips (ADT) at the intersection of Horsethief Canyon Road and Temescal Canyon Road were 4,328 in 2014. Construction traffic trips would be minimal and temporary during the 24-month construction period. Temporary construction activities may occur within Temescal Canyon Road during construction of the pipeline to the storm drain located within Temescal Canyon Road and for the pipeline connection to the Temescal Valley Pipeline in Temescal Canyon Road. Traffic control measures would be implemented in applicable locations to maintain access and ensure public safety. In addition, if trenching is to occur within Temescal Canyon Road, it would be done in a manner that would allow one side of the road to be open to traffic at all times. Long-term traffic associated with the site would be minimal. As discussed in the project description, typical operational activities would include once daily (weekday) visits to the site for maintenance/security check, as well as chemical truck deliveries about every 21 days, and chlorine analyzer reagent waste hauling approximately once or twice per week. Thus, the project would typically generate around 5 round-trip trips associated with EVMWD workers and up to 4 round-trip delivery truck trips in a single week. The addition of approximately 9 trips in the project area over a 5-day work week period would not significantly change road volumes or effect the circulation system in a negative way. The proposed project would not substantially affect existing public transit, bicycle, or pedestrian facilities, as there are no such facilities at the site or adjacent to the site. As such, the project would not conflict with an applicable program, plan, ordinance, or policy addressing the circulation system. Impacts would be less than significant.
- b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?* **No Impact.** Refer to Response 4.17a, above. While the project site is not located within one half-mile of an existing or planned transit stop, the project would not introduce land uses to the site that would generate significant amounts of traffic trips. The project would generate a small number of temporary daily trips during the 24-month

construction period. The long-term operation of the project site would typically generate, at most, eight round-trips per week. Thus, the project would not conflict with, or be inconsistent with CEQA Guidelines section 15064.3. No impact would occur.

- c. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* **No Impact.** The proposed project would not include the construction of hazards (e.g., sharp curves or dangerous intersections), and would not result in incompatible uses with the surrounding developed area. Accordingly, no impacts regarding design features or incompatible uses would occur.
- d. *Result in inadequate emergency access?* **Less-Than-Significant Impact.** Portions of the pipeline construction activities would occur within Temescal Canyon Road. Traffic control measures would be implemented in applicable locations, to maintain access and ensure public safety. Operation of the project would not interfere with emergency access. Impacts would be less than significant.

4.18 Tribal Cultural Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) 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.	☐	☒	☐	☐

- a. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?* **Less-Than-Significant with Mitigation Incorporated.** The records search at the EIC and pedestrian survey conducted as part of the Cultural Resources Survey Report prepared for the project (HELIX 2019b, refer also to Section 4.5) indicated that no sacred sites or other cultural resources are present on site.

A Sacred Lands File (SLF) search was requested from the NAHC on February 4, 2019. The response, received on February 8, 2019 indicated that a records search of the SLF was completed with negative results. During a meeting with representatives from the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians, representatives from both Tribes stated that the negative SLF search was incorrect. They indicated that the area is part of Traditional Cultural Property and is sensitive in terms of cultural resources. Pechanga planned to contact the NAHC for a revised SLF search for the project. HELIX waited to conduct further tribal outreach in anticipation of a revised SLF search. When no revised SLF search was received by March 25, 2019, letters were sent to the tribal contacts listed by the NAHC. Written responses have been received from five Tribes. The Morongo Band of Mission Indians responded on March 28, 2019 that they have no additional information to provide and would defer to the Pechanga Band of Mission Indians when the Lead Agency begins the AB 52 process. The Agua Caliente Band of Cahuilla Indians responded on April 2, 2019, indicating that the project site is outside their Traditional Use Area, and they defer to other Tribes in the area. The Augustine Band of Cahuilla Indians, in a letter dated April 2, 2019 responded that they were unaware of specific cultural resources that may be affected by the project, but they encourage contacting Native American tribes and individuals in the project vicinity, recommended Native American monitoring during preconstruction and construction activities, and requested to be contacted if cultural resources are discerned during project development. The Rincon Band of Luiseño Indians (Rincon) responded on April 23, 2019 and indicated that the location is “within the Traditional Cultural Landscape of the Luiseño people, and is also within Rincon’s specific area of Historic interest.” The response from Rincon also stated, “The City of Lake Elsinore is considered by the Rincon Band to be a Traditional Cultural Place (TCP) within a Traditional Cultural Landscape (TCL), as it is associated with the Luiseño Creation Story and traditional practices. We have knowledge of several Luiseño Place Names (TCP’s) within the City of Lake Elsinore to include the TCP *Anoomay* within a one mile radius. In addition, the Temescal Valley Road is believed by Rincon to be a trading route, utilized by the Luiseno people for thousands of years.” The Soboba Band of Luiseño Indians responded on July 2, 2019, and indicated that although the project site is outside of the existing reservation, the project area is within the bounds of Soboba’s Tribal Traditional Use Areas, is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes, and is considered to be culturally sensitive by the people of Soboba. Soboba requested to initiate consultation with the project proponents and lead agency and the transfer of information to Soboba regarding the progress of the project. Soboba also requested to continue to act as a consulting tribal entity for the project, for Native American Monitors from the Soboba Band of Luiseño Indians to be present during any ground disturbing proceedings, proper procedures be taken, and requests of the tribe be honored. For AB 52 consultation, EVMWD staff and HELIX Environmental Planning, Inc. (HELIX) Director of Cultural Resources Mary Robbins-Wade met with representatives from Pechanga Band of Luiseño Mission Indians and Soboba Band of Luiseño Indians to discuss the project and potential effects to significant cultural resources. EVMWD will complete the Tribal consultation process prior to finalizing/approving the MND and considering the proposed project for approval. Therefore, although no tribal cultural resources have been identified on site, the cultural sensitivity of the area allows for the potential of tribal cultural resources to be encountered on site during the project’s ground-disturbing activities. Impacts would be potentially significant, and mitigation measures CR-1

through CR-10 would be required. With implementation of the mitigation measures, impacts would be less than significant.

- b. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of the Public Resources Code Section 5024.1? **Less-Than-Significant with Mitigation Incorporated.** Refer to Response 4.17a.*

4.19 Utilities and Service Systems

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

- a. *Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? **Less-Than-Significant Impact.** The project would entail the construction and operation of water wells and associated facilities as part of EVMWD's Near-Term Water Supply Program to meet anticipated potable water demand. The project would not require or result in the relocation or construction of new or expanded water facilities but is intended as part of EVMWD's overall water supply program. Wastewater generation associated with the project would occur as part of short-term construction activities during the 24-month construction period; however, this wastewater generation would be minor and temporary.*

During the long-term operation of the project, wastewater generation would be limited and would consist of approximately 0.07 gpm from the proposed chlorine analyzers and laboratory sink waste, and up to 45 gpm (intermittently) from fire sprinklers in the sodium hypochlorite room, chemical eye wash, building drain, or proposed facility washdown. This water would be diverted to an onsite storage tank and periodically hauled off site for disposal in accordance with applicable state and federal regulations and would not require or result in the need for new wastewater treatment or storm water drainage facilities. Additionally, long-term operation of the project would include well flushing a maximum of two times per year. This would entail the release of groundwater at a flowrate of approximately 800 gpm (periodic, twice per year) and approximately 0.2 gpm (continuous flow) of dechlorinated analyzer cycle water not recirculated to the existing County of Riverside storm drain line within Temescal Canyon Road via the new pipeline added as part of the project. The water from this line discharges into the existing Temescal Wash discharge. The proposed well flushing would not result in the need for new or expanded wastewater or storm water drainage facilities, except for the new gravity conveyance pipeline to connect to the existing storm drain. A 225 kilovolt-amps transformer from Southern California Edison would be at the project site to provide electricity to the project. The project would not result in or require the need for additional electrical facilities beyond that provided as part of the project. The project does not propose structures or facilities that would be manned as part of normal operations. Daily maintenance and security checks would occur, but the project does not include components that would require natural gas or telecommunication facilities, and as such, the project would not result in the need for new or altered natural gas or telecommunication facilities. Impacts associated with environmental effects caused by the need for new or altered water, wastewater, stormwater, electrical, natural gas, or telecommunications facilities would be less than significant.

- b. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?* **Less-Than-Significant Impact.** The project consists of the construction of wells and associated facilities to pump groundwater. The proposed project is part of EVWMD's Near Term Water Supply Program to meet anticipated potable water demand, maximize assets in the Lee Lake Groundwater Basin, and ultimately provide a more local, sustainable water supply. The program aims to optimize groundwater resources to increase potable supply while reducing dependence on imported water sources. EVMWD has planned and accounted for existing and future potable water supplies, taking into account the safe yield of specific basins for groundwater pumping wells. EVMWD limits withdrawals to stay within the safe yield of the basin. Based on the long-term planning of EVMWD, as well as EVMWD's active groundwater management and conjunctive use programs, the project would not result in significant impacts associated with water supplies. Impacts would be less than significant.
- 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?* **Less-Than-Significant Impact.** As discussed in Response 4.19.a, the project would not generate substantial amounts of wastewater, and as such, would not result in significant impacts associated with wastewater service. Impacts would be less than significant.

- d. *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?* **Less-Than-Significant Impact.** Waste generation and disposal requirements associated with the proposed project would be limited to minor quantities of waste associated with construction activities (e.g., material packaging) and employees (e.g., food-related trash) during the construction period. The generation of solid waste during construction activities would be minor and would only occur during the 24-month construction period. The project does not include operational components which would generate solid waste, and as such, would not generate solid waste in excess of state or local standards or in excess of the capacity of location infrastructure. Impacts would be less than significant and limited to the construction phase of the project.
- e. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?* **Less-Than-Significant Impact.** Refer to Response 4.19d, above. Project construction is not anticipated to generate substantial volumes of solid waste. Solid waste debris would be disposed of at a permitted landfill. Moreover, AB 939, also known as the Integrated Waste Management Act, and AB 341 mandate the reduction of solid waste disposal in landfills by requiring a minimum of 50 percent diversion rate. Accordingly, at least half of the potential construction waste would be diverted from a landfill. The remaining quantity is reasonably anticipated to be within the permitted capacity of the permitted landfills serving the project area. Impacts would be less than significant.

4.20 **Wildfire**

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
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?	☐	☐	☐	☒
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 a wildfire?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☐	☒

- a. *Substantially impair an adopted emergency response plan or emergency evacuation plan?*
No Impact. The proposed project would not impair an adopted emergency plan or emergency

evacuation plan. Construction vehicles accessing the site would use Temescal Canyon Road. Any lane closures required during project construction would incorporate appropriate traffic control measures as necessary in pertinent areas to maintain access and ensure safety. Such measures would likely include standard efforts such as the use of cones, barriers, signs and flaggers, where applicable. Construction-related equipment/material staging and storage would be located entirely within the project site. During operation of the project, no obstruction of area roadways would occur. As such, the project would not substantially impair an adopted emergency response plan or emergency evacuation plan. No impact would occur.

- 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 a wildfire?* **No Impact.** The project site is relatively flat. The project does not include uses that would result in project occupants. Daily maintenance and security checks would result in the presence of EVWMD workers at the site on a daily basis; however, worker(s) would not be present for long periods or time. The project does not include components which would exacerbate wildfire risks or expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire. No impact would occur.
- 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?* **No Impact.** The project does not include habitable structures and would not require the installation or maintenance of roads, fuel breaks, emergency water sources, or other infrastructure that would exacerbate fire risk. No impact would occur.
- 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?* **No Impact.** The project does not include habitable structures. As such, there would be no exposure of people to significant risks associated with downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes. The project site is mostly designated as a Moderate Fire Hazard Severity Zone (with small areas of Very High Fire Hazard Severity Zone along the boundary of the project site, adjacent to Temescal Canyon Road), and is mostly surrounded by land designated as Very High Fire Hazard Severity Zone (County of Riverside 2019a). Land adjacent to the south, west, and east are relatively flat and would not expose the project site to significant risks associated with runoff, slope instability, or drainages changes. As such, no impact would occur.

4.21 Mandatory Findings of Significance

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
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?	☐	☒	☐	☐
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)?	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

- 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?* **Less-Than-Significant with Mitigation Incorporated.** As described in Response 4.4a, the project site supports potential burrowing owl habitat; however, no sign of burrowing was observed during the habitat assessment or during the four-visit protocol burrowing owl survey conducted in February, April, May, and June 2019. Impacts to burrowing owls, if present prior to construction, would be potentially significant. Implementation of mitigation measure BIO-1 would reduce impacts to a less-than-significant level. Construction of the proposed project could occur during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds and violation of the MBTA and CFG Code. Direct impacts could occur as a result of removal of vegetation or soil supporting an active nest. Indirect impacts could occur as a result of construction noise impacting nearby trees or rocky beach areas, where active nests may be present. Implementation of mitigation measure BIO-2 would reduce potentially significant impacts on nesting birds and raptors to less-than-significant levels.

Indirect impacts to nearby sensitive vegetation communities could occur if storm water runoff is not controlled at the construction site, and sediment, toxics, and/or other materials are inadvertently carried into adjacent sensitive habitat. Further, if the construction work areas are not properly fenced, inadvertent encroachment into adjacent sensitive habitat could occur. Compliance with existing regulations for water quality, storm water management, and

implementation of mitigation measures BIO-1 through BIO-4 would reduce potentially significant impacts to sensitive natural communities to less than significant levels.

The project would not reduce the habitat of a fish or wildlife species, as no natural habitat would be removed, nor would the project cause a 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.

As described in Response 4.5a, no substantial adverse change in the significance of historical resources is anticipated to occur as a result of project implementation; thus, it would not eliminate important examples of the major periods of California history. The project has the potential to encounter archaeological resources, and human remains during excavation activities, which could result in significant impacts to important examples in California prehistory; implementation of mitigation measures CR-1 through CR-10 would ensure that potential impacts would be reduced to less-than-significant levels.

- 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)?* **Less-Than-Significant Impact.** Cumulative impacts are defined as two or more individual project effects that, when considered together or in concert with other projects, combine to result in a significant impact (CEQA Guidelines Section 15355). The project site is located within unincorporated Riverside County. Proposed projects within the immediate vicinity of the project site include the Temescal Canyon Road Bridge Replacement and Road Realignment Project and Toscana Village at Temescal Valley (County of Riverside 2019b and City of Lake Elsinore 2019). The Temescal Canyon Road Bridge Replacement and Road Realignment Project is located approximately 1.4 southeast of the project site and would consist of the replacement of a bridge over Temescal Wash and realignment of approaching roadways. The Toscana Village Project is located approximately 1.5 miles northwest of the project, near Indian Truck Trail Road and Temescal Canyon Road. It consists of a 27-acre commercial development.

Although construction and operation of the proposed project could occur in concert with the above-described planned development projects, the majority of impacts associated with the proposed project would be localized and short-term. Based on a review of the anticipated impacts of the proposed project when considered in the context of cumulative development projects identified above, implementation of the proposed project would not result in impacts that are individually limited, but cumulatively considerable. Additionally, the project is consistent with local and regional plans, including the AQMP, and the project’s air quality and GHG emissions are well below the SCAQMD-established thresholds of significance. The project adheres to all other land use plans and policies with jurisdiction in the project area. Therefore, cumulative impacts would be less than significant.

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?* **Less-Than-Significant Impact.** With adherence to regulatory codes, ordinances, regulations, standards, and guidelines, in conjunction with the discussed mitigation measures, construction and operation of the proposed project would

not present a substantial adverse effect on human beings either directly or indirectly. In addition, all resource topics associated with the project have been analyzed in accordance with State CEQA Guidelines and found to pose no impact, less-than-significant impact, or less-than-significant impact with mitigation. Further environmental analysis is not required. Impacts would be less than significant.

5.0 PREPARERS

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7.0 ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADT	average daily trips
AMSL	above mean sea level
AQMP	Air Quality Management Plan
ARMR	Archaeological Resources Monitoring Report
ATCM	Airborne Toxics Control Measure
Basin	South Coast Air Basin
BMPs	best management practices
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CBC	California Building Code
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CFG Code	California Fish and Game Code
CGS	California Geological Survey
CH ₄	methane
CNPS	California Native Plant Species
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
County	County of Riverside
CRMP	Cultural Resources Monitoring Plan
CSMP	Construction Site Monitoring Program
CWA	Clean Water Act
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
EIC	Eastern Information Center
EIR	Environmental Impact Report
EVMWD	Elsinore Valley Municipal Water District
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHGs	greenhouse gases
gpm	gallons per minute

HELIX HFCs	HELIX Environmental Planning, Inc. hydrofluorocarbons
I-15	Interstate 15
IBC	International Building Code
ICC	International Code Council
IS/MND	Initial Study/Mitigated Negative Declaration
kWh	kilowatt hour
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
Mg/L	milligrams per liter
MSHCP	Multiple Species Habitat Conservation Plan
MS4	municipal separate storm sewer system
MT	metric ton
N ₂ O	nitrous oxide
NAHC	Native American Heritage Commission
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PFCs	perfluorocarbons
PM ₁₀	particulate matter (less than 10 microns in diameter)
PM _{2.5}	particulate matter (less than 2.5 microns in diameter)
Psi	pounds per square inch
REAP	Rain Event Action Plan
RPA	Register of Professional Archaeologists
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	South Coast Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	sodium hypochlorite
SF ₆	sulfur hexafluoride
SLF	Sacred Lands File
SO _x	oxides of sulfur
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	volatile organic compounds
WSMP	Water System Master Plan

Appendix A

Biological Resources Letter Report

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August 27, 2019

EVM-01.21

Mr. Parag Kalaria, PE
Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92530

Subject: Biological Resources Letter Report for the Lee Lake Wells Project

Dear Mr. Kalaria:

This letter presents the results of a biological resource technical study completed by HELIX Environmental Planning, Inc. (HELIX) for the Lee Lake Wells Project (project) located in unincorporated Riverside County, California. The Elsinore Valley Municipal Water District (EVMWD; project applicant), is planning to install two wells along the northeast side of Temescal Canyon Road. This letter report is intended to summarize the existing biological resources within the site and provide an analysis of the proposed impacts in accordance with the California Environmental Quality Act (CEQA) and applicable federal, state, and local policy, including the adopted Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

INTRODUCTION

Project Location

The 15.9 acre project study area is generally located in the southwest portion of western Riverside County, California, along the northern side of Interstate 15 between the cities of Lake Elsinore and Corona (Figure 1). More specifically, the study area is situated along the northeast side of Temescal Canyon Road, east of Horsethief Canyon Road. The study area occurs on the southwestern portion of Assessor Parcel Number (APN) 393-130-001. The study area is depicted within Township 5 south, Range 5 west, and Section 17 of the Alberhill 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figure 2). The study area is bordered to the north and east by Temescal Wash and undeveloped land and to the west and south by various commercial developments (Figure 3). The study area is relatively level with elevations around 1,200 feet above mean sea level (amsl). For the purpose of this report the project site area is the 3.7 acre portion of the study area that is proposed for temporary and permanent impacts while the study area consists of the entire 15.9 acres (Figure 3).

Project Description

The EVMWD proposes the construction of two wells and associated systems at the project site. The proposed project includes the construction of two up-to-140-foot-deep, 400-gallon-per-minute (gpm) wells, an approximately 9,000 square foot infiltration basin, and a centralized disinfection and pump station facility. The raw water piping would be routed from the wells to a centralized water treatment area located approximately 300 feet from each well site. The centralized disinfection facility would be in undeveloped land southeast of existing dairy/cattle yard remnants on the project site. A new booster pump station would convey treated water into EVMWD's Temescal Valley Pipeline. The Temescal Valley Pipeline is a transmission pipeline in Temescal Canyon Road, which runs adjacent to the project site. The treatment/booster pump system would include the following components:

- Flush-to-waste facility for groundwater from the Lee Lake Wells and dechlorinated process water;
- Aboveground steel chlorine contact tank;
- Approximately 20-foot-tall, 2,400-square-foot mechanical building to house the required booster pump station, laboratory/work area, electrical and chemical facilities;
- Chlorine and ammonia chemical storage and feed facilities within the mechanical building;
- Associated piping and appurtenances;
- Associated electrical equipment and connections;
- New site security facilities including 8-foot-high concrete masonry unit perimeter wall and security gate;
- New 8-foot-high, screened chain-link fencing around the perimeter of the well sites and access road areas not encompassed by the concrete masonry perimeter wall, and associated security gates; and
- Associated site civil improvements.

A conceptual site plan is shown in Figure 4.

Wells

The project proposes two new wells. Lee Lake Well 1 would be located in the northwestern portion of the project footprint, as shown on Figure 4. Lee Lake Well 2 would be located approximately 550 feet southeast of Well 1. Concrete demolition associated with existing remnants on site would be required for the Lee Lake Well 1 site. Well pumps would be installed on concrete pads that are four feet by four feet. Each well would be equipped with associated piping, valves, and appurtenances installed above grade on an approximately 20-foot by 10-foot concrete pad, a sand separator installed above grade on an approximately 5-foot by 8-foot concrete pad, and a precast concrete sand pit.

Conveyance Pipelines

The proposed project would include the construction of a conveyance piping system. The well discharge pipeline would consist of approximately 300 feet of piping from each well site to the centralized disinfection facility. The project would include a pump-to-waste and dechlorinated chlorine analyzer sample stream discharge pipeline consisting of approximately 400 feet of piping from the centralized disinfection facility to an existing 24-inch reinforced concrete pipe (RCP) storm drain located south of the project site, within Temescal Canyon Road. A treated water pipeline would consist of approximately 200 feet of 8-inch pipeline from the centralized disinfection facility to its connection point to the Temescal Valley Pipeline in Temescal Canyon Road, adjacent to the project site. Pump to waste (intermittent) would be discharged to an onsite air gap structure and a new 12-inch gravity line would divert the flow to the existing 24-inch RCP storm drain within Temescal Canyon Road. Dechlorinated water from the chlorine tank overflow/ drain would be diverted to the 24-inch RCP storm drain in the event of an overflow or planned maintenance activity.

Sodium Hypochlorite Storage and Feed System

Primary and secondary disinfection (chloramine residual for distribution) would be accomplished through the use of 12.5% sodium hypochlorite (SHC). A 1,000-gallon double-wall high-density polyethylene tank would be used to store the SHC. A chemical feed metering system would supply a free chlorine concentration of approximately two milligrams per liter (mg/L) to the injection point prior to entering the chlorine contact tank. Chemical feed pumps would be used for SHC feed pumping to minimize off-gassing and potential gas binding in the chemical feed system. The SHC solution would be fed upstream of the chlorine contact tank into the static mixer located in the raw water pipe.

The SHC feed point would incorporate the use of an inline static mixer, which requires no power, has relatively low maintenance requirements, and provides consistent mixing performance. The inline static mixer can be equipped with chemical injection ports that would allow the chlorine to be injected directly into the body of the mixer and would be sized to have a maximum pressure drop of five pounds per square inch (psi). The inline mixer would be located aboveground, near the chlorine contact tank, in the mechanical building.

Ammonia Storage and Feed System

The ammonia storage and feed system, using ammonium hydroxide (19% ammonia), would supply ammonia at a chlorine to ammonia ratio of 5:1. A 220-gallon double-wall high-density polyethylene chemical storage tank with secondary containment would store the ammonia. Ammonia would be fed downstream of the chlorine contact tank, prior to the booster pumps, into a static mixer located in the treated water pipeline. Diaphragm feed pumps would be used for ammonia feed pumping to minimize off-gassing and potential gas binding in the chemical feed system. The finished water is anticipated to contain a chloramine residual of two mg/L.

The ammonia feed point would incorporate the use of an inline static mixer similar to that used for the SHC feed. The inline static mixer can be equipped with chemical injection ports that would allow the ammonia to be injected directly into the body of the mixer and would be sized to have a maximum pressure drop of five psi. The inline mixer would be located above grade, near the discharge piping of the chlorine contact tank, in the mechanical building.

Chlorine Contact Tank

A 35,000-gallon welded steel tank would be constructed adjacent to the mechanical building. The approximate dimensions of the chlorine contact tank would be a 22-foot-diameter, 12-foot overall height, with approximately 5.7 feet of freeboard. The chlorine contact tank would be outfitted with an internal baffle system, inlet, outlet, overflow, access manway, and vent. The welded steel tank would include the required Occupational Safety and Health Administration (OSHA)- and EVMWD-preferred safety appurtenances (e.g., vertical ladder, safety rail, and safety cage).

Mechanical Building and Booster Pumps

The project includes the construction of a 2,400-square-foot mechanical building, which would be located between the proposed wells and include the disinfection chemical storage and feed areas, laboratory/work area, electrical room, and booster pump station. The building would be approximately 60 feet by 40 feet. Approximately 200 feet of new 8-inch piping would convey treated water from the centralized disinfection facility to the existing Temescal Valley Pipeline.

The booster pump station would include a three-variable-frequency-drive 400-gpm, 240-horsepower vertical turbine can pumps (two pumps in operation and one pump on standby). A 225 kilovolt-amps transformer from Southern California Edison would be located onsite.

METHODS

The study area for this project consists of the southwestern 15.9 acres of the 35.60 acre APN 393-130-001. This study area is situated between Temescal Wash and Temescal Canyon Road. Prior to conducting field surveys a review of relevant maps, databases, and literature pertaining to biological resources known to occur within the project vicinity was performed. Recent and historical aerial imagery of the (Google 2019), topographic maps (USGS Alberhill Quadrangle), and soils (USDA 2013) maps of the study area and vicinity were reviewed to obtain updated information on the natural environmental setting.

In addition, a query of sensitive species and habitats databases was conducted, including the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2018), California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB: CDFW 2019a and b), and California Native Plant Society (CNPS) Electronic Inventory (CNPS 2016a). The USFWS National Wetland Inventory (NWI) was also reviewed (USFWS 2016c). Recorded location of species, habitat types, wetland, and other resources were mapped and overlaid onto aerial imagery using Geographic Information Systems (GIS). The MSHCP was also reviewed for context and to identify regional conservation goals and objectives for the vicinity of the study area.

General Biological Survey

HELIX biologist Rob Hogenauer performed an initial, general biological survey on February 1, 2019, which included 100 percent visual coverage of the 15.9-acre study area and immediate vicinity. A second visit was conducted by Mr. Hogenauer on March 18, 2019 as part of the Jurisdictional delineation and update to the vegetation mapping and plant list for the study area. These general biological surveys included a general inventory of existing conditions and focused primarily on verifying existing vegetation

communities or habitat types, delineating and mapping potential jurisdictional waters and wetlands, assessing suitability for sensitive plant and animal species, and noting other sensitive biological resources that occur or have the potential to occur. Meandering pedestrian transects were performed throughout the site in order to obtain 100 percent visual coverage. Off-site areas were inspected by visual scans. Physical parameters assessed included vegetation and soil conditions, presence of indicator plant and animal species, slope, aspect, and hydrology.

Vegetation was mapped on 1"=150' scale aerial imagery. Vegetation community classifications follow Holland (1986) with additional classification assistance from the online Manual of California Vegetation (CNPS 2016b). Plant and animal species observed or otherwise detected during biological surveys of the study area are included in Attachments A and B respectively. Sensitive species recorded within a nine-quadrangle search area centered on the Alberhill quadrangle were analyzed for potential to occur (Attachments C and D; status codes in Attachment E). Due to the variance of habitats and elevation within the large search area, an elevation range of 500 to 2,000 feet AMSL was used. A complete list was compiled and recorded, and locations were mapped and overlaid onto aerial imagery using GIS. Plant identifications were made in the field. Directed inspections of habitat were performed to locate target rare plant species known to occur on the site and/or in the region. Animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. Representative photographs of the site were taken and are included in Attachment F.

Sensitive Plant Surveys

The study area was assessed for potential to support sensitive plant species on February 1, 2019. The assessment included documenting the habitats and soils that do occur on site, along with documenting plants observed within and adjacent to the study area. The habitat assessment showed that habitat with potential to support sensitive plant species does not occur within the proposed project impact area.

Burrowing Owl

A burrowing owl (*Athene cunicularia*) habitat assessment was conducted on January 31, 2019. The assessment included searching the site for the basic requirements of burrowing owl habitat that include:

- disturbed low-growing vegetation within grassland and shrublands (less than 30 percent canopy cover);
- gently rolling or level terrain;
- areas with abundant small mammal burrows, especially California ground squirrel burrows (*Otospermophilus beecheyi*);
- fence posts, rocks, or other low perching locations; and
- man-made structures, such as earthen berms, debris piles, and cement culverts.

Due to the presence of habitat with low potential to support burrowing owl, a focused burrowing owl survey was initiated on February 19, 2018 (Table 1). The survey is being conducted in accordance the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The biologist walked survey transects no

greater than 20 meters apart throughout habitat with potential to support burrowing owl. During the first survey burrows with potential to support burrowing owl (greater than 11cm [4 inches]) were mapped using sub-meter global positioning system (GPS) device (Figure 5). The biologist walked slowly and methodically closely checking all potential burrows for signs of burrowing owl occupation. Signs of occupation include:

- pellets/casting (regurgitated fur, bones, and/or insect parts);
- white wash (excrement); and/or
- feathers.

The buffer area included potential burrowing owl habitat along the southwest side of Temescal Canyon Road. This area was visual surveyed with the aid of binoculars from the edge of Temescal Canyon Road.

Three additional surveys are scheduled to occur, between April 15 and July 15, with the surveys being conducted at least three weeks apart and the final survey being conducted after June 15 (Table 1). This survey method meets the survey conditions of the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012) and the Riverside County MSHCP protocol (County 2006).

Table 1
BURROWING OWL SURVEY DETAILS

Date	Time	Conditions	Notes
February 1, 2019 (Habitat assessment)	0800-0900	NA	Burrows observed, Low potential habitat in study area.
February 19, 2019	0645-0750	Start: clear, 40°F, wind 1-3 mph End: clear, 46°F, wind 0-1 mph	Burrows mapped. No burrowing owl or sign of burrowing owl observed.
April 23, 2019	0600-0700	Start: 10% clouds, 53°F, wind 0-1 mph End: clear, 54°F, wind 1-2mph	No burrowing owl or sign of burrowing owl observed.
May 21, 2019	0600-0700	Start: 50% clouds, 48°F, wind 1-2 mph End: 30% clouds, 50°F, wind 1-2 mph	
June 24, 2019	Sunrise	Start: 100% clouds, 60°F, wind 0-2 mph End: 100% clouds, 62°F, wind 1-2 mph	

Jurisdictional Delineation

Mr. Hogenauer performed a survey of the study area on January 31, 2019 for potential waters that may be jurisdictional to the CDFW, U.S. Army Corps of Engineers (USACE), and the Regional Water Quality Control Board (RWQCB) concurrent with the general biological survey. Prior to beginning fieldwork, aerial photographs (1"=150' scale), topographic maps (1"=150' scale), and NWI maps were reviewed to assist in determining the location of potential jurisdictional areas in the study area. The field delineation

was conducted to identify and map potential water and wetland resources that could be subject to USACE jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), RWQCB jurisdiction pursuant to CWA Section 401 or State Porter-Cologne Water Quality Control Act, CDFW jurisdiction pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code), and Riparian/Riverine Areas pursuant to Section 6.1.2 of the MSHCP. Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated. The delineation mapped all waters within the project area and mapped the outer limits and location of potential waters on the remainder of the study area.

Nomenclature

Nomenclature used in this report follows The Jepson Manual second edition for plants (Baldwin 2012), Taggart (2012) for reptiles, Butterflies of Southern California (Emmel 1973) for butterflies, American Ornithologists' Union (2016) for birds, and Bradley et al. (2014) for mammals.

RESULTS

Soils

The soils on the study area are Gorgonio loamy sand to the west and south, and Hanford coarse sandy loam and Honcut loam on the north and east (Figure 6).

Vegetation Communities and Land Uses

The project area includes seven vegetation communities (Figure 7) and/or land use types. They are southern willow scrub, riparian scrub (including disturbed), riparian woodland-disturbed, disturbed wetland, disturbed habitat, agriculture (fallow), and developed (Table 2).

Southern Willow Scrub

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* spp.) in association with mule fat (*Baccharis salisifolia*). This habitat occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. The herbaceous understory consists of curly dock (*Rumex crispus*), cocklebur (*Xanthium strumarium* var. *canadense*), and western ragweed (*Ambrosia psilostachya*). Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, competition between the willows will intensify as these individuals grow and resources become increasingly scarce. A small percentage of these individuals will survive and form the tree stratum, while most will die or exist as suppressed juveniles in the lower stratum. Within the study area southern willow scrub consists of a couple small arroyo willow (*Salix lasiolepis*) located just west of the streambed on the eastern side of the study area.

Riparian Woodland-Disturbed

Riparian woodland is a tall, open, broad-leaved winter-deciduous riparian habitat dominated by western cottonwood (*Populus fremontii*) and willows. This habitat occurs along streams. This habitat occurs along Temescal Wash north of the study area. A small portion of the habitat extends on to the northern

edge of the study area. Species within this habitat include western cottonwood, Mexican fan palm (*Washingtonia robusta*), and Gooding's black willow (*Salix goodingii*).

Riparian Scrub (including disturbed)

Riparian scrub is a generic term for several shrub dominated communities that occur along drainages and/or riparian corridors. In the study area the riparian scrub occurs along the streambed on the eastern portion of the property. Species in the study area within this habitat include stinging nettle (*Urtica dioica*), tree tobacco (*Nicotiana glauca*), mule fat, tarragon (*Artemisia dracunculus*), arroyo willow, western cottonwood, salt cedar (*Tamarix* sp.), and Italian thistle (*Carduus pinocephalus*). Several of the plants in this habitat have been disturbed or removed related to the recent flood control efforts occurring at the culvert where the streams exits the culvert on the eastern side of Temescal Canyon Road.

Disturbed Wetlands

Disturbed wetland is a low-growing mostly herbaceous community that is dominated by a variety of native and non-native wetland species. It typically occurs in seasonally wet areas with heavy soils. Dominant species vary based on hydrology, climate, and soils, but usually include rushes, sedges, various herbs (e.g., willow herb [*Epilobium* spp.], knotweed [*Polygonum* spp.], and monkey-flowers [*Mimulus* spp.]), and wetland grasses (e.g., beardgrass [*Polypogon* spp.] and sprangletop [*Leptochloa* spp.]). Within the study area, disturbed wetlands include barnyard grass (*Echinochloa crus-galli*), Bermuda grass (*Cynodon dactylon*), saltgrass (*Distichlis spicata*), cattail (*Typha* sp.), arrow weed (*Pluchea sericea*), tarragon, Italian thistle, five hook Bassia (*Bassia hyssopifolia*), English plantain (*Plantago lanceolata*), arroyo willow, and California bulrush (*Schoenoplectus californicus*).

Riversidean Sage Scrub-Disturbed

This is a xeric expression of coastal sage scrub found on steep slopes, severely drained soils, and very xeric sites. Vegetation is open and usually dominated by California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), and California sagebrush (*Artemisia californica*). Within the study area, this community is disturbed from adjacent activity and non-native species such as red brome (*Bromus madritensis*), short-podded mustard (*Hirschfeldia incana*), and red-stem filaree (*Erodium cicutarium*). Native species present in this community in the study area include California buckwheat, deerweed (*Acmispon glaber*), and mini lupine (*Lupinus bicolor*). This community occurs in along the southwest side of Temescal Canyon Road. Additional patches of this habitat occur on the northeastern edge of Temescal Canyon Road that were not mapped due to the small size of these patches.

Disturbed Habitat

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted or vegetation removed by prior development or where agricultural lands have been abandoned. Disturbed habitat is generally dominated by non-native weedy species that adapt to frequent disturbance or consists of dirt trails and roads. Disturbed habitat in the study area primarily occurs on the southeastern portion of the site and is comprised of land previously cleared of native vegetation and currently covered with a mix of native and non-native species including rancher's fiddleneck (*Amsinckia menziesii*), tumble mustards (*Sisymbrium* sp.), stinknet (*Oncosiphon piluliferum*),

filaree (*Erodium* sp.), short pod mustard (*Hirschfeldia incana*), tree tobacco, Russian thistle (*Salsola tragus*), and telegraph weed (*Heterotheca grandiflora*). Disturbed habitat also occurs along the west side of Temescal Canyon Road within the road Right-of-Way.

Agriculture-Fallow-Disturbed

Agricultural land is habitat that has been converted from a natural state and used for agricultural purposes such as growing crops or raising livestock. The agricultural land in the study area is mostly void of vegetation and appears to have been used for livestock. Vegetation that is present includes a few chinaberry trees (*Melia azedarach*) and a few scattered ruderal non-native plants.

Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Developed land within the study area is comprised of concrete pads that are remnants of the previous agriculture activities on the property, along with improved roads and driveways.

Table 2
EXISTING VEGETATION COMMUNITIES AND LAND USES (ACRES)

Community/Land Use	Existing Acres
Southern Willow Scrub	0.04
Riparian Woodland-disturbed	0.16
Riparian Scrub	0.45
Riparian Scrub-disturbed	1.77
Disturbed Wetland	1.18
Riversidean sage scrub-disturbed	0.4
Disturbed habitat	3.3
Agriculture	5.4
Developed	3.2
Total	15.9

Sensitive Natural Communities

Sensitive natural communities include land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines.

The study area supports the following sensitive natural communities: riparian scrub, riparian woodland, southern willow scrub, and emergent wetland.

Sensitive Plants

The habitat assessment showed that habitat with potential to support sensitive plant species does not occur within the proposed impact area. Since sensitive plant habitat does not occur within the impact area focused plant surveys were not conducted. The study area does include habitat with potential to support sensitive plant species on the eastern side, away from the proposed impacts (Figure 8). Plant

species observed during other surveys on site are documented in Appendix A. A full assessment of the potential for sensitive plant species to occur in the study area is included below.

Sensitive Plants with Potential to Occur

The study area was assessed with regards for the potential to support sensitive plant species. The assessment included a search of the CNDDDB and USFWS databases for plants known to occur within a 9 quadrangle area (Corona south, Alberhill, Lake Mathews, Steele Peak, Santiago Peak, Lake Elsinore, Canada Gobernadora, Sitton Peak, and Wildomar) centered on the Alberhill quadrangle. A total of 73 sensitive plant species with records of occurrences within the 9 quadrangle area were assessed for potential to occur within the study area.

Although 18 of the 73 plant species have potential to occur in the study area, none of them have potential to occur within the proposed project impact area. Those with potential to occur in the study area include 2 listed species, the federally listed as endangered San Diego Ambrosia (*Ambrosia pumila*) has moderate potential to occur, and the federal and state listed as endangered San Diego button-celery (*Eryngium aristulatum* var. *parishii*) has low potential to occur. The non-listed species with moderate potential to occur are Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*), smooth tarplant (*Centromadia pungens* spp. *laevis*), paniculate tarplant (*Deinandra paniculata*), mud nama (*Nama stenocarpum*), and San Bernardino aster (*Symphotrichum defoliatum*).

The non-listed species with low potential to occur within the study area are horn's milk-vetch (*Astragalus hornii* var. *hornii*), Buxbaum's sedge (*Carex buxbaumii*), southern tarplant (*Centromadia parryi* sp. *australis*), Peruvian dodder (*Cuscuta obtusifolia* var. *glandulosa*), Campbell's liverwort (*Geothallus tuberosus*), vernal barley (*Hordeum intercedens*), California satintail (*Imperata brevifolia*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), Ocellated Humboldt lily (*Lilium humboldtii* spp. *ocellatum*), prostrate navarretia (*Navarretia prostrata*), and Allen's pentachaeta (*Pentachaeta aurea* spp. *allenii*). As stated above, these species do not have the potential to occur in the proposed project impact area.

Sensitive Animals with Potential to Occur

The study area was assessed for the potential for sensitive animal species to occur using a database search within the same 9 quadrangle areas as for the plants. There are 56 animal species with records of occurrences within the 9 quadrangle area. A total of 17 out of the 58 species have moderate or low potential to occur in the study area, including the federal and state listed as endangered least Bell's vireo (*Vireo bellii pusillus*). The other 16 species include 3 mammals, 8 birds, and 5 reptiles and amphibians. The 7 non-listed species with moderate potential to occur in the study area include loggerhead shrike (*Lanius ludovicianus*), California horned lark (*Eremophila alpestris actia*), white-tailed kite (*Elanus leucurus*), long eared owl (*Asio otus*), Cooper's hawk (*Accipiter cooperii*), two-striped garter snake (*Thamnophis hammondi*), and San Bernardino ringneck snake (*Diadophis punctatus modestus*). The nine non-listed species with potential to occur on the study area are orange-throated whiptail (*Cnemidophorus hyperthrus*), northern red-diamond rattlesnake (*Crotalus ruber*), California mountain kingsnake (*Lampropeltis zonata*), burrowing owl, yellow breasted chat (*Icteria virens*), white-faced ibis (*Plegadis chihi*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus xanthinus*), and Yuma myotis (*Myotis yumanensis*).

The proposed project impact area is mostly void of vegetation and thus void of habitat that would be used by most of the species with potential to occur in the study area. Of the 17 species, only 1 was assessed as having potential to occur within the project area, burrowing owl. The project area includes a few fossorial mammal burrows of appropriate size to support burrowing owls. No sign of burrowing owl was observed during the habitat assessment or during the 4-visit protocol burrowing owl survey. The additional details on burrowing owl are included below and in the focused burrowing owl report.

Nesting Birds and Raptors

The study area contains suitable nesting habitat (e.g., trees, shrubs, structures) for several common bird species, including raptors, protected under the Migratory Bird Treaty Act (MBTA) and CFG Code.

Burrowing Owl

No burrow owl or sign of use by burrowing owl was observed on site. The property was determined to have a low potential to support burrowing owl therefore a focused 4 visit protocol burrowing owl survey was conducted. The 4-visit survey protocol occurred in February, April, May, and June 2019 (Table 1) in accordance the protocol in the CDFW staff report on burrowing owl mitigation (CDFW 2012).

Jurisdictional Resources

The delineation of the project area (Area of potential impacts) showed that a small pipe outlets on the northeastern side of the study area and drains toward the riparian habitat that comprises Temescal Wash. The riparian habitat associated with Temescal Wash occurs outside of the study area. Additional riparian habitats and streambed were mapped on the eastern side of the study area, outside of the potential project area of impacts. A concrete channel occurs on the south side of Temescal Canyon Road and connects to the natural stream that is tributary to Temescal Wash. The concrete channel appears to be a channelization of a natural occurring stream. Waters collected from the west side of Interstate 15 are conveyed underground and emerge in this concrete channel west of Temescal Canyon Road. The concrete channel also receives flows from several other sources that include (1) an ephemeral drainage located just outside the south side of the study area, (2) a storm drain located in Temescal Canyon Road, and (3) a drainpipe coming from the commercial development on the south side of Temescal Canyon Road. Flows in the channel connect to the streambed in the study area on the east side of Temescal Canyon Road, and then to Temescal Wash.

State

Areas that are jurisdictional to the CDFW primarily occur on the north and eastern side of the study area. CDFW habitats in the study area total 3.67 acres and include 0.04 acre southern willow scrub, 2.22 acres riparian scrub (including disturbed), 1.18 acres disturbed wetland, 0.16 acres riparian woodland-disturbed, and 0.01 acre streambed, along with 0.06 acre of concrete channel (Figure 9; Table 3). Of these habitats, only small amount of riparian woodland-disturbed and streambed occur on the western portion of the study area, and impacts to these areas will be avoided.

Table 3
CDFW AND RIPARIAN/RIVERINE HABITAT ON THE STUDY AREA (ACRES)

Habitat	Study Area	Project Area
Southern willow scrub	0.04	0
Riparian scrub	0.45	0
Riparian scrub-disturbed	1.77	0
Disturbed wetland	1.18	0
Riparian woodland-disturbed	0.16	0
Streambed*	0.01	0
Concrete Channel	0.06	0
Total	3.67	0

*There is additional streambed within the limits of the riparian scrub habitat.

Federal

The delineation of federal WUS included searching for waters in the entire study area that may be WUS. The potential WUS that were observed on the project site occur within the limits of the CDFW jurisdictional habitats discussed above. The disturbed wetland on the eastern side of the study area (Figure 9) has potential to be all, or in part, a wetland WUS. A portion of the riparian scrub (dominated by stinging nettle) is also a potential wetland WUS. As the project proposes to avoid impacts to CDFW habitats (except the concrete channel), and all potential WUS occur within the CDFW habitats the formal limits of the WUS were not mapped for the eastern portion of the study area. The WUS that occur in the study area in proximity of the project area occur within the limits of the CDFW habitats (Figure 9). WUS in the study area include disturbed wetland, riparian scrub and streambed, along with concrete channel. Acreage for the riparian scrub and disturbed wetland are estimated, while the streambed and concrete channel locations and acreages were formally delineated and mapped (Table 4).

Table 4
ESTIMATED USACE WATERS IN THE STUDY AREA

Habitat	Study Area (estimated acres)	Project Area
Wetland WUS		
Riparian scrub	0.27	0
Disturbed wetland	1.18	0
Sub Total	1.45	0
Non-wetland WUS		
streambed	0.06	0
Concrete channel	0.02	0
Total	1.53	0

APPLICABLE REGULATIONS

Based on the findings of this report, activities affecting the biological resources determined to exist or have the potential to exist within the study area could be subject to the federal, state, and local regulations discussed below.

Federal

Federal Endangered Species Act

Administered by the USFWS, the federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species that are identified as being endangered or threatened with extinction. Actions that jeopardize such species and their habitats are considered a “take” under the federal ESA.

Sections 7 and 10(a) of the federal ESA regulate actions that could harm or harass endangered or threatened species. Section 10(a) allows issuance of permits for “incidental” take of endangered or threatened species. The term “incidental” applies if the taking of the listed species is secondary to, and not the purpose of, an otherwise lawful activity. A conservation plan demonstrating how the take will be minimized and what steps taken would ensure the listed species’ survival must be submitted for the issuance of Section 10(a) permits. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A biological assessment is required for any major activity if it may affect listed species. The MSHCP was prepared pursuant to Section 10(a) of the ESA and the Permittees were issued an umbrella Section 10(a) Incidental Take Permit (ITP) from the USFWS authorizing take of multiple federally listed species.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected from direct impacts under the federal MBTA as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, USFWS places restrictions on disturbances allowed near active raptor nests.

Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. (including wetlands and vernal pools) is overseen by the USACE under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. A CWA Section 401 Water Quality Certification, which is administered by the RWQCB, must be issued prior to any 404 permit. Impacts to waters of the U.S. would result in a need for both a USACE 404 permit and a RWQCB 401 certification. As this project proposes to avoid impacts to waters of the U.S. and waters of the state, Section 401 water quality certification and Section 404 permit would not be required.

USFWS Critical Habitat

USFWS designated critical habitat does not occur on the study area. The nearest critical habitat occurs just over a half mile to the north. California gnatcatcher (*Polioptila californica californica*) critical habitat

occurs just over a half mile to the north and approximate 1.75 miles east of the study area. San Diego ambrosia (*Ambrosia pumila*) critical habitat occurs approximately 1.75 miles southeast of the study area.

State

California Endangered Species Act

The California Endangered Species Act (CESA) declares that deserving plant or animal species will be given protection by the state because they are of ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. The CESA establishes that it is state policy to conserve, protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated as rare, threatened, or endangered through official listing by the California Fish and Game Commission. Listed species are given greater attention during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

The CESA allows the take of listed endangered, threatened, or candidate species pursuant to a federally-issued Incidental Take Statement (ITS) under Section 7 of the FESA or ITP under Section 10 of the FESA, if the CDFW certifies that the ITS or ITP is consistent with CESA (Fish and Game Code Section 2080.1(a)). Section 2081(b) and (c) of the CESA allows CDFW to issue an ITP for a state-listed threatened and endangered species only if specific criteria are met. These criteria can be found in Title 14 CCR, Sections 783.4(a) and (b). No Section 2081(b) permit may authorize the take of “fully protected” species and “specified birds.” If a project is planned in an area where a fully protected species or specified bird occurs, an applicant must design the project to avoid all take; the CDFW cannot provide take authorization under CESA. On private property, endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. In addition, CEQA requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts. The MSHCP was prepared pursuant to Section 2081 of the CESA and the Permittees were issued an umbrella Section 2081 ITP from the CDFW authorizing take of multiple state listed species.

California Fish and Game Code Section 1600

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities. As the project proposes to avoid impacts to waters and associated riparian habitats a SAA is not required for this project.

California Fish and Game Code Sections 3503, 3503.5, and 3800

These sections of the CFG Code prohibit the take or possession of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a take. Such a take would also violate federal law protecting migratory birds. ITPs are required from the CDFW for projects that may result in the incidental take of species listed by the

state as endangered, threatened, or candidate species. The wildlife agencies require that impacts to protected species be minimized to the extent possible and mitigated to a less than significant level.

California Natural Community Conservation Planning Act of 1991

The NCCP Act is designed to conserve habitat-based natural communities at the ecosystem scale while accommodating compatible land uses in coordination with CESA. The CDFW is the principal state agency implementing the NCCP Program. The Act established a process to allow for comprehensive, long-term, regional, multi-species, and habitat-based planning in a manner that satisfies the requirements of the state and federal ESAs (through a companion regional habitat conservation plan). The NCCP program has provided the framework for innovative efforts by the state, local governments, and private interests, to plan for the protection of regional biodiversity and the ecosystems upon which they depend. NCCPs seek to ensure the long-term conservation of multiple species, while allowing for compatible and appropriate economic activity to proceed. The MSHCP was prepared pursuant to the NCCP Act.

Local

Multiple Species Habitat Conservation Plan

As stated previously, the EVMWD is not a permittee or signatory of the MSHCP, but under CEQA the project is required to show that it does not conflict with the MSHCP.

The MSHCP is a comprehensive multi-jurisdictional effort that includes Riverside County and multiple cities in western Riverside County, including the City. Rather than address sensitive species on an individual basis, the MSHCP focuses on the conservation of 146 species, proposing a reserve system of approximately 500,000 acres and a mechanism to fund and implement the reserve system (Dudek 2003). Most importantly, the MSHCP allows participating entities to issue take permits for listed species so that individual applicants need not seek their own permits from the USFWS and/or CDFW. The MSHCP was adopted on June 17, 2003, by the Riverside County Board of Supervisors. The ITP was issued by both the USFWS and CDFW on June 22, 2004.

WESTERN RIVERSIDE MULTIPLE SPECIES HABITAT CONSERVATION PLAN ANALYSIS

The study area is located in Criteria Cell 3648 of Cell Group F in Subunit 1-Estelle Mtn/Indian Cyn of the Elsinore Area Plan of the MSHCP. As stated, above EVMWD is not a signatory of the MSHCP and therefore not an MSHCP permittee, and not subject to the requirements of the MSHCP. However, under CEQA the project must demonstrate that it does not conflict with the MSHCP. The following is an analysis of the project with respect to the basic requirements of the MSHCP.

HANS MSHCP Section 6.1.1

Projects that occur within a criteria cell of the MSHCP are required to analyze the study area with respect to the conservation requirements of the MSHCP to determine if the some or all of the property is needed for conservation as part of the MSHCP reserve. The property is on the west side of the southern cell of the 2-cell Cell Group F (Figure 10). The conservation requirements of Cell Group F are:

- to contribute to Proposed Extension of Existing Core 2,
- conserve riparian habitat along Temescal Wash, along with adjacent sage scrub and grassland habitats,
- conserved habitat should connect to conservation in Cell Group E to the west and in Cell 3748 to the south,
- Conserve 65 to 75 percent of the cell group focusing in the northern portion of the cell group.

The current level of development within the cell is estimated at 30 to 35 percent of the cell, with most of the development occurring in the southwest portion of the cell on the south side of Temescal Canyon Road. Project proposes to develop 0.4 acres adjacent to the north side of Temescal Canyon Road adjacent to the existing development in the cell group. The project impacts are to fallow agricultural land that currently does not support more than a few ornamental plants. The small amount of development proposed would not result in negative effects to the Proposed Extension of Existing Core 2 as the existing riparian habitats connect to Cell 3748 to the south and to Cell Group E to the west. No impacts are proposed to Temescal Wash riparian habitat or the adjacent grassland and sage scrub habitats. Approximately 65 percent of the cell remains available for conservation.

Riparian/Riverine and Vernal Pool Resources Assessment MSHCP Section 6.1.2

HELIX biologist conducted a Riparian/Riverine and vernal pool habitat assessment on January 31, and conducted a follow up assessment on February 18. The Riparian/Riverine habitats on site coincide with the location of the CDFW jurisdictional habitats (Figure 9). All Riparian/Riverine and vernal pool habitats are proposed for avoidance. The project is proposing potential impacts to the concrete channel via installation of an outfall for flushing the pipes from the wells.

In addition to direct impacts, the MSHCP discusses indirect impact to riparian species. One of the riparian species, least Bell's vireo, is known to occur in the riparian woodland/forest along Temescal Wash. Noise from construction activities have potential to result in impacts to least Bell's vireo nesting along Temescal Wash. This would be a significant impact. As a result, the project proposes to implement measures to reduce the noise levels during the least Bell's vireo breeding season of March 15 to September 15 (MM Bio4). The project is in compliance with Section 6.1.2 of the MSHCP as it will not result in impacts to Riparian/Riverine or Vernal Pool species, and will limit impacts to install of an outfall pipe at or potentially in a concrete channel.

Narrow Endemic Plant Species Survey Area (NEPSSA) MSHCP Section 6.1.3

The study area is within a survey area for NESSA plant species: Munz's onion (*Allium munzii*), San Diego ambrosia, Slender-horned spineflower (*Dodecahema leptoceras*), Many-stemmed dudleya (*Dudleya multicaulis*), Spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), San Miguel savory (*Clinopodium chandleri*), Hammitt's clay-cress (*Sibaropsis hammittii*), Wrights's trichocoronis (*Trichocoronis wrightii*). The habitat assessment for these species indicated that the study area has potential to support one, San Diego ambrosia. San Diego ambrosia has potential to occur on the eastern portion of the study area that is to be avoided. The project areas subject to impacts do not have potential to support the NEPSSA target species. No surveys are required due to a lack of habitat within the impact area. As no impacts to NEPSSA species are proposed the project is not in conflict with Section 6.1.3 of the MSHCP.

Urban Wildlands Interface Guidelines MSHCP Section 6.1.4

The Urban Wildlands Interface Guidelines (UWIG) are intended to address indirect effects of development in proximity to the MSHCP conservation areas with respect to drainage (runoff), toxics, lighting, noise, invasive plants, barriers, and grading. The project includes the installation of 2 wells to be connected to the Temescal Valley Pipeline. The project will utilize standard BMPs during construction to avoid direct and indirect impacts to the adjacent native habitats. The small nature of the project will not result in a significant increase in surfaces that will promote runoff. The project will include shielding of night lighting to avoid indirect lighting effects on the adjacent habitat. The project will not introduce toxins or invasive plants to the area. The project will not result in an increase in noise above the ambient noise level that exists from the adjacent commercial activities. The project will not result in grading impacts to the adjacent habitats. The project does not conflict with the UWIG of MSHCP Section 6.1.4.

Additional Survey Needs and Procedures MSHCP Section 6.3.2

The MSHCP includes additional survey areas for plants, amphibians, birds, and mammals.

Criteria Area Species Survey Area (CASSA)

The study area is within the CASSA area for Thread-leaved brodiaea (*Brodiaea filifolia*), Davidson's saltscall (*Atriplex serenana*), Parish's brittlescale (*Atriplex parishii*), Smooth tarplant, Round-leaved filaree (*California macrophylla*), Coulter's goldfields, and little mouseling (*Myosurus minimus*). The study area was assessed for the potential for these species to occur and it was determined that of these only smooth tarplant and Coulter's goldfields have potential to occur. Both of these species have potential to occur on the eastern portion of the study area. None of the CASSA species has potential to occur within the project impact area, so no impacts to CASSA species are proposed. The project does not conflict with the MSHCP.

Amphibians

The study area is not in an MSHCP survey area for amphibians.

Mammals

The study area is not in an MSHCP survey area for mammals.

Burrowing Owl

The project is within the burrowing owl survey area and burrowing owl surveys were conducted. As mentioned above the 4 visit protocol survey was negative for burrowing owl or burrowing owl sign. Based on the results, burrowing owls do not occur on the property. The project is in compliance with the MSHCP with respect to burrowing owl.

Fuels Management MSHCP Section 6.4

The project will not require brush management of the native habitats for fuel management. The wells are located on the western half of the study area that is mostly void of vegetation. The project does not involve structures designed for human occupancy. The project is consistent with MSHCP Section 6.4.

IMPACTS ANALYSIS AND PROPOSED MITIGATION

This section provides a project-level biological resources impact analysis for the proposed project in support of environmental review. The issues addressed in this section are derived from Appendix G of the CEQA Guidelines. Mitigation, monitoring, and reporting requirements to eliminate or reduce project impacts to a less than significant level are also provided in this section.

The final precise design for the project has not been completed at this time. Impacts are estimated based on a 100 foot diameter area for each well, a 2,400 square foot mechanical building to house the booster pump station, a chlorine contact tank, electrical connections, pipe connections, fencing, and other associated infrastructure. Total impacts will occur within a 3.7 acre area that is primarily unvegetated or includes ruderal non-native vegetation. Impacts are estimated to be comprised of 1.1 acre permanent impacts and 2.6 acre temporary impacts (Table 5). Temporary impacts include storage of materials and equipment during construction, along with trenching for underground installation of pipes.

Table 5
EXISTING VEGETATION COMMUNITIES AND LAND USE AND IMPACTS (ACRES)

Community/Land Use	Existing Acres	Impacts	
		Permanent	Temporary
Southern Willow Scrub	0.04	0	0
Riparian Woodland-disturbed	0.16	0	0
Riparian Scrub	0.45	0	0
Riparian Scrub-disturbed	1.77	0	0
Riversidean sage scrub-disturbed	0.4	0	0
Disturbed Wetland	1.18	0	0
Disturbed habitat	3.3	0	0.02
Agriculture	5.4	1.0	1.8
Developed	3.2	0.1	0.8
Total	15.9	1.1	2.6

ISSUE 1: Special Status Species

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Less than significant with mitigation. The project will implement Mitigation Measures (MM) BIO-1 and BIO-2 to reduce the impacts to less than significant.

Sensitive Plant

Sensitive plant species have potential to occur on the east side of the study area. The project proposes to restrict activities to the west side of the study area that is essentially void of vegetation. No impact to habitat with potential to support sensitive plants is proposed.

Burrowing Owl

The project site has low potential to support burrowing owl. Burrows of appropriate size occur within the study area. No burrowing owl or sign of site use by burrowing owl has been observed. The first of a 4 visit protocol survey did not observe burrowing owl or sign of site use by burrowing owl. Project will implement MM Bio 1 to reduce impacts to less than significant or no impact.

Nesting Birds

The study area has potential to support a variety of ground, shrub, and tree nesting birds. The project will implement MM BIO-2 to reduce potential impacts to less than significant or no impact.

Issue 1 Mitigation Measures

BIO-1 Burrowing Owl: In compliance with the CDFW *Staff Report on Burrowing Owl Mitigation* (2012), a protocol four-visit survey has been conducted. In addition to conducting a protocol survey, a take avoidance survey shall be conducted on the Project area within 14 days prior to ground disturbance to determine presence of BUOW. If the take avoidance survey is negative and BUOW is confirmed to be absent, then ground-disturbing activities shall be allowed to commence, and no further mitigation would be required.

If BUOW are observed during the take avoidance survey, active burrows shall be avoided by the project, in accordance with the CDFW's Staff Report (2012). The CDFW shall be immediately informed of any BUOW observations. A Burrowing Owl Protection and Relocation Plan (plan) shall be prepared by a qualified biologist, which must be sent for approval by CDFW prior to initiating ground disturbance. The plan shall detail avoidance measures that shall be implemented during construction and passive or active relocation methodology. Relocation shall only occur outside of the nesting season for BUOW (February 1 through August 31).

BIO-2 Nesting Bird and Raptor Avoidance. The project is anticipated to include working during the nesting season. If initial grading and vegetation removal activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird breeding season for migratory birds and raptors

(January 15 through September 15), the project applicant shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of the activities. If the qualified biologist determines that no active migratory bird or raptor nests occur within 300 feet of the impact site (500 feet for raptors), the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or until noise barriers have been installed that adequately protect the nest, as determined by the qualified biologist. Indirect impacts to nesting birds in the adjacent riparian habitat are addressed in the least Bell's vireo mitigation measure, MM-Bio-4.

ISSUE 2: Sensitive Natural Communities

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

Less than Significant. All temporary and permanent impacts will occur within disturbed habitat and developed land (Table 4; Figure 11). There will be no direct impacts to any riparian habitat or other sensitive natural community. The temporary impact area consists of storage of materials and equipment during construction, trenching for underground installation of pipes. The permanent impact area consists of the 2 wells, mechanical building, storage tanks, electrical connections, pipe connections, fencing, and other associated infrastructure.

Potential significant indirect impacts could occur if storm water runoff is not controlled at the construction site, and sediment, toxics, and/or other material are inadvertently carried into sensitive habitat. Further, if the construction work areas are not properly fenced, inadvertent encroachment into adjacent sensitive habitat could occur. Compliance with existing regulations for water quality, storm water management, and implementation of mitigation measure BIO-3 below would reduce potentially significant impacts on sensitive natural communities to less-than-significant levels.

BIO-3 Construction Fencing. Temporary construction fencing shall be installed at the limits of project impacts (including construction staging areas and access routes) adjacent to sensitive habitat to prevent sensitive habitat impacts and to prevent the spread of silt from the construction zone into adjacent habitats. Temporary fencing shall be located on the eastern and northern boundary of the impact area. Fencing shall be installed in a manner that does not impact habitats to be avoided.

Construction crews shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint. Equipment maintenance, staging, and dispensing of fuel, oil, coolant, or other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located as to prevent runoff from entering adjacent habitat and shall be shown on the construction plans. Contractor equipment shall be checked for leaks prior to operation and repair, as necessary. "No-fueling zones" shall be designated on construction plans.

If work occurs beyond the fenced or demarcated limits of impact, work shall cease until the problem has been remedied to the satisfaction of EVMWD. Impacts that occur to sensitive areas beyond the approved fence shall be mitigated as determined by EVMWD in coordination with the USFWS, USACE, RWQCB, and/or CDFW. Temporary construction fencing shall be removed upon project completion.

ISSUE 3: Wetlands

Would the project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

No Impact. As shown on Figure 11, all temporary and permanent impacts have been restricted to disturbed uplands that occur outside of vegetated jurisdictional waters of the U.S. subject to USACE; therefore, the project would have no impact on federally-protected wetlands as defined by CWA Section 404. The project has potential to result in temporary impacts to the concrete channel on the west side of Temescal Canyon Road. MM BIO-3 will ensure no impacts to wetlands.

ISSUE 4: Wildlife Movement and Nursery Sites

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?

Less than Significant with mitigation. The study area occurs adjacent to Temescal Wash. The project impacts will not interfere with the movement of resident or migratory fish or wildlife species. Noise from project construction has potential to affect breeding habitat for least Bell's vireo. Implementation of MM BIO-4 will reduce the potential impacts to less than significant.

MM Bio-4 Least Bell's Vireo Nesting. Least Bell's vireo are known to occur in the riparian habitat along Temescal Wash. Between March 15 and September 15, which represents the least Bell's vireo breeding season, the increase in ambient noise levels due to construction shall not exceed 3 dB_{Leq} (one-hour average) at the nearest active least Bell's vireo nest. In the absence of U.S. Fish and Wildlife Service-protocol least Bell's vireo surveys to determine specific nest locations, this noise limit shall apply to the near edge of the riparian habitat that occurs to the northeast of the proposed project limits of construction. This limit on noise increases may be achieved by conducting the loudest construction activities (e.g., well drilling and grading) prior to March 15, altering construction equipment to make it quieter (e.g., using flashes instead of beeps as a backup alarm), erecting noise-reducing barriers between the limits of construction and the riparian habitat, placing stationary equipment (e.g., generators) as far from the riparian habitat as feasible, or some combination of these methods.

If construction noise monitoring indicates that construction during the least Bell's vireo breeding season is causing an increase in excess of 3-dB_{Leq} at the nearest nest or edge of the riparian habitat, as applicable, additional/larger noise barriers and/or additional changes to reduce construction noise generation will be required until the noise level increase is reduced to 3 dB_{Leq} or less.

Modeling of projected construction noise impacts indicates that a 10-foot-high noise barrier would be sufficient to prevent noise levels from increasing more than 3 dB_{Leq} in the potential LBV habitat near the project impact footprint.

ISSUE 5: Local Policies and Ordinances

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. The project would not conflict with any local policies or ordinances protecting biological resources, as further detailed below.

Riverside County Ordinance 663.10 requires development projects within the Stephens' kangaroo rat fee area to pay a fee for implementation of The Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California. The Study area is within the Stephens' kangaroo rat fee area; however, EVMWD is not required to pay the \$500 per acre mitigation fee.

ISSUE 6: Adopted Conservation Plans

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan?

Less than Significant. The project occurs within the boundaries of the adopted MSHCP, within the Elsinore Area Plan but is not within specific Criteria Cells. The project would be consistent with the MSHCP, as detailed below.

MSHCP Consistency Analysis Summary

The project would not impact land targeted for conservation to contribute to assembly of the MSHCP preserve. The project is designed to avoid impacts to Riparian/Riverine resources, therefore no riparian plants or animals would be impacted. Additionally, MM Bio-2 and MM Bio-4 will be implemented to prevent potential indirect impacts to least Bell's vireo and other nesting birds. The proposed project impacts will occur to developed, disturbed, and unvegetated agriculture lands. No impact to habitat that may support NEPSSA or CASSA plant species is proposed. The project is not within an amphibian or mammal survey area, but is within a burrowing owl survey area and burrowing owl surveys have commenced.

CONCLUSION

The proposed project would install 2 wells, mechanical building to house the booster pump station, a chlorine contact tank, electrical connections, pipe connections, fencing, and other infrastructure. Impacts will total no more than 3.7 acres comprised of an estimated 1.1 acre permanent impacts and 2.6 acres temporary impacts. The impacts will be to fallow agriculture, disturbed habitat, and developed land that include limited sparse vegetation. No impacts to streambed or riparian habitat are proposed, therefore permits from the associated resource agencies are not required. Project construction will implement mitigation measure BIO-4 that will prevent indirect impacts to least Bell's vireo and other nesting birds in the adjacent riparian habitat.

The project location avoids habitat that is targeted for conservation for the MSHCP reserve. The project avoids impacts to habitat with potential to support sensitive plant species. Burrowing owl surveys have been conducted and no sign of site use by burrowing owl was detected. The project design and location do not conflict with the design of the MSHCP reserve.

Mitigation measures proposed are primarily restricted to measure such as fencing, standard best management practices, and timing to avoid impacts to sensitive resources. Nesting bird survey, limiting of noise during the breeding season, sound walls or other measure will prevent direct and indirect impacts to nesting birds.

We appreciate the opportunity to provide you with this letter report. Please do not hesitate to contact me at (619) 462-1515 or Rob Hogenauer at (562) 537-2426 if you have any questions or require further assistance.

Sincerely,



Rob Hogenauer
Senior Scientist

Attachments:

Figure 1	Regional Location
Figure 2	USGS Topography
Figure 3	Aerial Vicinity
Figure 4	Project Plans
Figure 5	Burrowing Owl Transects
Figure 6	Soils
Figure 7	Vegetation/Land Use
Figure 8	Sensitive Plant Potential Habitats
Figure 9	CDFW Jurisdictional Resources
Figure 10	MSCHP
Figure 11	Vegetation/Land Use Impacts
Attachment A	Plant Species Observed
Attachment B	Animal Species Observed or Detected
Attachment C	Special-Status Plant Species Potential to Occur
Attachment D	Special-Status Animal Species Potential to Occur
Attachment E	Explanation of Status Codes for Plant and Animal Species
Attachment F	Representative Site Photographs

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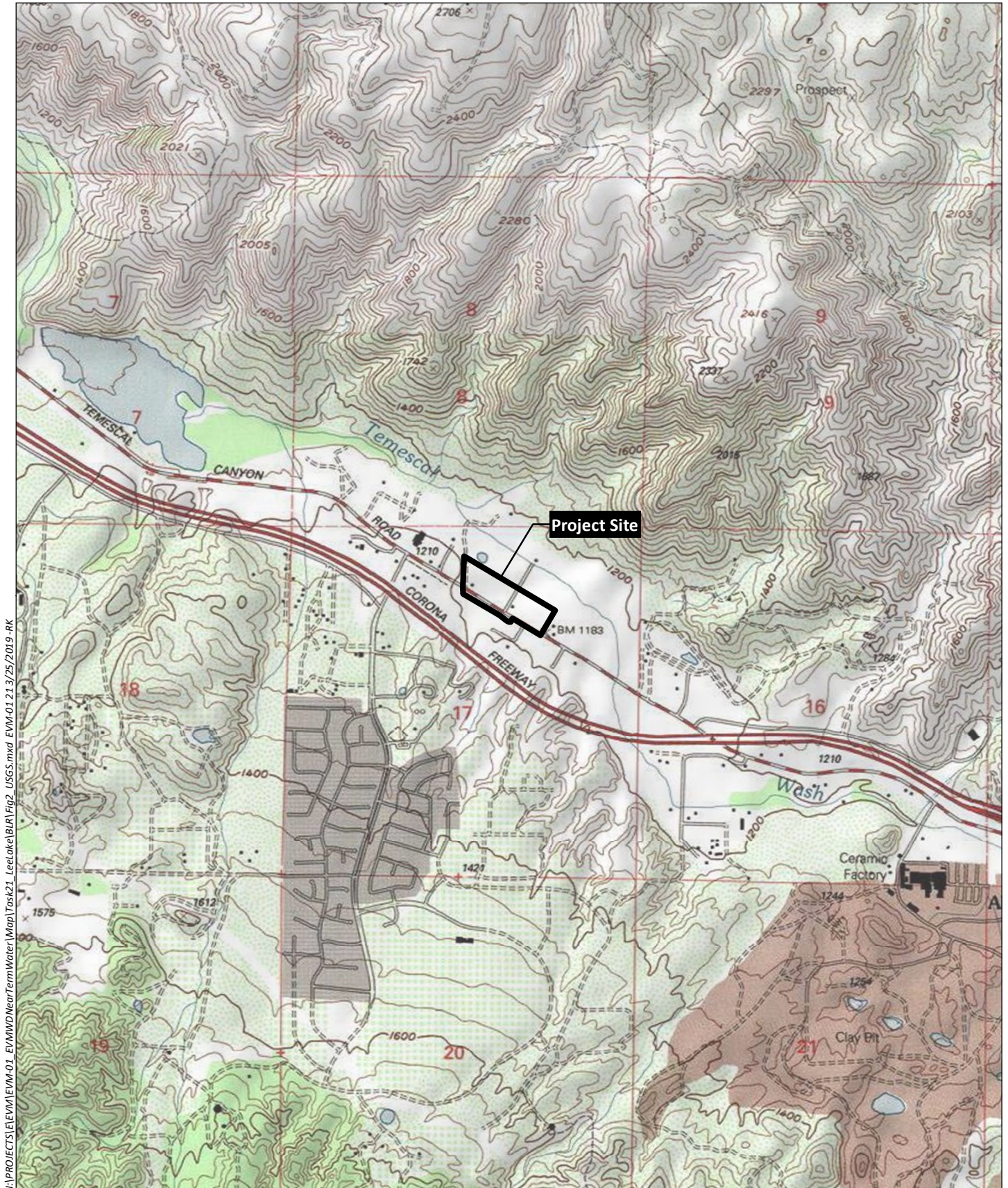
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Figures

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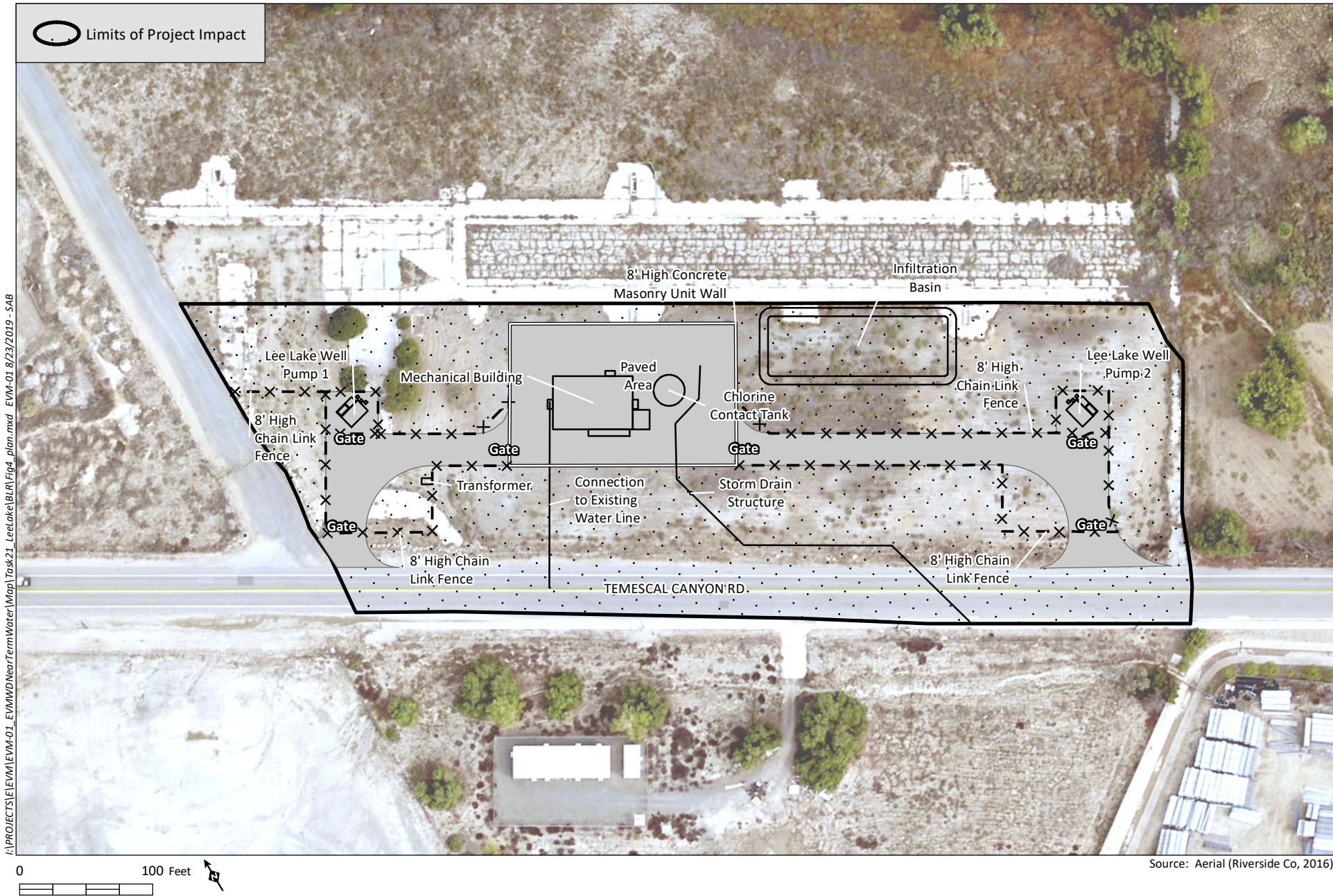
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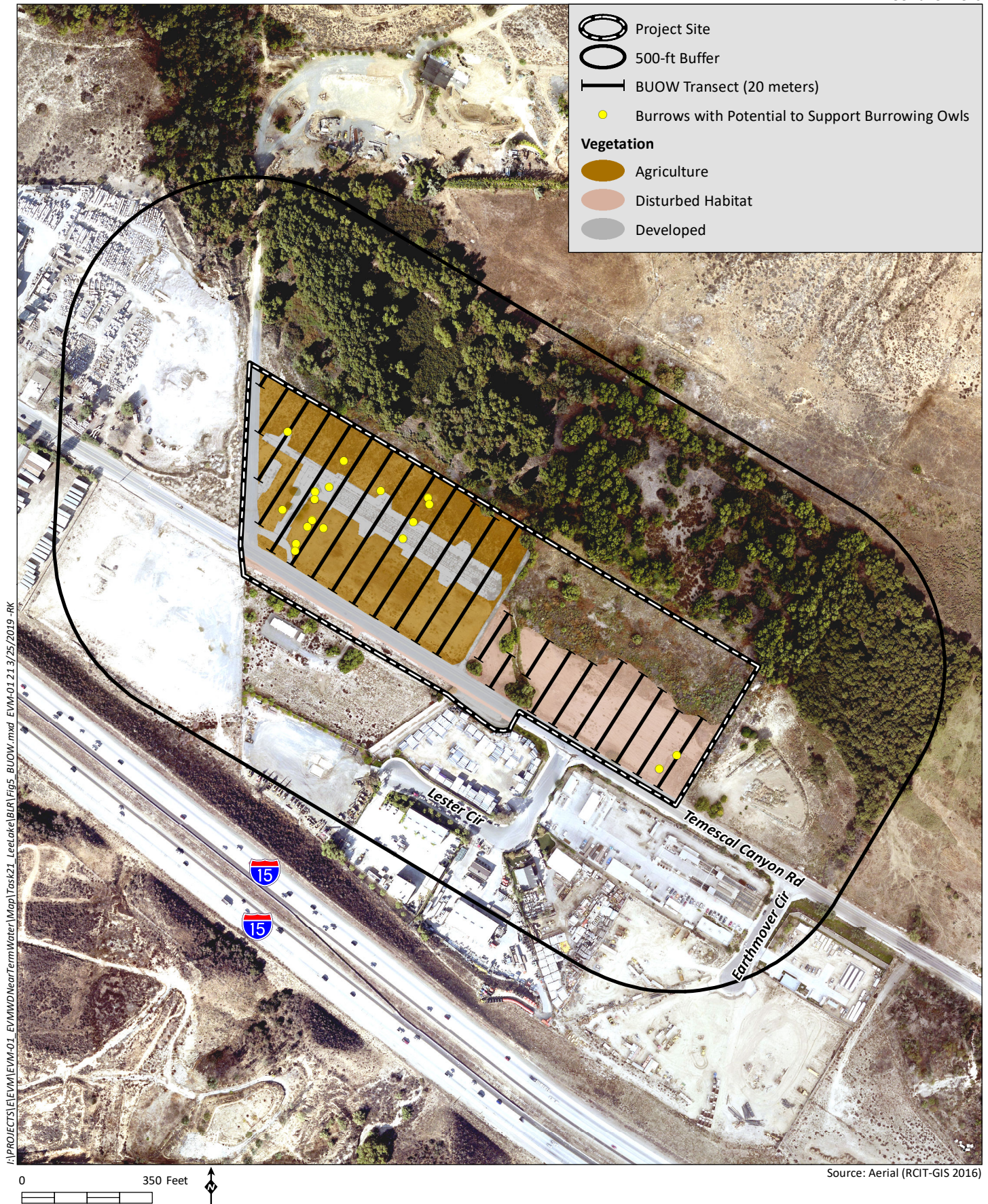


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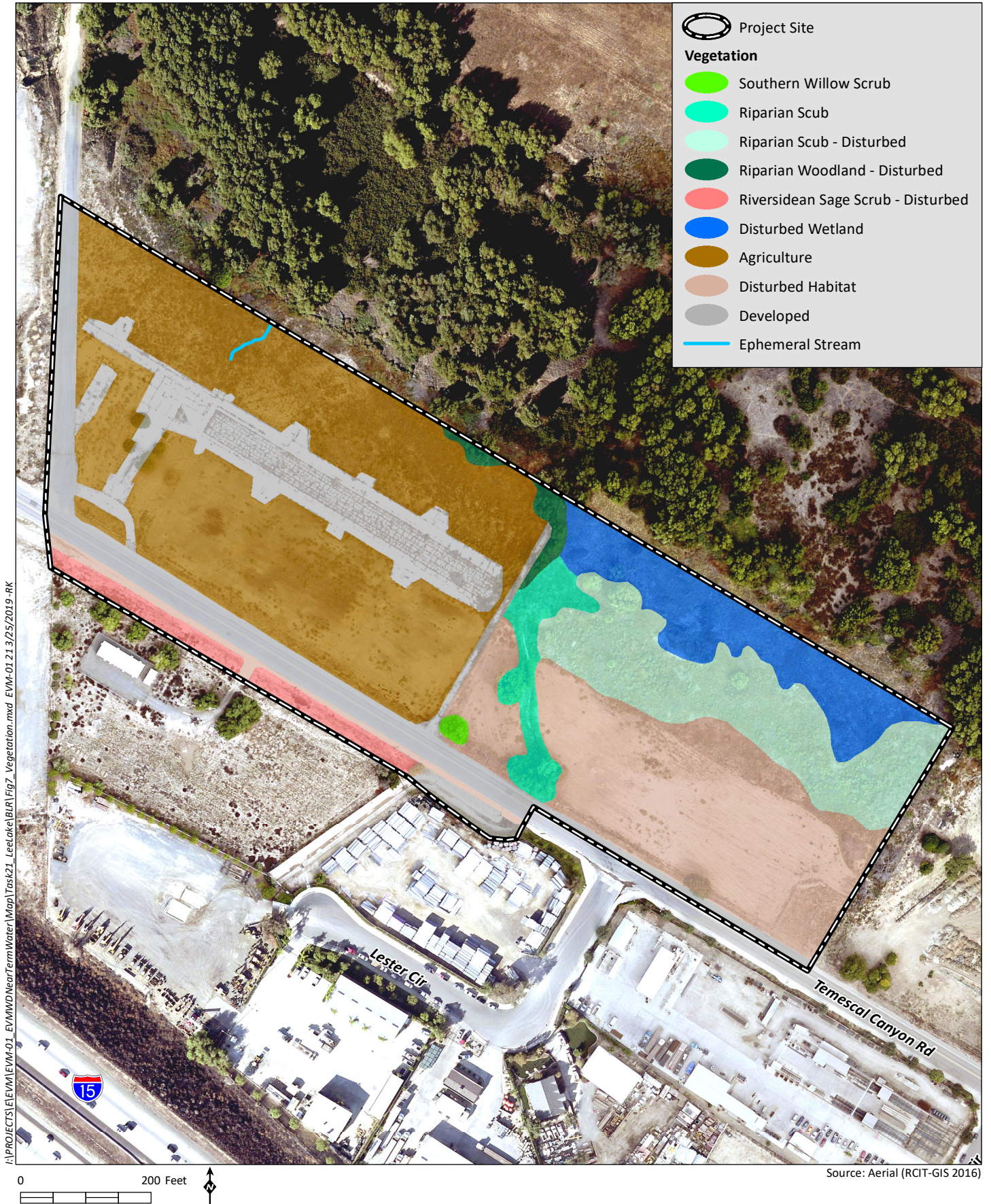
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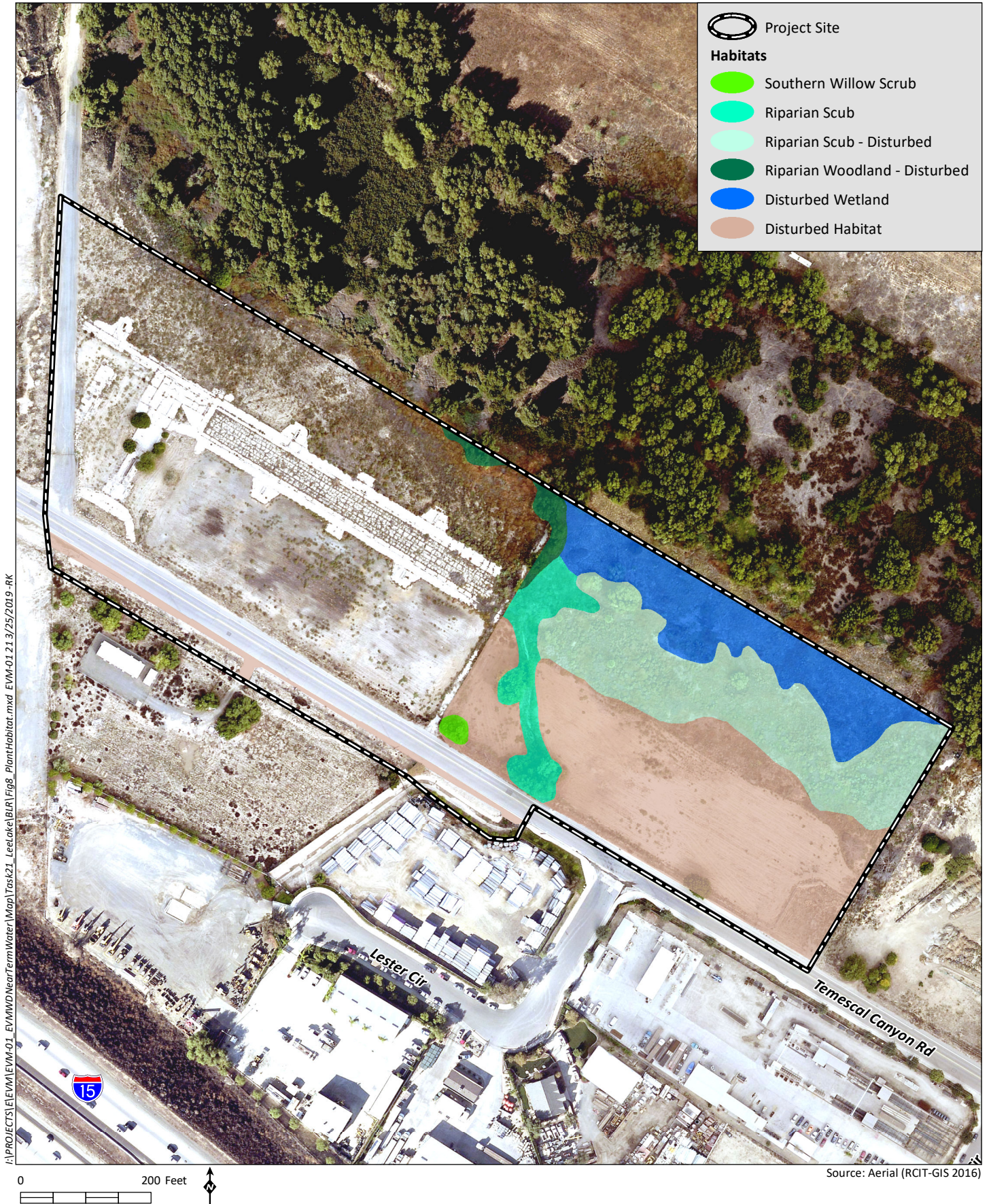


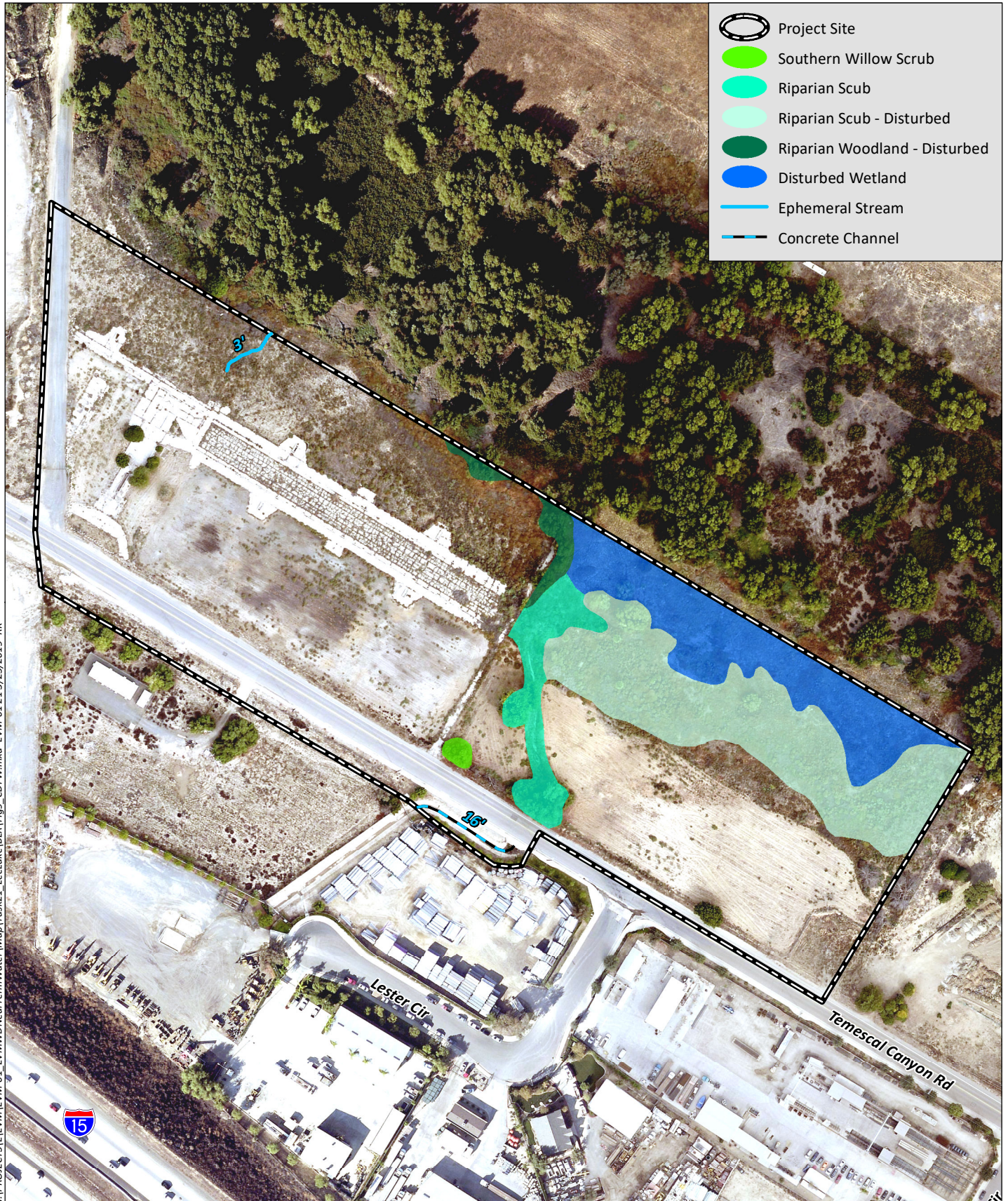
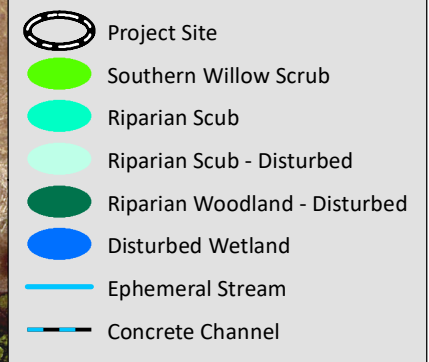




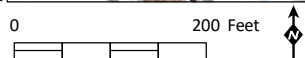


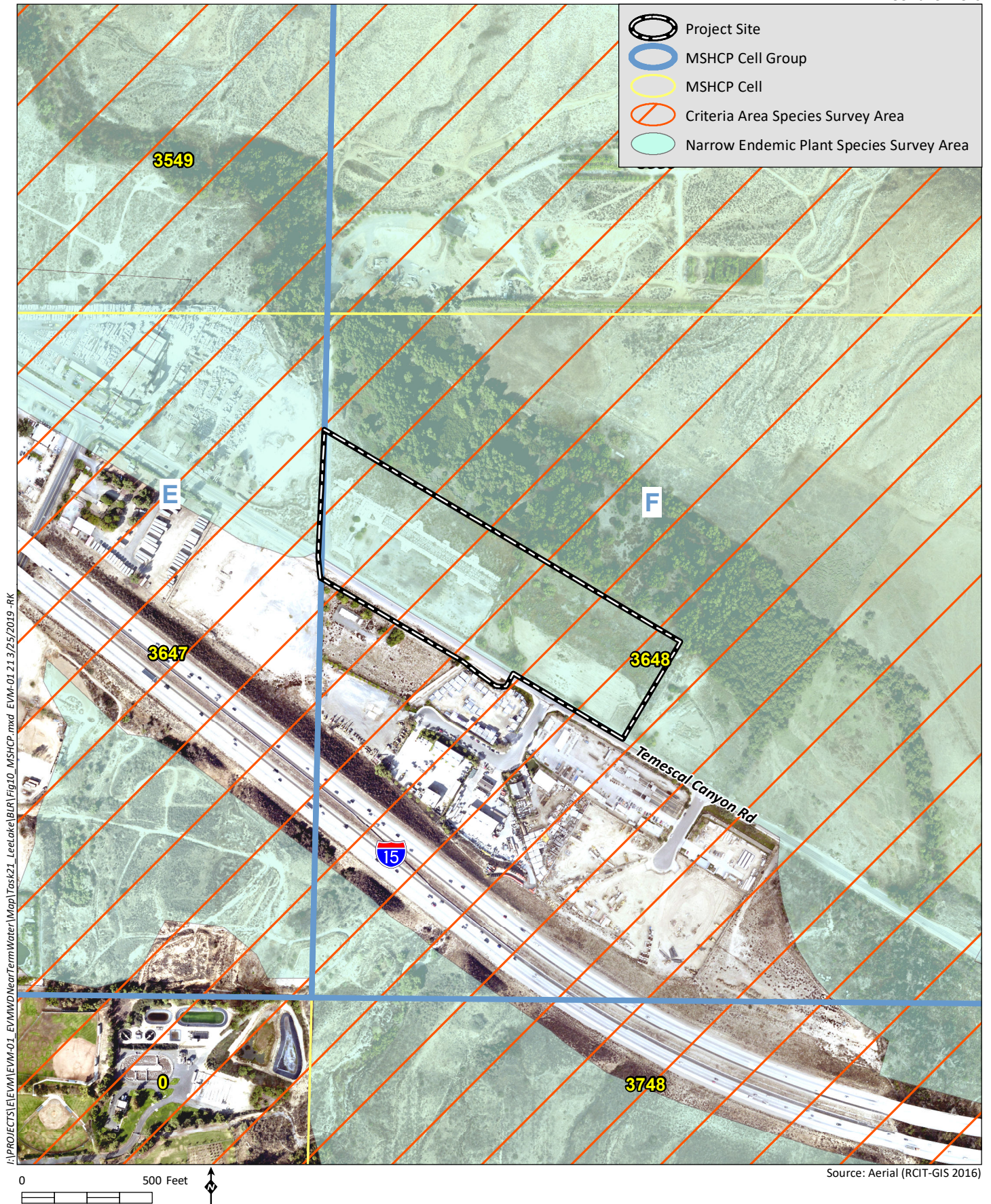


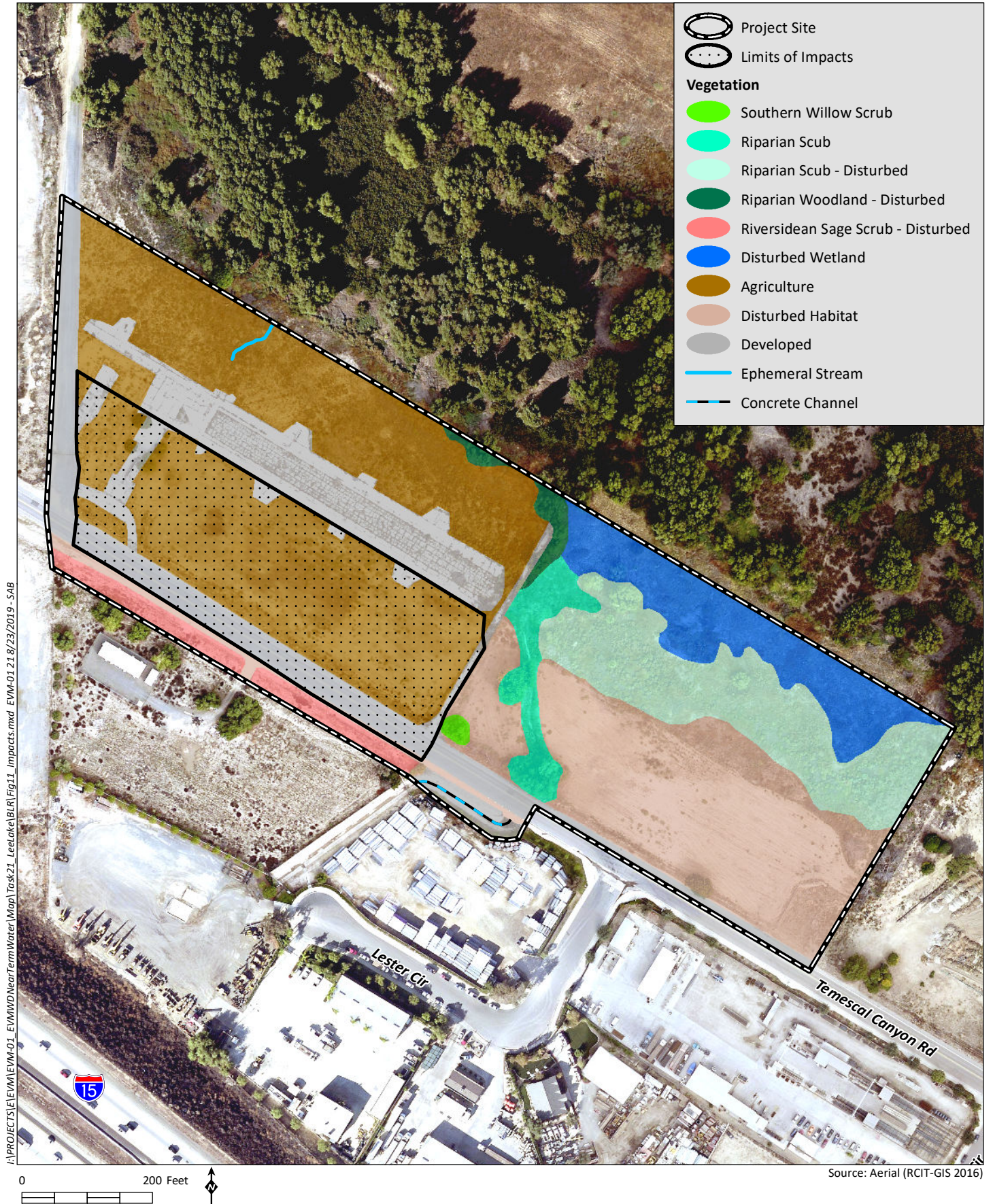




Source: Aerial (RCIT-GIS 2016)







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Attachment A

Plant Species Observed

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Attachment A Plant Species Observed

Family	Scientific Name	Common Name
Amaranthaceae	<i>Salsola tragus</i>	Russian thistle
Arecaceae	<i>Washingtonia robusta</i> *	Mexican fan palm
Asteraceae	<i>Artemisia dracunculus</i>	Tarragon
Asteraceae	<i>Baccharis salicifolia</i>	mule fat
Asteraceae	<i>Baccharis sarothroides</i>	Broom baccharis
Asteraceae	<i>Carduus pycnocephalus</i>	Italian thistle
Asteraceae	<i>Heterotheca grandiflora</i>	Telegraph weed
Asteraceae	<i>Oncosiphon piluliferum</i>	stinknet
Asteraceae	<i>Pluchea sericea</i>	arrow weed
Asteraceae	<i>Pulicaria paludosa</i> *	Spanish false fleabane
Boraginaceae	<i>Amsinckia menziesii</i>	Common fiddleneck
Brassicaceae	<i>Hirschfeldia incana</i> *	Short-podded mustard
Brassicaceae	<i>Sisymbrium sp.</i> *	Mustard
Chenopodiaceae	<i>Bassia hyssopifolia</i> *	Five-hook bassia
Cypereceae	<i>Schoenoplectus californicus</i>	California bulrush
Fabaceae	<i>Acmispon glaber</i>	Deerweed
Fabaceae	<i>Lupinus bicolor</i>	Miniature lupine
Geraniaceae	<i>Erodium cicutarium</i> *	Red stemmed Filaree
Meliaceae	<i>Melia azedarach</i> *	China berry tree
Plantaginaceae	<i>Plantago lanceolata</i> *	ribgrass, English plantain
Poaceae	<i>Bromus madretensis</i>	Red brome
Poaceae	<i>Cynodon dactylon</i>	Bermuda grass
Poaceae	<i>Distichlis spicata</i> var. <i>stricta</i>	saltgrass
Poaceae	<i>Echinochloa crus-galli</i> *	Barnyard grass
Polygonaceae	<i>Eriogonum fasciculatum</i>	California buckwheat
Salicaceae	<i>Populus fremontii</i>	Western cottonwood
Salicaceae	<i>Salix gooddingii</i>	Goodding's black willow
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow
Solanaceae	<i>Datura wrightii</i>	Jimson weed
Solanaceae	<i>Nicotiana glauca</i> *	Tree tobacco
Tamaricaceae	<i>Tamarix sp.</i> *	saltcedar, tamarisk
Typhaceae	<i>Typha sp.</i>	cattail
Urticaceae	<i>Urtica dioica</i> ssp. <i>holosericea</i>	Stinging nettle

* Non-native species.

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Attachment B

Animal Species Observed
or Detected

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Attachment B

Animal Species Observed or Detected

Family	Scientific Name	Common Name
Birds		
Accipitridae	<i>Buteo jamaicensis</i>	red-tailed hawk
Tytonidae	<i>Tyto alba</i>	barn owl
Emberizidae	<i>Pipilo maculatus</i>	spotted towhee
Anatidae	<i>Anas platyrhynchos</i>	mallard duck
Trochilidae	<i>Calypte anna</i>	Anna's hummingbird
Charadriidae	<i>Charadrius vociferus</i>	killdeer
Mimidae	<i>Mimus polyglottos</i>	northern mockingbird
Columbidae	<i>Zenaida macroura</i>	mourning dove
Corvidae	<i>Corvus brachyrhynchos</i>	American crow
Corvidae	<i>Corvus corax</i>	common raven
Mammals		
Canidae	<i>Canis latrans</i>	coyote
Leporidae	<i>Sylvilagus audubonii</i>	desert cottontail

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Attachment C

Special-Status Plant Species
Potential to Occur

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Attachment C

Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
chaparral sand verbena (<i>Abronia villosa aurita</i>)	--/-- CNPS Rank 1B.1	Sandy soils, requires bare ground; not tolerant of weeds.	Not expected. Sandy soils and bare ground present, but site has significant disturbance and weed base present. Species readily identified, and was not observed.
Munz's onion (<i>Allium munzii</i>)	FE/ST CNPS Rank 1B.1	Clay soils, opening in grassland, sage scrub.	Not expected. No clay soils or sage scrub. Site highly disturbed.
San Diego ambrosia (<i>Ambrosia pumila</i>)	FE/-- CNPS Rank 1B.1	Stream floodplain terraces and vernal pool margins. Loam or clay soils, typically slightly acidic, often in disturbed areas.	Moderate. Loam soils present, site highly disturbed with weeds and human disturbance.
Rainbow manzanita (<i>Arctostaphylos rainbowensis</i>)	--/-- CNPS Rank 1B.1	Chaparral.	Not expected. Not observed on property, species is conspicuous year round. Suitable habitat does not occur on property.
Western spleenwort (<i>Asplenium verpertinum</i>)	--/-- CNPS Rank 4.2	Rocky soils in Chaparral, woodland or coastal scrub.	Not expected. Rocky soils, chaparral and sage scrub not present.
Horn's milk-vetch (<i>Astragalus hornii</i> var. <i>hornii</i>)	--/-- CNPS Rank 1B.1	Alkaline playas, lake sides, marshes and seeps.	Low. Emergent wetland habitat similar to meadow and marshes, not alkaline.
Coulter's saltbush (<i>Atriplex coulteri</i>)	--/-- CNPS Rank 1B.2	Coastal dunes, coastal scrub, grassland with alkaline or clay soils.	Not expected. Alkaline or clay soils not present. Coastal dunes and scrub not present.
San Jacinto Valley crownscale (<i>Atriplex coronata</i> var. <i>notatior</i>)	FE/-- CNPS Rank 1B.1	Occurs in playas, chenopod scrub, valley and foothill grassland, and vernal pools. From 1,250 to 1,805 feet in elevation.	Not expected. Playa, Chenopod scrub and vernal pool habitats not present.
California ayenia (<i>Ayenia compacta</i>)	--/-- CNPS Rank 2B.3	Washes associated with creosote bush scrub.	Not expected. Habitat not present.
thread-leaved brodiaea (<i>Brodiaea filifolia</i>)	FT/SE CNPS Rank 1B.1	Semi alkaline mud flats and vernal pools, in clay soils.	Not expected. No vernal pools, mud flats or clay soils.
Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	--/-- CNPS Rank 1B.1	Mesic clay woodland, chaparral scrub, and vernal pools.	Not expected. Clay soils, chaparral and vernal pool habitats not present.
Buxbaum's sedge (<i>Carex buxbaumii</i>)	--/-- CNPS Rank 4.2	Bogs, fens, meadows, seeps, marshes and swamps.	Low. Emergent wetland similar habitat to marshes and meadows.
Catalina mariposa lily (<i>Calochortus catalinae</i>)	--/-- CNPS Rank 4.2	Chaparral, woodland, coastal scrub and grassland habitats.	Not expected. chaparral, sage scrub, and grassland habitats not present.

Attachment C (cont.)
Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
Palmer's mariposa lily (<i>Calochortus palmeri</i> var. <i>palmeri</i>)	--/-- CNPS Rank 1B.2	Mesic habitats, Chaparral, meadows and seeps, coniferous forest.	Moderate. Emergent wetland is mesic habitat similar to meadow.
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	--/-- CNPS Rank 1B.2	Rocky, sandy, alluvial or granite, sage scrub, woodland, and grassland.	Not expected. Alluvial habitat not present. No sage scrub or grassland is saline/alkaline.
intermediate mariposa lily (<i>Calochortus weedii</i> var. <i>intermedius</i>)	--/-- CNPS Rank 1B.2	Rocky, chaparral, scrub, and grassland.	Not expected. Habitat for species not present.
Southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	--/-- CNPS Rank 1B.1	Marsh, swamps, vernal pools in vernal mesic grasslands.	Low. Emergent wetland is similar but dryer than the marsh or swamp.
smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)	--/-- CNPS Rank 1B.1	Riparian/watercourses, grassland, alkali scrub.	Moderate. Potential habitat for species occurs in the riparian habitat that mainly occurs on the north and eastern portions of the site.
Peninsular spineflower (<i>Chorizanthe leptotheca</i>)	--/-- CNPS Rank 4.2	Alluvial fans with granitic soils and chaparral, coastal scrub or coniferous forest habitats.	Not expected. Habitat for species does not occur in study area.
Parry's spineflower (<i>Chorizanthe parryi</i>)	--/-- CNPS Rank 1B.1	Openings in chaparral and sage scrub, sandy or rocky soil.	Not expected. No chaparral or sage scrub present.
long-spined spineflower (<i>Chorizanthe polygonoides longispina</i>)	--/-- CNPS Rank 1B.2	Chaparral, sage scrub, grassland, often in clay soils.	Not expected. Sage scrub, grassland and clay soils not present.
White-bracted spineflower (<i>Chorizanthe xanti</i> var. <i>leucotheca</i>)	--/-- CNPS Rank 1B.2	Sandy or gravelly soil in alluvial sage scrub, desert scrub and juniper woodland.	Not expected. Sandy soils present, but not sage scrub, or juniper woodland.
San Miguel savory (<i>Clinopodium chandleri</i>)	--/-- CNPS Rank 1B.2	Chaparral, woodland, scrub, grassland, rocky areas.	Not expected. Chaparral, sage scrub, woodland and rocky habitat not present. Grassland is saline/alkaline.
Summer holly (<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>)	--/-- CNPS Rank 1B.2	Chaparral and cismontane woodland.	Not expected. Habitat not present in study area.
summer holly (<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>)	--/-- CNPS Rank 1B.2	Chaparral and cismontane woodland.	Not expected. Chaparral and cismontane woodland habitats not present.
Small-flowering morning-glory (<i>Convolvulus simulans</i>)	--/-- CNPS Rank 4.2	Clay soils, seeps, in chaparral, coastal scrub and grasslands.	Not expected. Clay soils other habitat requirements not present in study area.

Attachment C (cont.)
Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
Peruvian dodder (<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>)	--/-- CNPS Rank 2B.2	Freshwater marshes and swamps.	Low. Emergent wetland similar but dryer than marshes and swamps.
paniculate tarplant (<i>Deinandra paniculata</i>)	--/-- CNPS Rank 4.2	Usually found in vernal mesic areas and sometimes sandy areas within coastal scrub, grassland, near ephemeral streambeds and vernal pools.	Moderate. Sandy soils, mesic habitat present.
Western dichondra (<i>Dichondra occidentalis</i>)	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, sage scrub and grassland.	Not expected. Habitat does not occur in study area.
Cleveland's bush monkeyflower (<i>Diplacus clevelandii</i>)	--/-- CNPS Rank 4.2	Rocky openings in chaparral, cismontane woodland and forest.	Not expected. Habitat does not occur in study area.
slender-horned spineflower (<i>Dodecahema leptoceras</i>)	FE/SE CNPS Rank 1B.1	Chaparral, woodland, scrub, sandy soil.	Not expected. Chaparral, sage scrub habitats not present.
Santa Monica dudleya (<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>)	--/-- CNPS Rank 1B.1	Chaparral, coastal scrub rocky, volcanic or sedimentary.	Not expected. Habitat does not occur in study area.
many-stemmed dudleya (<i>Dudleya multicaulis</i>)	--/-- CNPS Rank 1B.2	Clay soils in barren, rocky areas with limited vegetation.	Not expected. No clay soils present. No chaparral or sage scrub.
sticky dudleya (<i>Dudleya viscida</i>)	--/-- CNPS Rank 1B.2	Chaparral, scrub, coastal bluffs, rocky.	Not expected. Rocky bluffs not present.
Booth's evening primrose (<i>Eremothera boothii</i> spp. <i>boothii</i>)	--/-- CNPS Rank 2B.3	Joshua tree woodland and pinyon pine woodland.	Not expected. Species habitat does not occur on site.
San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	FE/SE CNPS Rank 1B.1	Mesic area, sage scrub, grassland, vernal pools.	Low. No sage scrub or vernal pools present. Mesic habitats are present.
Alvin meadow bedstraw (<i>Galium californicum</i> spp. <i>primum</i>)	--/-- CNPS Rank 1B.2	Granitic sandy soils in chaparral and coniferous forest.	Not expected. Habitat does not occur in study area.
Campbell's liverwort (<i>Geothallus tuberosus</i>)	--/-- CNPS Rank 1B.1	Mesic soil, in wetlands, vernal pools, grassland, chaparral and coastal scrub.	Low. No vernal pool habitat present. Mesic habitats present on north and east side.
Palmer's grapplinghook (<i>Harpagonella palmeri</i>)	--/-- CNPS Rank 4.2	Clay soil, chaparral, sage scrub, and grassland.	Not expected. Sage scrub, chaparral and clay soils not present.

Attachment C (cont.)
Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
Tecate cypress (<i>Hesperocyparis forbesii</i>)	--/-- CNPS Rank 1B.1	Clay, gabbroic or metavolcanic soils in coniferous forest or chaparral.	Not expected. Habitat not present. Species obvious when present.
graceful tarplant (<i>Holocarpha virgata</i> ssp. <i>elongata</i>)	--/-- CNPS Rank 4.2	Woodland, sage scrub and grassland lacking a well developed scrub cover. Only known in Riverside from Santa Rosa Plateau .	Not expected. Sage scrub and grassland not present. Site not on or near Santa Rosa Plateau.
vernal barley (<i>Hordeum intercedens</i>)	--/-- CNPS Rank 3.2	Mesic grasslands, vernal pools, and large saline flats or depressions.	Low. No vernal pool, Mesic disturbed wetlands potential habitat for species.
Mesa horkelia (<i>Horkelia cuneata</i> ssp. <i>puberula</i>)	--/-- CNPS Rank 1B.1	Chaparral, woodland, and scrub, sandy or gravelly.	Not expected. Chaparral, woodland and sage scrub habitats not present.
California Satintail (<i>Imperata brevifolia</i>)	--/-- CNPS Rank 2B.1	Scrub, chaparral, meadows and seeps, alkaline soils.	Low. Emergent wetland similar to meadows, alkaline soils not present.
southern California black walnut (<i>Juglans californica</i>)	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, alluvial soils.	Not expected. Some riparian scrub present but the species is easily detected and was not observed.
Santa Lucia dwarf rush (<i>Juncus luciensis</i>)	--/-- CNPS Rank 1B.2	Meadows, seeps, vernal pool in chaparral, coniferous forest and great basin scrub.	Not expected. Chaparral, coniferous forest and great basin scrub not present.
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	--/-- CNPS Rank 1B.1	Sage scrub, oak woodland, grassland, usually in wetlands that are alkaline and associated with Travers or other clay soils.	Low. No Travers or other clay soils. Wetland habitat occurs to north and east.
Robinson's pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	--/-- CNPS Rank 4.3	Openings in chaparral and sage scrub, typically dry sites.	Not expected. Chaparral and sage scrub not present.
Ocellated humboldt lily (<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>)	--/-- CNPS Rank 4.2	Openings in chaparral, cismontane woodland, coastal scrub, riparian woodland.	Low. Riparian woodland present on edge of study area.
lemon lily (<i>Lilium parryi</i>)	--/-- CNPS Rank 1B.2	Banks of mountain seeps and stream with year round moisture, occurs above 3,000 feet amsl.	Not expected. Study area is at 1,200 feet amsl. Well below species known range.
Small-flowering microseris (<i>Microseris gouglasii</i> sp. <i>platycarpa</i>)	--/-- CNPS Rank 4.2	Clay soils in woodland, coastal scrub, grasslands and vernal pools.	Not expected. Clay soils, sage scrub, vernal pools, not present

Attachment C (cont.)
Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
felt-leaved monardella (<i>Monardella hypoleuca</i> spp. <i>lanata</i>)	--/-- CNPS Rank 1B.2	Chaparral and woodland.	Not expected. Native woodland and chaparral not present.
little mouseltail (<i>Myosurus minimus</i> ssp. <i>apus</i>)	--/-- CNPS Rank 3.1	Alkaline vernal pools in grassland.	Not expected. Vernal pools not present.
mud nama (<i>Nama stenocarpum</i>)	--/-- CNPS Rank 2B.2	Muddy banks of marshes, swamps, lakes and streams.	Moderate. Study area includes stream, and wetland habitat.
spreading navarretia (<i>Navarretia fossalis</i>)	FT/-- CNPS Rank 1B.1	Vernal pools.	Not expected. No vernal pool habitat present.
prostrate navarretia (<i>Navarretia prostrata</i>)	--/-- CNPS Rank 1B.1	Mesic, alkaline, vernal pools, grassland, scrub. Nearly always occurs in wetlands.	Low. No vernal pools present. Wetlands in study area are not typical habitat for species.
chaparral nolina (<i>Nolina cismontana</i>)	--/-- CNPS Rank 1B.1	Chaparral and coastal scrub.	Not expected. No chaparral or coastal sage habitat present.
California Orcutt grass (<i>Orcuttia californica</i>)	FE/SE CNPS Rank 1B.1	Vernal pools.	Not expected. Vernal pool habitat does not occur.
Allen's pentachaeta (<i>Pentachaeta aurea</i> ssp. <i>allenii</i>)	--/-- CNPS Rank 1B.1	Chaparral, woodland, coastal scrub, coniferous forest, riparian woodland, grassland.	Low. May occur on study area northern edge that borders riparian woodland.
Woolly chaparral-pea (<i>Pickeringia montana</i> var. <i>tomentosa</i>)	--/-- CNPS Rank 4.3	Gabbroic, granitic clay in chaparral.	Not expected. Habitat does not occur in study area.
Narrow-petaled rein orchid (<i>Piperia leptopetala</i>)	--/-- CNPS Rank 4.3	Cismontane woodland, coniferous forest.	Not expected. Habitat does not occur in study area.
Fish's milkwort (<i>Polygala cornuta</i> var. <i>fishiae</i>)	--/-- CNPS Rank 4.3	Shaded areas in woodland, also can occur in xeric and mesic chaparral.	Not expected. Habitat does not occur in study area.
white rabbit-tobacco (<i>Pseudognaphalium leucocephalum</i>)	--/-- CNPS Rank 2.B2	Riparian areas, woodland, sandy or gravelly areas.	Not expected. Species easily detected and was not observed.
Nuttall's scrub oak (<i>Quercus dumosa</i>)	--/-- CNPS Rank 1B.1	Sandy or clay loam soils, sage scrub, chaparral or coniferous forests.	Not expected. no sage scrub, chaparral or coniferous forests occur onsite. Species is conspicuous and not oaks were observed on site.
Engelmann oak (<i>Quercus engelmannii</i>)	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, riparian woodland, grasslands.	Not expected. Riparian habitats present but species is conspicuous and not oaks were observed on site.
Coulter's matilija poppy (<i>Romneya coulteri</i>)	--/-- CNPS Rank 4.2	Often in burns, chaparral, coastal scrub.	Not expected. Habitat does not occur in study area.

Attachment C (cont.)
Special-Status Plant Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on site
Salt marsh bird's-beak (<i>Didalcea neomexicana</i>)	FE/SE CNPS 1B.2	Coastal dunes, marshes and swamps, Often in saline areas.	Not expected. Habitat not saline, emergent wetland similar to but dryer than marshes or swamps.
bottle liverwort (<i>Sphaerocarpos drewei</i>)	--/-- CNPS Rank 1B.1	Chaparral or coastal scrub below 2,000 feet amsl.	Not expected. Preferred habitat not present.
San Bernardino aster (<i>Symphyotrichum defoliatum</i>)	--/-- CNPS Rank 1B.2	Near ditches, streams, seeps, marshes in grassland, scrub, forest.	Moderate. Stream and wetland habitat on site. Site disturbed.
Parry's tetraococcus (<i>Tetraococcus dioicus</i>)	--/-- CNPS Rank 1B.2	Chaparral and coastal scrub.	Not expected. No chaparral or sage scrub habitat present.
woven spored lichen (<i>Texosporium sancti-jacobi</i>)	--/-- CNPS Rank 3	Chaparral openings, usually on animal pellets, dead twigs or detritus rich soil.	Not expected. Habitat not present.
California screw moss (<i>Tortula californica</i>)	--/-- CNPS Rank 1B.2	Sandy soils in chenopod scrub or native grasslands.	Not expected. No chenopod scrub or grassland present.
La Purisima viguiera (<i>Viguiera purisimae</i>)	--/-- CNPS Rank 2B.3	Coastal scrub and chaparral.	Not expected. Chaparral and sage scrub not present.

* See Attachment E for sensitivity codes.

Attachment D

Special-Status Animal Species
Potential to Occur

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Attachment D

Special-Status Animal Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on Site
Invertebrates			
Crotch bumblebee (<i>Bombus crotchii</i>)	--/--	Scrub and grassland habitats. Uses sage, sunflowers, and similar species for nectar.	Not expected. Scrub habitat not present. Sunflowers and similar species for nectar not present.
vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT/--	Vernal pool and playa habitat, cool pools, preferable on clay soils.	Not expected. No vernal pool habitat present.
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	FE/SC	Vernal pools.	Not expected. No vernal pool or ephemeral pond habitat in study area.
Senile tiger beetle (<i>Cicindela senilis frosti</i>)	--/--	Occurs along marine shoreline, from central California coast south to salt marshes of San Diego, also found at Lake Elsinore.	Not expected. Waters on site ephemeral. Species associated with permanent waters.
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	FE/SC	Open areas, sparse vegetation, and flowers. Host plants are <i>Plantago</i> spp., <i>Antirrhinum coulterianum</i> , and <i>Cordylanthus rigidus</i> .	Not expected. Host plants not observed on property.
Santa Rosa Plateau fairy shrimp (<i>Linderiella santarosae</i>)	--/--	Occurs in the vernal pools on the Santa Rosa Plateau on southern basalt flow vernal pools.	Not expected. No vernal pools occur on site. Site is not on Santa Rosa Plateau.
Riverside fairy shrimp (<i>Streptocephalus wootoni</i>)	FE/--	Endemic to Western Riverside, Orange, and San Diego Counties. Found in deep long lasting seasonal vernal pools, ephemeral ponds and similar habitats.	Not expected. Habitat does not occur on site.
Fish			
arroyo chub (<i>Gila orcuttii</i>)	--/SC	Prefers slow moving streams or backwaters with sand or mud bottoms. Streams typically deeper than 40 centimeters (16 inches).	Not expected. Stream on site is ephemeral.
Steelhead (<i>Oncorhynchus mykiss irideus</i>)	FE/--	Prefers streams and rivers with dissolved oxygen concentration of at least 7 parts per million. Deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt.	Not expected. Stream on site is ephemeral.

Attachment D (cont.)
Special-Status Animal Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on Site
Santa Ana speckled dace (<i>Rhinichthys osculus</i> ssp. 3)	--/SC	Streams with year round flow.	Not expected. Permanent year round streams do not occur in study area.
Reptiles and Amphibians			
arroyo toad (<i>Anaxyrus californicus</i>)	FE/SC	Low flow streams with sparse cover in foothills, valleys and mountains. Requires sandy terraces.	Not expected. Stream on site is ephemeral. Dense cover around nearby Temescal Wash is not habitat for species.
Southern California legless lizard (<i>Anniella stebbinsi</i>)	--/SC	Coastal dune, sandy washes, alluvial fans, oak woodlands, conifer forest, sandy soils.	Not expected. Oak woodland, alluvial fans, conifer forest not present in study area.
California glossy snake (<i>Arizona elegans occidentalis</i>)	--/SC	Scrub and grassland habitats, usually with loose or sandy soils. A generalist.	Not expected. Sage scrub and grassland habitats not present.
orange-throated whiptail (<i>Cnemidophorus hyperthrus</i>)	--/SC	Chaparral, sage scrub, grassland, woodland, riparian areas.	Low. Riparian habitat present along north and eastern edges.
coastal western whiptail (<i>Cnemidophorus tigris stenjnegeri</i>)	--/SC	Open rocky areas with sparse vegetation, usually scrub or grassland.	Not expected. Rocky habitat not present. Species prefers sparsely vegetated uplands.
northern red-diamond rattlesnake (<i>Crotalus ruber</i>)	--/SC	Heavy brush, boulders, can use a variety of habitats; prey density determining factor.	Low. Habitat not typical for species. Known from hills to north and east.
San Bernardino ringneck snake (<i>Diadophis punctatus modestus</i>)	--/--	Mesic habitats. woodlands, farms, grassland, chaparral.	Moderate. Habitat to north and east along Temescal Wash are mesic.
western pond turtle (<i>Emys marmorata</i>)	--/SC	Slow moving stream, ponds, reservoirs, and other water bodies deeper than 6 feet with logs or other submerged cover.	Not expected. Stream is ephemeral.
California mountain kingsnake (<i>Lampropeltis zonata</i>)	--/SC	Coniferous forest, oak woodland, riparian woodland, sage scrub. Typically near streams with rock outcrops.	Low. Riparian woodland present along northern border of study area.
coast horned lizard (<i>Phrynosoma coronatum blainvillei</i>)	--/SC	Grassland, scrub, chaparral, and woodland.	Not expected. No scrub, chaparral, or woodland habitat on site.

Attachment D (cont.)
Special-Status Animal Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on Site
California red-legged frog (<i>Rana aurora draytonii</i>)	FT/SC	Ponds, lowland stream, riparian woodland, wetlands. Requires humid habitats.	Not expected. Stream habitat on site is ephemeral.
coast patch-nosed snake (<i>Salvadora hexalepis virgulata</i>)	--/SC	Coastal and desert scrub, chaparral, dry washes. A generalist.	Not expected. Species is a generalist in dry habitats. Upland habitats on site are disturbed.
western spadefoot (<i>Scaphiopus hammondi</i>)	--/SC	Grassland, sage scrub, or occasionally chaparral; standing water, puddles, vernal pools needed for reproduction.	Not expected. No puddles or vernal pools for reproduction.
coast range newt (<i>Taricha torosa torosa</i>)	--/SC	Grassland, woodland associated with ponds, slow-moving streams.	Not expected. Stream on site is ephemeral.
two-striped garter snake (<i>Thamnophis hammondi</i>)	--/SC	Stream course with adjacent dense vegetation.	Moderate. Stream course on site, with adjacent dense habitat.
Birds			
Cooper's hawk (<i>Accipiter cooperii</i>)	--/SC	Forest and woodland habitats; will forage in grasslands.	Moderate. Species has high potential to use adjacent riparian woodlands, may forage on site.
tricolored blackbird (<i>Agelaius tricolor</i>)	--/SC	Wetland with dense cattails, tall grasses, or thickets of willows.	Not expected. Cattails on property limited to a few, no thickets of habitat present.
southern California rufous crowned sparrow (<i>Aimophila ruficeps canescens</i>)	--/SC	Hillsides, with grassland, sage scrub, or chaparral.	Not expected. Vegetated hillsides not present in study area.
Bell's sage sparrow (<i>Amphispiza belli belli</i>)	--/WL	Evenly spaced sage scrub.	Not expected. Habitat for species does not occur.
golden eagle (<i>Aquila chrysaetos</i>)	--/SC	Open country, prefers mountains or hills.	Not expected. May occur in hills to east, but site does not have typical habitat for species.
long-eared owl (<i>Asio otus</i>)	--/SC	Dense vegetation adjacent to open grassland or shrubland, and open forests.	Moderate. Open woodland/forest borders the northern edge of study area.
burrowing owl (<i>Athene cunicularia</i>)	--/SC	Grassland, fallow agriculture, and areas of sparse cover, preferably with burrows of fossorial mammals.	Low. A few burrows with potential to support species observed. No sign of species observed at burrows.

Attachment D (cont.)
Special-Status Animal Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on Site
coastal cactus wren (<i>Campylorhynchus brunneicapillus sandiegensis</i>)	--/SC	Scrub, desert thickets, and areas with large branching cacti.	Not expected. No cacti in or adjacent to study area.
northern harrier (<i>Circus cyaneus</i>)	--/SC	Meadows, grassland, scrub, rarely in woodland. Roosts on ground.	Not expected. Typical habitat for species not present.
Yellow rail (<i>Coturnicops noveboracensis</i>)	--/--	Shallow marshes and wet meadows. Generally an eastern U.S. species. Also known in northern California.	Not expected. Site not in species known range. CNDDDB records may have been a migratory bird, or a misidentification.
white-tailed kite (<i>Elanus leucurus</i>)	--/-- Fully Protected	Grassland, agriculture with nearby woodland for nesting.	Moderate. Open land on site, riparian woodland adjacent.
southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	FE/SE	Dense mature riparian woodland with willows and/or cottonwoods.	Not expected. Habitat does not occur onsite, but does occur adjacent to north side of study area.
California horned lark (<i>Eremophila alpestris actia</i>)	--/WL	Grassland, agriculture fields, and disturbed fields.	Moderate. Fallow agriculture on site has potential for species.
bald eagle (<i>Haliaeetus leucocephalus</i>)	DL/SE	Large bodies of open water for foraging, Nearby trees for nesting and roosting.	Not expected. No large bodies of open water on site.
yellow breasted chat (<i>Icteria virens</i>)	--/SC	Wide riparian woodland, dense willow thickets, with well-developed understory.	Low. Habitat for species present in adjacent Temescal Wash riparian habitat. Species may forage in shrubs on site.
loggerhead shrike (<i>Lanius ludovicianus</i>)	--/SC	Open grassland or shrubland with trees, utility poles, fence post, or other perch sites.	Moderate. Open habitat and shrubs present.
Osprey (<i>Pandion haliaetus</i>)	--/--	Breeds in variety of habitats with shallow water and large fish, including boreal forest ponds, desert salt-flat lagoons, temperate lakes, and tropical coasts. Winters along large bodies of water containing fish.	Not expected. Required water habitat not present in or adjacent to study area.
white-faced ibis (<i>Plegadis chihi</i>)	--/SC	Shallow marshes, spoils banks, meadows, marshes.	Low. Disturbed wetland has potential for species.
coastal California gnatcatcher (<i>Poliophtila californica californica</i>)	FT/SC	Coastal sage and other low scrub.	Not expected. Habitat for species does not occur.

Attachment D (cont.)
Special-Status Animal Species Potential to Occur

Species	Sensitivity Status*	Habitat	Status on Site
least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE/SE	Riparian areas with dense ground cover and stratified canopy, prefers willows.	Low. The site includes riparian scrub. Species likely to occur in adjacent riparian forest/woodland along Temescal Wash.
Mammals			
Pallid bat (<i>Antrozous pallidus</i>)	--/SC	Coniferous forests, various woodlands, deserts and rocky terrain.	Low. May occur in riparian forest along adjacent Temescal Wash and rocky hill to the east. Could forage on site.
San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	--/SC	Sage scrub and grassland, sandy soils.	Not expected. Sage scrub and grassland not present.
Stephens' kangaroo rat (<i>Dipodomys stephensi</i>)	FE/ST	Open areas with sparse perennial cover and loose soil.	Not expected. Site has mostly annual cover where potential burrows are present in the southeast.
Western red bat (<i>Laiurus blosservillii</i>)	--/SC	Trees and shrubs in forest habitat, often riparian habitat.	Low. Riparian habitat present to east and the north. May occur along Temescal Wash and forage on site.
western yellow bat (<i>Lasiurus xanthinus</i>)	--/SC	Desert grassland and scrub with an associated water feature.	Not expected. Grassland and desert scrub not present in study area.
western mastiff bat (<i>Eumops perotis californicus</i>)	--/SC	Rocky areas, cliff faces, known to roost in buildings.	Not expected. Habitat not present.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	--/SC	Primarily open scrub with short grasses.	Not expected. Appropriate scrub habitat not present.
Yuma myotis (<i>Myotis yumanensis</i>)	--/--	Juniper and riparian woodland, near open water. Roosts in caves, mines, bridges.	Low. Riparian woodland adjacent, no open water on site.
San Diego desert woodrat (<i>Neotoma lepida</i>)	--/SC	Scrub and desert, rock outcrops, or areas of dense cover.	Not expected. Habitat not present, <i>Neotoma</i> middens not observed.
pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	--/SC	Desert scrub, roosts in cliffs, rocky crevices in small colonies.	Not expected. Habitat does not occur.
American badger (<i>Taxidea taxus</i>)	--/SC	Upland grasslands, meadows, field.	Not expected. Upland grassland not present. No burrows appropriate for badger not present.

* Please refer to Attachment D for an explanation of sensitivity status codes.

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Attachment E

Explanation of Status Codes for Plant and Animal Species

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Attachment E

Explanation of Status Codes for Plant and Animal Species

U.S. Fish and Wildlife Service

FE Federally listed endangered
FT Federally listed threatened
FC Federal candidate
PT Proposed threatened
DL De-listed
BCC Bird of conservation concern

California Department of Fish and Game

SE State listed endangered
ST State listed threatened
SC California species of special concern
SR State listed rare
WL Watch List

State Ranking

The state rank (S-rank) refers to the imperilment status only within California's state boundaries. The State Rank represent a letter and number score that reflects a combination of Rarity, Threat, and Trend factors, with weighting being heavier on Rarity than the other two.

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.

Federal Forest Service Code

Federal:

FS U.S. Department of Agriculture Forest Service Sensitive

The USDA Forest Service defines sensitive species as those plant and animal species identified by a regional forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species existing distribution. Regional foresters shall identify sensitive species occurring within the region. More information is available at <http://www.fs.fed.us/r5/projects/sensitive-species>.

Attachment E (cont.)
Explanation of Status Codes for Plant and Animal Species

California Native Plant Society (CNPS) Codes

Lists

- 1A = Presumed extinct.
- 1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.
- 2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.
- 3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.
- 4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

- .1 = Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
- .2 = Fairly endangered in California (20 to 80 percent occurrences threatened)
- .3 = Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no threat code extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences are considered in setting the Threat Code.

Attachment F

Representative Site Photographs

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Photo 1-View from proposed location of Well 1 to south showing agricultural land.



Photo 2-View from proposed location of Well 2 to east showing agricultural land in foreground with riparian habitat along Temescal Wash in the background.

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Photo 3-View north to south of concrete pad that is a remnant from the agricultural operation.



Photo 4- View from the northwest corner of study area showing Temescal Canyon Road and agricultural land with Temescal Wash in the background.

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Photo 5-View north to south along the western edge of the study area.



Photo 6-View from study area of large culvert under Temescal Canyon Road and associated stream that will be avoided by proposed project.

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Photo 7-View of riparian scrub along streambed on south side of study area that is to be avoided.



Photo 8-View north on south side of study area showing disturbed riparian scrub along the edge of Temescal Wash Riparian scrub that is all to be avoided.

G:\PROJECTS\Biology\H\HDL-05\Reports\Year 5 (2010)\Yr5 Appx E site photos

Appendix B

Cultural Resources Survey Report

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Lee Lake Wells Project

Cultural Resources Survey

July 2019 | EVM-01.21

Submitted to:

Elsinore Valley Municipal Water District

31315 Chaney Road
Lake Elsinore, CA 92531

Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard
La Mesa, CA 91942

Lee Lake Wells Project

Cultural Resources Survey

Prepared for:

Elsinore Valley Municipal Water District

31315 Chaney Road
Lake Elsinore, CA 92531

Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard
La Mesa, CA 91942

July 2019 | EVM-01.21

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National Archaeological Database Information

Authors:	Mary Robbins-Wade, RPA, and Julie Roy
Firm:	HELIX Environmental Planning, Inc.
Client/Project:	Elsinore Valley Municipal Water District / Lee Lake Wells Project
Report Date:	July 2019
Report Title:	Cultural Resources Survey for the Lee Lake Wells Project, Riverside County, California
Type of Study:	Cultural Resources Survey
New Sites:	P-33-028821
Updated Sites:	None
USGS Quad:	Alberhill 7.5-minute Quadrangle
Acreage:	14.7 acres
Key Words:	Riverside County, Alberhill, Lee Lake (Corona Lake); inland; archaeological survey; 1960s cattle yard/dairy; no significant resources; Township 5 South, Range 5 West, Section 17

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
BP	Before Present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
EIC	Eastern Information Center
EVMWD	Elsinore Valley Municipal Water District
gpm	gallons per minute
NAHC	Native American Heritage Commission
NEPA	National Environmental Protection Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
psi	pounds per square inch
RPA	Register of Professional Archaeologists
SLF	Sacred Lands File
SLR	San Luis Rey
SR	State Route
TCPs	Traditional Cultural Properties
TCRs	Tribal Cultural Resources
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) conducted a cultural resources survey for the Elsinore Valley Municipal Water District (EVMWD; District) Lee Lake Wells Project (project), in western Riverside County, California. The EVMWD proposes the construction of two wells and associated systems at the project site, which is a District-owned parcel near the community of Lake Elsinore.

The cultural resources survey included a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a field survey. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).

Prior to the survey, HELIX conducted a records search at the Eastern Information Center, covering a one-mile radius around the project area. The records search revealed that 26 studies have been conducted and 25 cultural resources have been recorded within the one-mile search radius of the project. None of previously recorded cultural resources are located within the project area. One historic residential complex was recorded immediately adjacent to the project area.

The field survey was conducted in February 2019 by HELIX and a Luiseño Native American monitor from the Pechanga Band of Luiseño Indians. The only cultural material observed within the project area consisted of concrete slabs and food or water troughs related to the former cattle yard/dairy that operated on the site beginning in the mid-1960s. Due to their age (over 50 years old), these features were recorded as a single resource and given the temporary designation LLW-001; the permanent number assigned by the EIC is P-33-028821. This resource does not meet the criteria for listing on the California Register of Historical Resources or the National Register of Historic Places. Therefore, impacts to it would not constitute significant effects.

Discussions with the Pechanga Band of Luiseño Indians and the Soboba Band of Luiseño Indians indicated that the project area is within a Traditional Cultural Property and is thus sensitive in terms of cultural resources.

Due to the cultural sensitivity of the area and the potential for subsurface cultural resources, it is recommended that an archaeological monitoring program be implemented for ground-disturbing activities. This would include monitoring by an archaeologist and a Native American monitor, as described in the mitigation measures presented in this report.

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION AND LOCATION

The Elsinore Valley Municipal Water District (EVMWD; District) proposes to develop the Lee Lake Wells Project (project). The project site is located near the community of Lake Elsinore in southwestern Riverside County, California (Figure 1, *Regional Location*). The project area is located east of Interstate (I-) 15 and north of State Route (SR) 74 (Figure 1). The project site is located on a District-owned parcel approximately 1,100 feet southeast of the intersection of Horsethief Canyon Road and Temescal Canyon Road, northwest of the unincorporated community of Alberhill (Figures 2 and 3, *USGS Topography* and *Aerial Vicinity*, respectively). The project site is located within Township 5 South, Range 5 West, Section 17 on the US Geological Survey (USGS) 7.5-minute Alberhill quadrangle topographic map (Figure 2).

EVMWD proposes the construction and operation of two wells and associated systems at the project site. The proposed project includes the construction of two 122-foot-deep, 400-gallon-per-minute (gpm) wells and a centralized disinfection facility and booster pump. The raw water piping would be routed from the wells to a centralized disinfection facility located approximately 300 feet from each well site. The water treatment site would be in undeveloped land south of existing dairy/cattle yard remnants on the project site. A new booster pump station would convey treated water into EVMWD's Temescal Valley Pipeline. The Temescal Valley Pipeline is a transmission pipeline in Temescal Canyon Road, which runs adjacent to the project site. The centralized disinfection facility and booster pump station would include the following components:

- Flush-to-waste facility for groundwater from the Lee Lake Wells and dechlorinated process water;
- Aboveground welded steel clearwell/chlorine contact tank;
- Approximately 20-foot-tall, 2,400-square-foot mechanical building to house the required booster pump station, laboratory/work area, electrical and chemical facilities;
- Chlorine and ammonia chemical storage and feed facilities within the mechanical building;
- Associated piping and appurtenances;
- Associated electrical equipment and connections;
- New site security facilities including 8-foot-high concrete masonry unit perimeter wall and security gate;
- New 8-foot-high, screened chain-link fencing around the perimeter of the well sites and access road areas not encompassed by the concrete masonry perimeter wall, and associated security gates; and
- Associated site civil improvements.

1.2 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources that have been found eligible to the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP), as applicable.

1.2.1 National Historic Preservation Act

Federal regulations that would be applicable to the project if there is a federal nexus (e.g., permitting or funding from a federal agency) consist of the National Historic Preservation Act (NHPA) and its implementing regulations (16 United States Code 470 et seq., 36 CFR [Code of Federal Regulations] Part 800). Section 106 of the NHPA requires Federal agencies to take into account the effects of their undertakings on “historic properties”, that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

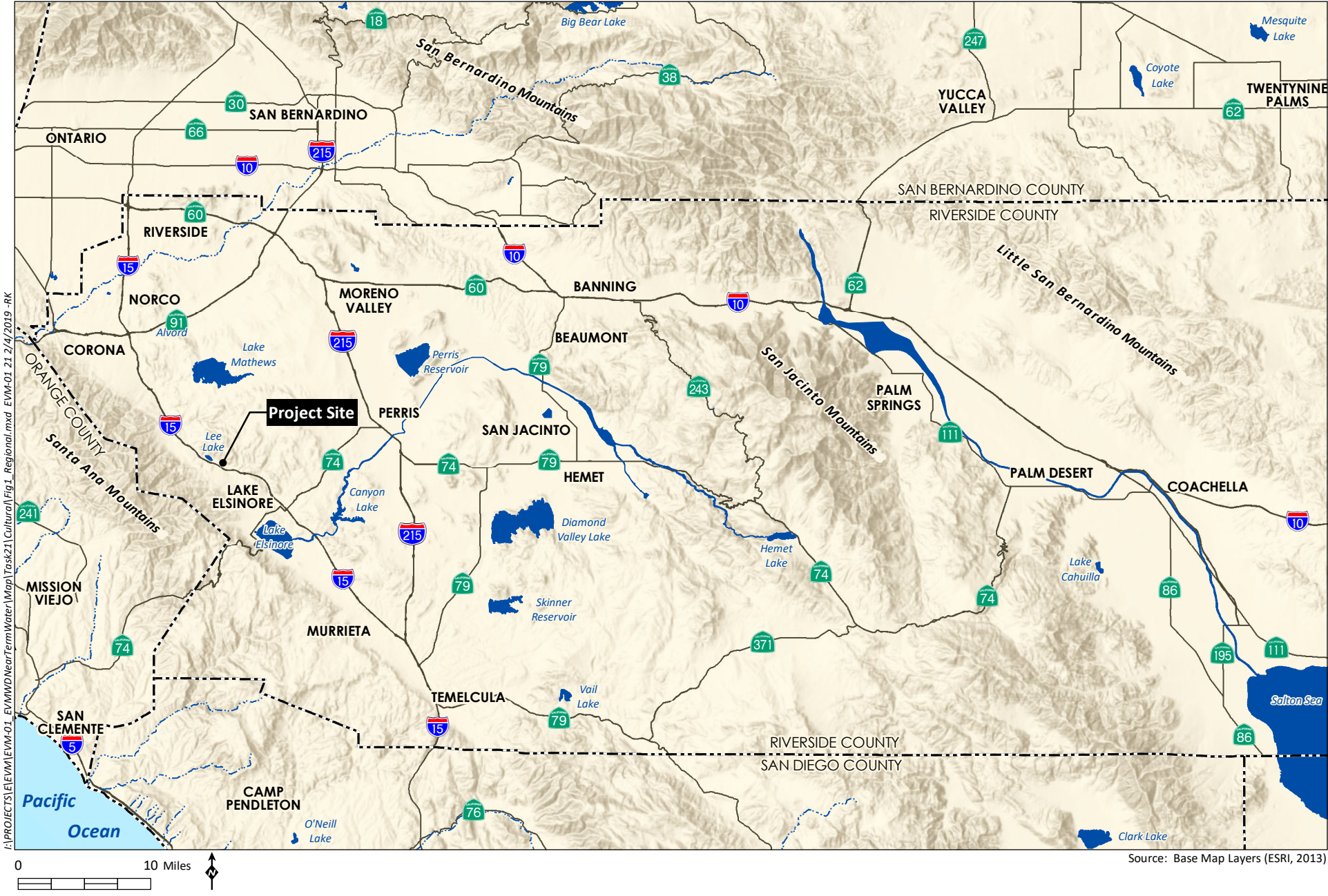
- A. associated with events that have made a significant contribution to the broad patterns of our history;
- B. associated with the lives of persons significant in our past;
- C. embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- D. has yielded or may be likely to yield, information important in prehistory or history.

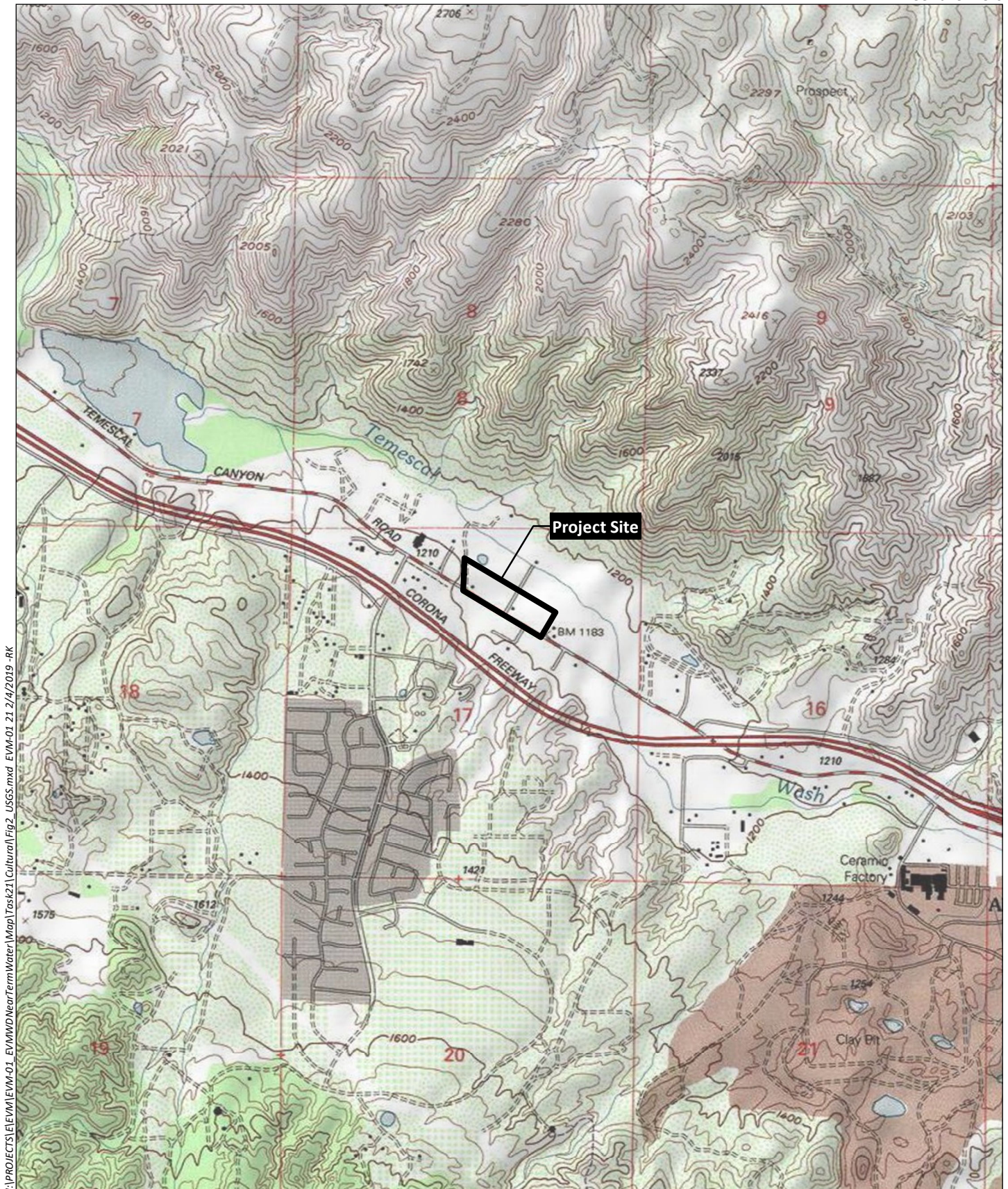
1.2.2 California Environmental Quality Act

The California Environmental Quality Act (CEQA), Public Resources Code (PRC) 21084.1 and CEQA Guidelines, California Code of Regulations (CCR) Title 14 Section 15064.5 discuss significant cultural resources as “historical resources,” and define them as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])
- resource(s) either listed in the NRHP or in a “local register of historical resources” or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (14 CCR Section 15064.5[a][2])
- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:





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- A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- B. It is associated with the lives of persons important to local, California, or national history;
- C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values;
- D. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a “historical resource” for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP “in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

CEQA also addresses tribal cultural resources. Section 21074 of the statute reads:

- (a) “Tribal cultural resources” are either of the following:
 - (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - (2) 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 purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- (b) 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.

- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

1.2.3 Tribal Cultural Resources

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the cultural sensitivity of the project area has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCPs) in discussions of cultural resource management performed under federal auspices or Tribal Cultural Resources (TCRs) under CEQA. “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices (Parker and King 1998).

Cultural resources can include TCRs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCR may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

State Assembly Bill (AB) 52, effective July 1, 2015, introduced the TCR as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described in PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

1.3 AREA OF POTENTIAL EFFECT

Pursuant to 36 CFR 800.4(a)(1), the project’s APE is the geographic area within which an undertaking may directly or indirectly alter the character or use of historic properties (i.e., significant cultural resources). The APE for the Lee Lake Wells project is the entirety of the District-owned parcel, as shown in Figures 2 and 3.

1.4 PROJECT PERSONNEL

A cultural resources survey was conducted by HELIX Environmental Planning, Inc. (HELIX) in February 2019 to assess whether the project would have any effects on cultural resources. Mary Robbins-Wade, M.A., RPA, served as the principal investigator and primary report author.

Archaeological field director Julie Roy, B.A., conducted the field survey and served as report co-author. The records search was conducted by HELIX archaeologist Dominique Diaz de Leon, B.A. Native American monitor Robert Cordova from the Pechanga Band of Luiseño Mission Indians (Pechanga) participated in the field survey as well. Resumes for key HELIX project personnel are presented in Appendix A. This report addresses the methods and results of the cultural resources survey, which included a records search, Sacred Lands File search, Native American outreach, review of historic maps and aerial photographs, and an intensive pedestrian field survey.

2.0 PROJECT SETTING

2.1 PHYSICAL SETTING

The project area is in the Temescal Valley on the east side of the Santa Ana Mountains, approximately 5 miles northwest of Lake Elsinore and 6 miles south of Lake Mathews; Lee Lake (Corona Lake) is located less than a mile to the northwest. The climate of the area is characterized as semi-arid to sub-humid, with warm, dry summers and cool, moist winters (National Cooperative Soil Survey 2006). Temperatures range from an average high of 65 degrees Fahrenheit (° F) and low of 38° F in December to an average high of 99° F and low of 63° F in August. Average annual precipitation is 12.45 inches, almost all of it falling in the months of December through March, varying from an average of 0 inches in August to 3.03 inches in January (US Climate Data 2019). Elevation within the project area is approximately 1180 feet (360 meters) above mean sea level (AMSL). The project site is adjacent to Temescal Wash, also known as Temescal Creek, and there are numerous creeks and streams in the area which would have provided water sources to native inhabitants.

Geologically, the project area is underlain by late to middle Pleistocene old alluvial flood plain deposits (Qoa), and Holocene and late Pleistocene young alluvial-wash deposits (Qywa) (Morton and Miller 2006). Three soil types are mapped within the project area: Gorgonio loamy sand, 0 to 8 percent slopes; Hanford coarse sandy loam, 2 to 8 percent slopes; and Honcut loam, 2 to 8 percent slopes (Web Soil Survey 2019). The Honcut soils, which are only found in a small area in the northwest corner of the project area, consist of alluvium derived from igneous rock. These soils support annual grasses, herbs and scattered oaks (National Cooperative Soil Survey 2003). The Gorgonio series is somewhat excessively drained alluvium derived from granite. Native vegetation supported by this soils series is primarily annual grasses and forbs with a few scattered oak trees (National Cooperative Soil Survey 2012). The Hanford series is well drained alluvium derived from granite and consists of stratified loamy sand to coarse sandy loam which supports annual grasses and associated herbaceous plants (National Cooperative Soil Survey 1999). These vegetation types and nearby vegetation communities would have provided a number of plant species that would have been used by the local indigenous people for food, medicine, tools, shelter, ceremonial, and other uses (Bean and Shipek 1978; Sparkman 1908). Many of the animal species found in these communities would have been used by native populations as well.

2.2 CULTURAL ENVIRONMENT

2.2.1 Prehistory

The culture history presented here (up to the discussion of the Late Prehistoric period) is based on Wallace's (1978) discussion of the Post-Pleistocene for Southern California (circa 9000 BP to 2000 BP). The earliest inhabitants of California subsisted mainly by hunting, as attested to by "the finding of

projectile points and other stone implements adapted to the chase at ancient campsites” throughout California (Wallace 1978:25). Wallace refers to this early period as Period I: Hunting. It generally equates with the Paleoindian or Lithic stage (Willey and Phillips 1958), in which little diversity of resource exploitation is evident.

Wallace’s (1978) Period II: Food Collecting equates with Willey and Phillips (1958) Archaic stage and is often referred to in Southern California as the Early Archaic, Early Milling period, or Milling Stone Horizon. “A changeover from hunting to the collection of seed foods is clearly reflected in the archaeological record for the period between 6000 and 3000 B.C. The importance of seeds in the diet of the prehistoric peoples can be seen in the numbers of food-grinding implements present at their settlements” (Wallace 1978:28).

After about 3000 B.C., a more diversified subsistence strategy is evident throughout Southern California. “Everywhere increased subsistence efficiency in the form of wider exploitation of available food resources can be seen” (Wallace 1978:30). The artifact assemblages changed slowly over time, with a few additions or changes. “By the end of the millennium the new ways and techniques had become firmly established and formed the basis for succeeding cultural traditions” (Wallace 1978:35).

“The late prehistoric period in southwestern California was a time of cultural transformations brought about by trait diffusion, immigration, and *in situ* adaptation to environmental changes” (Moratto 1984:153). This period in southern California is characterized by the incursion of Uto-Aztecan -speaking people who occupied large portions of the Great Basin and an area stretching from southern Arizona and northwest and central Mexico into Nevada, Oregon, and Idaho (Miller 1986). The expansion of the Takic group into southern California is unrefined, but several scholars have hypothesized as to when and how the so-called “Uto-Aztecan wedge” occurred. Sutton (2009) argues that the Takic group expanded into southern California from the San Joaquin Valley about 3,500 years ago. Moratto (1984) also proposes that Takic expansion into the Southern Coast region correlates to the end of the Early Period (Late Archaic) ca. 3,200 to 3,500 years ago, while Golla (2007) suggests an expansion of Uto-Aztecan speakers into southern California at approximately 2,000 years ago. While the exact chronology of Takic-speaking groups’ immigration to southern California remains uncertain, the beginning of the Late Prehistoric Period is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record and is characterized by higher population densities and intensification of social, political, and technological systems. The changes include the production of pottery and the use of the bow and arrow for hunting instead of atlatl and dart, a reduction of shellfish gathering in some areas, an increase in the storage of foodstuffs such as acorns, and new traits such as the cremation of the dead (Gallegos 2002; McDonald and Eighmey 2004).

Native American population figures in the region substantially increased toward the end of the Late Prehistoric Period. After AD 1600, a change occurred in settlement and subsistence patterns, and land use intensified in the region, which was reflected into the ethnohistoric period (Wilke 1974, 1978; Bean et al. 1991; Goldberg 2001).

The Late Prehistoric period is represented in western Riverside County and northern San Diego County by the San Luis Rey complex, which is the archaeological manifestation of the Takic-speaking predecessors of the ethnohistoric Luiseño people. The San Luis Rey complex (SLR) is divided into two phases: SLR I and SLR II. Elements of the SLR complex include small, triangular, pressure-flaked projectile points (generally Cottonwood series, but Desert side-notched series also occurs); milling implements: mortars and pestles, manos and metates, and bedrock milling features; bone awls; Olivella shell beads;

other stone and shell ornaments; and cremations (Meighan 1954; Moratto 1984; True et al. 1974). The later SLR II complex also includes several elements not found in the SLR I complex: “pottery vessels, cremation urns, red and black pictographs, and such nonaboriginal items as metal knives and glass beads (Meighan 1954:223)” (Moratto 1984:154). True noted a greater number of quartz projectile points at SLR sites than at Cuyamaca complex sites, representing the forebears of the Kumeyaay people, which he interpreted as a cultural preference for quartz (True 1966). The general mortuary pattern at SLR sites is ungathered cremations.

SLR I was originally thought to date from AD 1400 to 1750, with SLR II dating between AD 1750 and 1850 (Meighan 1954). However, that division was based on the assumption that the Luiseño did not practice pottery manufacture until just prior to the arrival of the Spanish. The chronology has since been revised due to evidence that pottery may have been introduced to the Luiseño circa AD 1200 to 1600. Ceramics were probably introduced from the Luiseños' southern neighbors, the Kumeyaay (True et al. 1974).

It must be acknowledged that this interpretation by archaeologists and linguistic anthropologists differs from the traditional knowledge and beliefs of many of the native people. Many creation stories indicate that the indigenous people have always been here, not migrating from elsewhere.

2.2.2 Ethnohistory

The project area is within traditional Luiseño territory, but it is in proximity to lands traditionally inhabited by the Cahuilla people, and the project vicinity is probably an area of transition and overlap of traditional use areas (Bean 1978: Figure 1; Bean and Shipek 1978: Figure 1; Kroeber 1978 [1925]:Plate 57). Based on ethnographic data, including the areas defined for the Takic-speaking peoples at the time of contact, it is generally accepted that the SLR complex is associated with the Luiseño people. The term Luiseño is derived from the Mission San Luis Rey and since Spanish-Mexican colonial times has been used in reference to those Takic-speaking people associated with the mission. The Luiseño language belongs to the Cupan group of the Takic subfamily; neighboring tribes who speak Cupan languages are Juaneño, Cupeño, Cahuilla, and Gabrieliño (Gabrielino/Gabrieleño). Although various researchers use slightly different ethnographic territory boundaries, the territory of the Luiseño people is generally described as extending along the coast from Agua Hedionda Creek on the southwest to the present-day southern boundary of Orange County, then east and north along the Santa Ana Mountains. On the north, this boundary extended east beyond what is now the city of Riverside south to the eastern side of the Elsinore Fault Valley, continuing southeast to Palomar Mountain, then around the southern slope above the valley of San Jose. The southern boundary follows westerly to Agua Hedionda Creek (Bean and Shipek 1978; Kroeber 1978 [1925]; Pechanga Tribal Government 2015; White 1963). Traditional stories and songs of the Native people also describe the extent of traditional use areas.

Luiseño social organization is noted for “(1) extensive proliferation of social statuses; (2) clearly defined ruling families that interlocked various rancherias within the ethnic nationality; (3) a sophisticated philosophical structure associated with the taking of hallucinogenics (*datura*); and (4) elaborate ritual paraphernalia including sand paintings symbolic of an avenging sacred being named Chingichngish” (Bean and Shipek 1978:550).

It must be noted that interpretations by archaeologists and linguistic anthropologists may differ from the traditional knowledge of the Luiseño people. The Luiseño creation story indicates that the Luiseño people have always been here, not migrating from elsewhere. The creation story of the Pechanga

people tells that the world was created at Temecula. “The Káamalam [first people] moved to a place called Nachíivo Pomíisavo, but it was too small, so they moved to a place called ‘exva Teméeku,’ this place you now know as Temeku. Here they settled while everything was still in darkness (DuBois 1908)” (Masiel-Zamora 2013:2). Lake Elsinore and Elsinore Hot Springs are significant in the Luiseño creation story as well. “When Wiyot was sick and dying, the people took him to a number of sacred hot springs in southern California in an effort to cure him. Elsinore Hot Springs was the last of these, and there Wiyot died (DuBois 1908:134, Harrington 1978:199)” (Lerch and Smith 1984:8).

2.2.3 Historic Background

Southern California’s historic period began in September 1542 when Juan Rodriguez Cabrillo landed on Santa Catalina Island as part of his exploration expedition up the coast north of “New Spain.” Although the impact of this initial contact did not usher in instant changes in the region, it marks the opening of the area to new contact, colonialism, and cultural shifts.

2.2.3.1 Spanish Period

During the mid-eighteenth century, Spain escalated its involvement in California from exploration to colonization (Weber 1992). In 1769, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California. The Presidio of San Diego and Mission San Diego de Alcalá were established in 1769 followed by the Presidio of Monterey and Mission San Carlos Borromeo de Carmelo in 1770 in northern California. The missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Agriculture and animal husbandry were the main pursuits of the Missions.

The first documented Spanish contact in what is now Riverside County was by Spanish military captain Juan Bautista de Anza who led expeditions in 1774 and 1775 from Sonora to Monterey (Bolton 1930). Anza embarked on the initial expedition to explore a land route northward through California from Sonora, with the second expedition bringing settlers across the land route to strengthen the colonization of San Francisco (Rolle 1963). Anza’s route led from the San Jacinto Mountains northwest through the San Jacinto Valley, which was named “San José” by Anza. Little documentation exists of Anza’s route being used after the two expeditions, although it was likely used to bring Spanish supplies into the newly colonized Alta California (Lech 2004). In 1781, the Spanish government closed the route due to uprisings by the Yuman Indians. However, by that time, the missions were established and self-sufficient; thus, the need for Spanish supplies from Sonora had begun to diminish.

Although Riverside County proved to be too far inland to include any missions within its limits, Missions San Juan Capistrano and San Luis Rey de Francia, established in 1776 and 1798 respectively, claimed a large part of southwestern Riverside County. Due to the inland geographical location of the Cahuilla territory, the Spanish missions did not have as direct an effect on them as it did on the Luiseño who lived along the coast (Bean 1978). On the coast, the Luiseño were moved into the Mission environment, where living conditions and diseases promoted the decline of the Luiseño population (Bean and Shippek 1978). However, throughout the Spanish Period, the influence of the Spanish progressively spread further from the coast and into the inland areas of southern California as Missions San Luis Rey and San Gabriel extended their influence into the surrounding regions and used the lands for grazing cattle and other animals.

In the 1810s, ranchos and mission outposts, called *asistencias*, were established, increasing the amount of Spanish contact in the region. An *asistencia* was established in Pala in 1818 and in San Bernardino in 1819. Additionally, Rancho San Jacinto was established for cattle grazing in the San Jacinto Valley (Bean and Vane 1980; Brigandi 1999). In 1820, Father Payeras, a senior mission official, promoted the idea that the San Bernardino and Pala *asistencias* be developed into full missions in order to establish an inland mission system (Lech 2004). However, Mexico won its independence from Spain in 1821, bringing an end to the Spanish Period in California.

2.2.3.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

2.2.3.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican–American War. California’s acquisition by the United States substantially increased the growth of the population in California. The California gold rush, the end of the Civil War, and the passage of the Homestead Act implementing the United States’ manifest destiny to occupy and exploit the North American continent brought many people to California after 1848. While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government (Lech 2004). The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued from 1876 to 1893.

Initially southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added, placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County.

Southern California was developed by Americans and other immigrants who migrated to the western frontier in pursuit of gold and other mining, agriculture, trade, and land speculation (Lech 2004). This population growth of southern California during the early years of the American Period brought a need for mail and freight travel. As early as 1849 efforts were made to establish overland mail routes between California and points farther east (Rush 1964). In 1857, John Butterfield was awarded a six-year contract to transport mail twice a week between St. Louis, Missouri, and San Francisco, California (Helmich 2008). The Butterfield Stage Route used the same trail as the Sonora (or Southern Emigrant) Trail from Yuma through Warner Springs and Temecula, and then up through Temescal Valley to Chino, and then to Los Angeles. By the mid-nineteenth century, the Southern Emigrant Trail ran through western Riverside County in a similar alignment to the current I-15 freeway. The Butterfield Overland Stage route went through a major stop called “Alamos,” the Spanish word for cottonwoods, in Murrieta. Another branch of the Southern Emigrant Trail veered northward from Temecula to Box Springs near present-day Moreno Valley, roughly following the present-day route of I-215 (Lech 2004).

Local mail routes within southern California were also developed beginning in the 1850s, such as the line begun in 1852 by Phineas Banning between Los Angeles and San Diego (Stott 1968). In 1868, Tomlinson & Co. briefly operated a daily mail route from Tucson, Arizona to Los Angeles via San Diego and San Bernardino (Stott 1968), although after only four months the company had lost \$12,000 and discontinued service (Mills 1957). In 1867, the U.S. Mail Company sent weekly stages that ran between San Diego and San Bernardino.

While stagecoaches were successful at transporting gold, people, and mail, the need for a railroad to California was imperative. In the 1850s, surveys were initiated by the federal government to determine a railroad route to the Pacific coast (Lech 2004). Although the first transcontinental railroad was completed in 1869 to northern California, in the 1870s the Southern Pacific Railroad Company, incorporated in 1865 and consolidated in 1870, began to construct a southern route that would traverse the state (Fickewirth 1992). In the early 1880s, the California Southern Railway, a subsidiary of the Atchison, Topeka and Santa Fe Railway (Santa Fe), was completed and allowed for travel through the Cajon Pass to Barstow to a junction of the Atlantic and Pacific Railroad and down to San Diego through western Riverside County. In 1887, Santa Fe officials consolidated their family of railroads in southern California, forming the California Central Railway. Although the California Southern remained an individual subsidiary at that time, it consolidated with the California Central Railway and the Redondo Beach Railway two years later 1889. The resulting corporation was the Southern California Railway Company, wholly owned by Santa Fe (Price 1988). Later, in 1906, all of lines of Southern California Railway Company were deeded to the Atchison, Topeka, and Santa Fe Railway Company.

2.2.3.4 Project Vicinity

Rose L. Ellerbee wrote of the Temescal Valley at the time of the Spanish explorers:

Here were cienagas which were oases of green in the driest season; groves of fine live-oaks and sycamore, beside many scattered giant trees; the streams were lined with a lush growth of willows, cottonwoods, bays, and underbrush, all overrun by a tangle of grapes, roses of Castile, chilicothe, and other vines [Ellerbee 1918 :12].

She went on to describe the lush growth of wildflowers in the valley as well. Señorita Dolores Serrano indicated that the priests of Mission San Luis Rey wanted her father (Leandro Serrano) to occupy the Temescal Valley, because he had “much influence with the Indians and could thus prevent trouble for the Mission” (Ellerbee 1918 :13). Señorita Serrano stated that when her father came to the valley in the early nineteenth century, there were many Indians; there was “a rancheria with a temescal [sweathouse]... where the bathers could run from the ‘sweathouse’ to the cold water of the mountain stream” (Ellerbee 1918: 13).

In the second half of the nineteenth century, John Butterfield’s Overland Mail Company stagecoach route ran through Temescal Valley; the Temescal Station, established in 1857, was located about 8 miles north-northwest of the current project area. The historic marker at this site reads, “Site of Butterfield Stage Station where mail was delivered and horses changed. The first stage carrying overland mail left Tipton, Missouri on September 15, 1858 and, passing through Temescal, arrived in Los Angeles October 7, 1858.” Rush (1964) has a photograph of the ruins of the Temescal Canyon stage station in 1956 and noted that the building “is now completely obliterated” (Rush 1964:124). Elsinore (now Lake Elsinore) was also a prominent stop on the Butterfield Stage Line.

Coal and clay were found in the area in the 1880s, and the “Alberhill Coal and Clay Company mined low-grade lignite coal and fire clay on these premises from 1890 until 1940”. The Los Angeles Brick Company started in 1895 in the area that became the community of Alberhill (Pacific Clay Products 2014). The community got its name from a combination of C.H. Albers and J.H. Hill, who discovered a vein of coal and quantities of clay in the area in 1886 (Acosta 2010). In writing about Lake Elsinore, Peck (1912) noted: “One of the greatest sources of revenue in this locality is clay, owned by the Alberhill Coal & Clay Company” (Peck 1912). The historic sketch noted that six varieties of clay were mined, and the average daily shipment was 270 tons (Peck 1912). The company “produced face brick, paving brick, sewer pipe, and roofing tile. Many of the original buildings in Los Angeles were built using these products”, including UCLA’s Royce Hall and Powell Library, both built in the 1920s. “During this time, Alberhill was a self-contained community with a post office, Catholic church and elementary school located right on the property. The three-room Alberhill Schoolhouse remained open until the 1960’s [sic]...”. The Los Angeles Brick Company was purchased by Pacific Clay Products in 1963 and continues in operation today (Pacific Clay Products 2014).

At the time of the City of Elsinore’s incorporation in 1888, industries that supported the economy included coal and clay mining, gold mining, ranching, and agriculture. The Good Hope Mine yielded two million dollars’ worth of gold during its working years, operating on and off for 90 years before high groundwater ended its run. The railroad first began serving the town in 1885 (City of Lake Elsinore 2018), and railroad spurs to the mining locations made it possible to transport the clay, coal, and other materials.

3.0 STUDY METHODS

HELIX conducted a record search at the Eastern Information Center (EIC) on February 11, 2019. The record search covered a one-mile radius around the project area and included archaeological and historical resources, and locations and citations for previous cultural resources studies, as well as a review of the state OHP historic properties directory. The records search maps are included as Appendix B (confidential, bound separately) to this report.

Historic maps and aerial photographs were reviewed to assess past land uses and the potential for historic archaeological resources.

HELIX contacted the Native American Heritage Commission (NAHC) on February 4, 2019, to request a search of its Sacred Lands File (SLF) and a list of Native American individuals and organizations that might have knowledge of, or concerns regarding, cultural resources within the project area. A response from the NAHC was received on February 8, 2019, and letters were sent via certified mail to the recommended tribal contacts on March 25, 2019. The NAHC and Native American correspondence is included as Appendix C (confidential, bound separately).

The project area was surveyed for cultural resources by HELIX archaeologist Julie Roy and Luiseño Native American monitor Robert Cordova from Pechanga Cultural Resources on February 25, 2019.

4.0 PREVIOUS RESEARCH

The EIC has a record of 26 cultural resource studies that have been conducted within a one-mile radius of the project area (Table 1, *Previous Studies within One Mile of Project Area*). Of these, three (RI-02831,

RI-06888, RI-08947) cover portions of the project area, and three are adjacent to the project site (RI-02830, RI-03464, RI-04665). The project area was surveyed for cultural resources in 1990; this survey was negative (White 1990a; RI-02831). The project area is also within the alignment corridors studied for the Valley-Ivyglen Transmission Line Project (Lerch and Gray 2006; RI-06888), and the “Elsinore Valley Municipal Water District Plan” (Maxon 2009; RI-08947) addressed a portion of the project area. A survey and assessment for EVMWD’s Temescal Valley Pipeline project was adjacent to the project site, in Temescal Valley Road (Love and Tang 1997; RI-04665), as was a survey of a segment of Temescal Valley Road (White 1990b; RI-02830). A 1987 survey addressed a parcel just south of the current project area, on the south side of Temescal Valley Road (TMI Environmental 1987; RI-03464). None of these studies identified any cultural resources within the project area. The records search maps in Appendix B (confidential, bound separately) show the locations of these studies.

Table 1
PREVIOUS STUDIES WITHIN ONE MILE OF PROJECT AREA

Report No.	Report Title	Author, Date
RI-01170	Archaeological Assessment of 880 Acres on the Alberhill Quad	Desautels, 1980
RI-01479	Archaeological Assessment of the Temescal Valley Project, County of Riverside, CA	Schroth, 1982
RI-01665	Devers-Serrano-Villa Park Transmission System Supplement to the Cultural Resources Technical Report - Public Review Document and Confidential Appendices	Wirth Associates, 1983
RI-02155	An Archaeological Assessment of the Ackerstein C.U.P. 2391, Property, Temescal Canyon, Riverside County, CA	Drover, 1987
RI-02211	An Archaeological Assessment of the Sandak Ranch Properties - Temescal Canyon, Riverside County, CA	Drover, 1988
RI-02300	Archaeological Assessment Form: TPM 23365	Scientific Resource Surveys, Inc., 1988
RI-02830	An Archaeological Assessment of a 2 (Approx.) Mile Section of Temescal Road Situated Between Horsethief Canyon Road and Lake Street in Alberhill, Riverside County, CA	White, 1990
RI-02831	An Archaeological Assessment of a 52+ Acre Parcel Located Adjacent to the North Side of Temescal Canyon Road in Alberhill, Riverside County, CA	White, 1990
RI-03175	Cultural Resources Assessment: Temescal Valley Project, Riverside County, CA	Swope, 1991
RI-03464	Archaeological Survey of the Horsethief Parcel, Riverside County, CA	TMI Environmental Services, 1987
RI-03872	Archaeological Literature & Records Review for the Alberhill Country Club Project, Lake Elsinore, Riverside County, CA	Brown, 1994
RI-04144	Cultural Resources Report: Temescal Valley Regional Interceptor, Santa Ana Watershed Project Authority, Riverside County, CA	Love and Tang, 1998
RI-04665	Identification and Evaluation of Historic Properties Temescal Valley Project Elsinore Valley Municipal Water District Riverside County, CA	Love and Tang, 1997
RI-04901	An Archaeological and Paleontological Survey Report of Renaissance Ranch, APNS 391-140-006, 391-100-025, and 391-480-019, South of Horsethief Canyon Master Plan, County of Riverside, CA	Irish, Hoover, Blevins, Wagner, and Fox, 2003
RI-05591	Environmental Impact Evaluation: An Archaeological Assessment of the Temescal Hills, Riverside County, CA	Drover, 2002

Table 1 (cont.)
PREVIOUS STUDIES WITHIN ONE MILE OF PROJECT AREA

Report No.	Report Title	Author, Date
RI-06092	Letter Report: Records Search and Site Visit for Sprint Telecommunications Facility Rv60xc822b (Jaggers Property), 13181 Highway 71, Corona, Riverside County, CA	Taniguchi, 2004
RI-06624	Historical/Archaeological Resources Survey Report: Corona Lake Industrial Park, Assessor's Parcel No. 391-070-029, Temescal Valley Area, Riverside County, CA	Tang, Hogan, Encarnacion, and Hernandez, 2006
RI-06888	Cultural Resources Assessment of the Valley-Ivyglen Transmission Line Project, Riverside County, CA	Lerch and Gray, 2006
RI-07106	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Number(s)/ Name(s): CA-8354B/ Temescal II TCNS# 17175	Allred, 2006
RI-07666	Addendum: Cultural Resources Assessment of the Valley-Ivyglen Transmission Line Project, Riverside County, CA	Cooley and Craft, 2008
RI-08083	Cultural Resources Investigation of the Proposed Southern California Edison 500/115 KV Alberhill Substation Project	ECORP Consulting, Inc, 2008
RI-08228	Addendum: Cultural Resources Assessment of the Valley-Ivyglen Transmission Line Project Alternatives EX-A through EX-D and W-1, W-1A through W-1C and W-4 Riverside County, CA	Chmiel and Cooley, 2008
RI-08947	Phase I Cultural Resources Inventory, Elsinore Valley Municipal Water District Plan EIR, County of Riverside, CA	Maxon, 2009
RI-08948	An Archeological and Paleontological Survey for the Saddleback Estates Project, Riverside County, CA	Smith, 2003
RI-09746	Cultural Resources Survey Report Addendum Valley-Ivy Glenn 115KV Transmission Line Project Southern California Edison Riverside County, CA	Miller, 2013
RI-09947	A Phase I Cultural Resources Assessment for the Temescal Storage Yard Project General Plan Amendment (GPA) No. 1166 Riverside County, CA	Smith and Anderson, 2016

A total of 25 cultural resources have been recorded within a one-mile radius of the project area. One of these, P-33-015428, is shown on the records search map as located within the project area; however, the maps with the site record show it is actually located immediately east of the project site. As summarized in Table 2 (*Previously Recorded Resources within One Mile of Project Area*), the 14 historic resources within the one-mile radius of the project include the railroad alignment, Lee Lake Dam and associated features, several houses and residential complexes, features related to water conveyance, and trash scatters. With the exception of the railroad grade and the Lee Lake Dam site, the historic sites and buildings all date to the twentieth century, generally post-dating World War II. The 11 prehistoric resources within the one-mile radius of the project include several lithic scatters, most of which have fewer than 10 artifacts; three sites with bedrock milling features; and one habitation site with midden soil and a high density of artifacts. While two of the milling sites each contain only a single feature, one site includes 11 milling features, a stone circle, and six associated artifacts. Two of the lithic scatters also include pottery: two sherds at one site and one sherd at the other.

Table 2
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF PROJECT AREA

Resource No. (P-33#)	Resource No. (CA-RIV-#)	Age	Description	Recorder, Date
P-33-000643	CA-RIV-643	Prehistoric Site	Occupation site with a midden deposit containing a heavy density of ground stone, lithic debitage, and tools.	Humbert and Hammond, 1973
P-33-001423	CA-RIV-1423	Prehistoric Site	One milling slick on granite boulder. Site could not be found during 2014 pedestrian survey.	Schroth, Demcak and del Chario, 1982; Hearth and Purtell, 2014
P-33-001446	CA-RIV-1446	Prehistoric Site	Lithic scatter. Flakes. Site could not be found during 2014 pedestrian survey.	Schroth, Demcak and del Chario, 1982; Hearth and Purtell, 2014
P-33-003832	CA-RIV-3832H	Historic Site	Old Santa Fe Railroad Grade through Temescal Valley. Site has diminished in integrity due to significant disturbances.	McCarthy, 1990; Swope and Peirce, 1990; Love, 1995; CRM Tech, 1996; Bruce and Tang, 2001; Blevins and Hoover, 2005; Goodman, 2006; Hoffman, 2011; Leonard, 2014
P-33-004665	CA-RIV-4665	Prehistoric Site	Lithic scatter. Two cores and 50+ flakes.	McManis, 1991
P-33-013366	--	Prehistoric Site	Light lithic scatter. One core and four or five flakes.	Jenkins, 1982
P-33-015348	CA-RIV-8104	Prehistoric Site	Light lithic scatter. Eight flakes and one mano.	Bholat, 2006
P-33-015361	CA-RIV-8117	Historic Site	Water conveyance system. Concrete irrigation risers, brick incinerator, stand-up pipe. Systems are no longer in use.	Goodman, Reseburg and Cogan, 2006
P-33-015363	CA-RIV-8119	Historic Site	Historic refuse dump, early to mid-twentieth century; two small concentrations within scatter likely associated with roadside dumping events on historic alignment of Temescal Valley Road.	Goodman, Cogan, and Jones 2006; Hearth and Long, 2014
P-33-015422	CA-RIV-8133	Historic Site	Exposed concrete pipe segment, possibly post-1945.	Cogan and Reseburg, 2006
P-33-015428	--	Historic District	Four structures located in a portion of the 10.10-acre property at 136 Highway 71/12360 Temescal Canyon Road; remainder of property is vacant. Construction date of house is 1920; other structures include a barn, two sheds, and a tank, probably dating to the same period as the house. Not assessed due to lack of access to property.	Rees, 2006

Table 2 (cont.)
PREVIOUSLY RECORDED RESOURCES WITHIN ONE MILE OF PROJECT AREA

Resource No. (P-33#)	Resource No. (CA-RIV-#)	Age	Description	Recorder, Date
P-33-017028	--	Historic Building	Front-gabled vernacular wood frame structure, potentially associated with a 1973 dairy and pig farm located in the area.	Craft, 2008
P-33-017571	CA-RIV-9110	Historic Site and Structures	Cylindrical water reservoir and a concrete curb east of the reservoir; bricks of reservoir manufactured 1907-1925.	Cotterman and Howard, 2008
P-33-017572	--	Historic Building	Single-story vernacular house with a concrete slab foundation constructed circa 1950.	Cotterman and Howard, 2008
P-33-019925	--	Historic Buildings	Single-story vernacular house, shed, chicken coop, rock retaining wall, rock alignment and horse hitching rail.	Cotterman and Ballester, 2009; Cotterman and Cunningham, 2012
P-33-021069	CA-RIV-10914	Historic Site	Well, tripod metal frame, and a cobblestone retaining wall of undetermined age.	Jones and Cunningham, 2012
P-33-023612	CA-RIV-11586	Historic Site	Trash scatter dated post-1945.	Miller, 2013
P-33-023613	CA-RIV-11587	Historic Site	Trash scatter dated post-1945.	Miller, 2013
P-33-024779	CA-RIV-12271	Prehistoric Site	Light lithic and ceramic scatter. Two flakes and a potentially Mission-Era brown ware ceramic body sherd.	Hearth and Purtell, 2014
P-33-024780	CA-RIV-12272	Prehistoric Site	Lithic and ceramic scatter. Two flakes and one brown ware ceramic sherd.	Hearth, 2014
P-33-024782	CA-RIV-12274	Historic Site	Domestic refuse scatter dated early twentieth century to post-WWII.	Hearth and Long, 2014
P-33-024783	CA-RIV-12275	Prehistoric Site	Lithic scatter and potentially fire-affected granite rock.	Hearth and Long, 20124
P-33-024784	CA-RIV-12276	Historic Site and Structures	Three concentrations of features associated with historic La Lagunita, Lee Lake, and the historic and modern-day iterations of Lake Corona. The features consist of an earthen and concrete dam forming Lake Corona with associated features, a linear feature utilized to transport water with associated features, and a concrete pad with associated features.	Hearth, Duke, and Mermilliod, 2014
P-33-024786	--	Prehistoric Site	One milling slick on heavily exfoliated bedrock boulder.	Hearth, Long and Duke, 2014
P-33-024788	CA-RIV-12279	Prehistoric Site	Eleven milling features (granite bedrock and boulder outcrops) with 12 slicks; five flakes and one mano, and one stone circle feature.	Hearth and Duke, 2014

5.0 RESULTS

5.1 HISTORIC MAPS AND AERIAL PHOTOGRAPHS

Historic maps and aerial photographs were reviewed to assess past land uses and the potential for historic archaeological resources. The 1901 USGS Elsinore (1:125,000) topographic map shows a road in the approximate alignment of the current freeway (I-15) to the southwest of the project area. A house is shown on that road, south of the project site, as well as other scattered houses along the road; Lee Lake is present. No buildings or structures are shown within the project area. The 1904 Southern California Sheet No. 1 (1:250,000) also shows the road and Lee Lake as seen on the Elsinore 1901 map; no buildings are shown on this map, due to the scale. The 1947 Santa Ana (1:250,000) map shows Temescal Canyon Road and the railroad to the southwest of the project area; again, no buildings are shown, due to the scale of the map. The 1954 Alberhill (1:24,000) map shows two buildings immediately east of the project site and a dirt road immediately west of project area; nothing is shown in project area itself. The 1973 Alberhill (1:24,000) map is the same as the 1954 but with the addition of a road and a building and what appear to be the slabs for the cattle yard/dairy (discussed below) within the project area. The 1982 Alberhill (1:24,000) map is the same as the 1973 map for project area; however, outside the project area, the freeway (I-15) is present, and the railroad is noted as abandoned. By the current 1997 Alberhill (1:24,000) map, the cattle yard features are gone, but the two buildings are still shown within the project area; the railroad is no longer shown.

The earliest aerial photo available from historicaerials.com for the project site is from 1966. At that time, there is some grading and what appears to be the concrete slab backbone for the cattle yard. There are also two buildings just outside the project property, apparently the two buildings shown on the USGS map (Figure 2) and part of site P-33-015428. By 1967, there are eight small structures associated with the concrete slabs in the project area, possibly feeding troughs. The area just north of the project site, which is currently thickly vegetated, appears disked in the 1967 aerial. The 1978 aerial photo shows additional buildings or structures on the western portion of the property, apparently part of the cattle yard, including the two buildings that appear on the USGS map (Figure 2). In the 1981 aerial, conditions are essentially the same as in 1978. By 1994, the buildings and structures in the area of the cattle yard are gone, leaving only the concrete slabs and remnants of the troughs, which are still in place. At least one of the two buildings to the east of the project area is still present in 2012; it is unclear whether the farther north building is still standing at that time (NETR Online 2019). Both buildings are now gone, as seen in Figure 3.

5.2 FIELD SURVEY

The project area was surveyed for cultural resources on February 25, 2019 by HELIX archaeologist Julie Roy and Luiseño Native American monitor Robert Cordova from Pechanga Cultural Resources. The project area was highly disturbed, with dead weeds and grass; closer to the creek (northern portion of the project site), tree limbs have been strewn about, due to the high level of water overflowing the creek bed during recent heavy rains. Ground visibility was generally poor during the field survey; some areas were covered with thick vegetation, in other areas, the ground surface was obscured by concrete slabs or gravel.

Concrete foundations, rectangular tanks, and broken concrete fragments associated with the cattle yard present beginning in the mid-1960s were observed throughout the project area. Due to the construction date of approximately 1966, the remnants of the cattle yard (P-33-028821) were recorded on a standard Department of Parks and Recreation (DPR) Primary Record, which was filed at EIC and is included as Appendix D (confidential, bound separately). Along the eastern project boundary and just east of the project site were a concrete foundation, concrete block wall remnants, and a circular concrete block foundation. These features are in the area of the building complex previously recorded as P-33-015428. No additional cultural resources were observed.



Plate 1. Overview of western portion of project area, looking westerly.



Plate 2. Overview of site P-33-028821, looking easterly.

5.3 NATIVE AMERICAN OUTREACH

The NAHC was contacted for a SLF search and list of Native American contacts on February 4, 2019. A response was received on February 8, 2019 stating that the results of the SLF search were negative. The response letter further states that “the absence of specific site information in the SLF does not indicate the absence of Native American cultural resources” (see NAHC response letter; Appendix C, confidential, bound separately).

During a meeting with representatives from Pechanga and the Soboba Band of Luiseño Indians (Soboba) on February 11, 2019, representatives from both Tribes stated that the negative SLF search was incorrect. They indicated that the project area is within a TCP. Pechanga planned to contact the NAHC for a revised SLF search for the project. HELIX waited to conduct further tribal outreach in anticipation of a revised SLF search. When no revised SLF search was received by March 25, 2019, letters were sent on that date to the tribal contacts listed by the NAHC. Letters were sent via certified mail. Native American correspondence is included as Appendix C (confidential, bound separately).

Five responses have been received to date, as summarized in Table 3, *Native American Contact Program Responses*. The Morongo Band of Mission Indians indicated that they have no additional information regarding the project area and will likely defer to Pechanga. The Agua Caliente Band of Cahuilla Indians stated that the project area is outside the Tribe’s Traditional Use Area; they defer to other tribes closer to the project area. The Augustine Band of Cahuilla Indians indicated they are unaware of any specific cultural resources that may be affected by the project but recommended contacting tribes and individuals closer to the project area. They also recommended monitoring during preconstruction and construction activities and asked to be notified if cultural material is found in monitoring. The Rincon Band of Luiseño Indians (Rincon) indicated that the location is “within the Traditional Cultural Landscape of the Luiseño people, and is also within Rincon’s specific area of Historic interest.” The response from

Rincon also stated, “The City of Lake Elsinore is considered by the Rincon Band to be a Traditional Cultural Place (TCP) within a Traditional Cultural Landscape (TCL), as it is associated with the Luiseño Creation Story and traditional practices. We have knowledge of several Luiseño Place Names (TCP’s) within the City of Lake Elsinore to include the TCP *Anoomay* within a one mile radius. In addition, the Temescal Valley Road is believed by Rincon to be a trading route, utilized by the Luiseno people for thousands of years.” Soboba indicated that the project location is within their Tribal Traditional Use Areas and “is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba.” The response also noted that working in and around traditional use areas intensifies the possibility of encountering cultural resources during the construction/excavation phase. For this reason, Soboba requested that Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings.

The District is undertaking AB 52 consultation with Tribes who have requested consultation.

Table 3
NATIVE AMERICAN CONTACT PROGRAM RESPONSES

Contact/Tribe	Response
Morongo Band of Mission Indians	Responded in an e-mail dated March 28, 2019; “We have no additional information to provide at this time and will likely defer to the Pechanga Band when the lead agency begins the AB 52 process.”
Agua Caliente Band of Cahuilla Indians	Responded in an e-mail dated April 2, 2019; “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.”
Augustine Band of Cahuilla Indians	Responded in a letter dated April 2, 2019 and received on April 8, 2019; unaware of specific cultural resources that may be affected by the project. Encourage contacting Native American tribes and individuals in the vicinity of the project site; recommend Native American monitoring during preconstruction and construction activities. “Please notify us immediately should you discover any cultural resources during the development of this project.”
Rincon Band of Luiseño Indians	Responded in an e-mail dated April 23, 2019; “The identified location is within the Traditional Cultural Landscape of the Luiseño people, and is also within Rincon’s specific area of Historic interest. Embedded in the Luiseño territory are Rincon’s history, culture and identity. The City of Lake Elsinore is considered by the Rincon Band to be a Traditional Cultural Place (TCP) within a Traditional Cultural Landscape (TCL), as it is associated with the Luiseño Creation Story and traditional practices. In addition, the Temescal Valley Road is believed by Rincon to be a trading route, utilized by the Luiseno people for thousands of years.”

**Table 3 (cont.)
NATIVE AMERICAN CONTACT PROGRAM RESPONSES**

Contact/Tribe	Response
Soboba Band of Luiseño Indians	Responded in a letter dated July 2, 2019, received via email on that date and by mail on July 5, 2019; “although it is outside the existing reservation, the project area does fall within the bounds of our Tribal Traditional Use Areas. This project location is in proximity to known sites, is a shared use area that was used in ongoing trade between the tribes and is considered to be culturally sensitive by the people of Soboba.” Soboba requested: to initiate consultation with the project proponents and lead agency; the transfer of information to Soboba regarding the progress of this project as soon as new developments occur; Soboba continues to act as a consulting tribal entity for this project; Native American Monitor(s) from the Soboba Band of Luiseño Indians Cultural Resource Department to be present during any ground disturbing proceedings; proper procedures be taken, and requests of the tribe be honored. “Multiple areas of potential impact were identified during an in-house database search. Specifics to be discussed in consultation with the lead agency.”

6.0 IMPACTS, SIGNIFICANCE, AND MANAGEMENT RECOMMENDATIONS

The only archaeological resources identified within the project area are the remnants of a cattle yard/dairy dating to the mid-1960s. The end date of the cattle yard is not known, but the buildings and structures were removed by the mid-1990s. These features were recorded as a single resource. The cattle yard/dairy does not meet the criteria for listing on the CRHR or the NRHP: it is not associated with events that have made a significant contribution to the broad patterns of our history; is not known to be associated with the lives of persons significant in our past; does not embody the distinctive characteristics of a type, period or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; and has not have yielded, nor may be likely to yield, information important in prehistory or history. Therefore, the cattle yard/dairy is not a historical resource under CEQA or a historic property under the NHPA, and impacts to it do not constitute significant effects.

Although the SLF search was negative, representatives of Pechanga and Soboba indicated that the area is part of a TCP and is quite sensitive in terms of cultural resources.

Due to the cultural sensitivity of the area and the potential for subsurface cultural resources, it is recommended that an archaeological monitoring program be implemented for ground-disturbing activities. This would include monitoring by an archaeologist and a Native American monitor, as described below.

The following measures are recommended:

- CR-1 Monitor Ground-disturbing Activities.** At least 30 days prior to grading, excavation and/or other ground-disturbing activities on the project site, including brushing and grubbing, the District shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology and listed on the Register of Professional Archaeologists (RPA) or the County of Riverside list of qualified archaeologists to monitor ground-disturbing activities.
- CR-2 Tribal Monitoring Agreements.** At least 30 days prior to grading, excavation, and/or other ground-disturbing activities the District shall contact both the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians to notify each Tribe of excavation activities and coordinate with the Tribes to develop Monitoring Agreements. The Agreements shall address the designation, responsibilities, and participation of Native American tribal monitors during excavation and other ground-disturbing activities and construction scheduling.
- CR-3 Develop a Cultural Resources Monitoring Plan.** The Project Archaeologist, in consultation with the Monitoring Tribe(s) and the District, shall develop a Cultural Resources Monitoring Plan (CRMP) to address the details, timing, and responsibility of archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:
- a. Project grading and development scheduling;
 - b. The coordination of a monitoring schedule as agreed upon by the Monitoring Tribe(s), the Project Archaeologist, and the District; and
 - c. The protocols and stipulations that the District, the Monitoring Tribe(s) and the Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including newly discovered cultural resources.
- CR-4 Cultural Resources Sensitivity Training.** Prior to grading, excavation, and/or other ground-disturbing activities on the project site, the Project Archaeologist and the Monitoring Tribe(s) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The District's construction manager shall ensure that construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance.
- CR-5 Authority to Stop and Redirect Excavation.** In accordance with the agreement required in CR-2, the Project Archaeologist and designated tribal monitor(s) assigned to the project by the Luiseño Monitoring Tribe(s) shall have the authority to stop and redirect excavation in order to evaluate the significance of archaeological resources discovered on the property.
- CR-6 Evaluation of Discovered Artifacts.** All artifacts discovered at the project site shall be inventoried and analyzed by the Project Archaeologist and Native American monitor(s). If artifacts of Native American origin are discovered, activities in the immediate vicinity of the find (within a 50-foot radius) shall stop. The Project Archaeologist and Native American monitor(s) shall analyze the Native American artifacts for identification as to everyday life and/or religious

or sacred items, cultural affiliation, temporal placement, and function, as deemed possible. The significance of Native American resources shall be evaluated in accordance with the provisions of CEQA and shall consider the religious beliefs, customs, and practices of the Luiseño tribes. All items found in association with Native American human remains shall be considered grave goods or sacred in origin and subject to special handling.

The District shall relinquish ownership of all cultural resources. Native American artifacts that cannot be avoided or relocated at the project site shall be prepared in a manner for curation. Within a reasonable amount of time, the Project Archaeologist, following consultation with the Monitoring Tribe(s), shall deliver the materials to a qualified repository in Riverside County that meets or exceeds federal standards per 36 CFR Part 79 and which shall be made available to all qualified researchers and tribal representatives.

- CR-7 Inadvertent Discovery of Resources.** If inadvertent discoveries of subsurface archaeological/cultural resources are made during grading, the District and the Project Archaeologist, with the Monitoring Tribe(s), shall assess the significance of such resources and shall meet and confer regarding the mitigation measures for such resources. The determination as to the significance or the mitigation measures for such resources will be based on the provisions of CEQA and shall take into account the religious beliefs, customs, and practices of the Monitoring Tribe(s).
- CR-8 Sacred Sites.** All sacred sites, should they be encountered within the project area, shall be avoided and preserved as the preferred mitigation, if feasible.
- CR-9 Final Archaeological Report.** The Project Archaeologist shall prepare a final archaeological report within 60 days of completion of the project. The report shall follow Archaeological Resource Management Report (ARMR) Guidelines (California Office of Historic Preservation 1990) and District requirements and shall include at a minimum: a discussion of monitoring methods and techniques used; the results of the monitoring program, including artifacts recovered; an inventory of resources recovered; updated DPR forms, if any, and any other site(s) identified; final disposition of the resources; and any additional recommendations. A final copy shall be submitted to the District, EIC, and the Monitoring Tribe(s).
- CR-10 Human Remains.** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours. Subsequently, the NAHC shall identify the person or persons it believes to be the “most likely descendant.” The most likely descendant may then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

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Appendix A

Resumes of Key Personnel

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Summary of Qualifications

Ms. Robbins-Wade has extensive experience in both archaeological research and general environmental studies. She oversees the management of all archaeological, historic, and interpretive projects; prepares and administers budgets and contracts; designs research programs; supervises personnel; and writes reports. Ms. Robbins-Wade has managed or participated in hundreds of projects in conformance with the California Environmental Quality Act (CEQA), Section 106, and the National Environmental Policy Act (NEPA). She has an excellent relationship with the local Native American community and the Native American Heritage Commission (NAHC). Ms. Robbins-Wade has worked in Southern California archaeology for 35 years. She has conducted archaeological studies for numerous local agencies, water districts/water agencies, Caltrans, SANDAG, U.S. Navy, SDG&E, educational institutions, non-profits, and a variety of other entities. Work for public projects has ranged from constraints studies for pipeline alternatives to survey, testing, and monitoring programs for public projects, such as roadways, parks, and various utilities. Ms. Robbins-Wade has also managed a range of mitigation monitoring projects in the public sector.

Selected Project Experience

Campo Creek Bridge (2016 - 2017). Project Manager/Principal Investigator for the cultural resources monitoring program for this emergency bridge replacement project on SR-94 in San Diego County. The project area is very sensitive in terms of Native American cultural resources, as well as historic resources. Responsible for development and implementation of the monitoring and discovery plan. The project requires effective communication and coordination with construction crews, Caltrans staff, and Native American monitors. Work performed as a subconsultant to the general contractor, with Caltrans as the lead agency.

Lilac Hills Ranch (2014 - 2016). Project Manager/Principal Investigator of a cultural resources survey and testing program for an approximately 608-acre mixed-use development in the Valley Center area of northern unincorporated San Diego County. Oversaw background research, field survey, testing, recording archaeological sites and historic structures, and report preparation. Responsible for development of the research design and data recovery program, the preservation plan, and Native American outreach and coordination. Project coordination is still underway while the project finishes the environmental review process. The proposed Specific Plan includes residential and commercial use, Town Center, park and private recreation areas, senior center, school site, waste recycling facility, wastewater reclamation facility, active orchards, and other supporting infrastructure. The project also included recording historic structures, development of a research design and data recovery program for a significant archaeological site, and coordination with the Native American community and the client to develop a preservation plan for a significant

Education

Master of Arts,
Anthropology, San
Diego State
University, California,
1990

Bachelor of Arts,
Anthropology,
University of
California, Santa
Barbara, 1981

Registrations/ Certifications

Register of
Professional
Archaeologists
#10294, 1991

County of San Diego,
Approved CEQA
Consultant for
Archaeological
Resources, 2014

NCTD, Roadway
Worker ID #C02943

Professional Affiliations

Society for American
Archaeology

Archaeological
Society

Mary Robbins-Wade, RPA

Senior Archaeologist

cultural resource. The project changed over time, so new survey areas were added, and a variety of off-site improvement alternatives were addressed. Work performed for Accretive Investments, Inc.

Valiano Cultural Resources (2012 - 2015). Project Manager/Principal Investigator of a cultural resources survey and testing program for a 239-acre residential planned community in the Escondido area of the County of San Diego, following a burn affecting much of the project area. Oversaw background research, field survey, testing, recording archaeological sites and assessment of historic structures, Native American outreach and coordination, and report preparation. Archaeological testing was conducted at several sites that could not be avoided through project design. The project site is in an area that is of cultural importance to both the Kumeyaay and Luiseño people; HELIX archaeologists worked with Native American representatives from both groups. Coordination was conducted to determine the feasibility of preserving bedrock milling features by moving them to open space areas within the project. Other archaeological sites were retained in open space through project design. Work performed for Integral Partners Funding, LLC.

Mission Cove Data Recovery (2014 - 2016). Project Manager/Principal Investigator for a cultural resources data recovery program at a significant archaeological site with cultural significance to the Luiseño people in the City of Oceanside. Prior to the data recovery program, worked with the client and the San Luis Rey Band of Mission Indians to redesign the project (an affordable housing/mixed-use development) to avoid impacts to cultural resources to the extent feasible. Oversaw background research, excavation and related fieldwork, cataloging and analysis, coordination of ancillary studies (e.g. radiocarbon analysis and shell analysis), Native American coordination, and report preparation. Analysis and report preparation are currently underway. The data recovery program was conducted to mitigate impacts that could not be avoided through project design. Work performed for National Community Renaissance.

Mission Cove Monitoring (2014 - 2016). Project Manager/Principal Investigator of an archaeological monitoring program for the 14.47-acre Mission Cove Affordable Housing mixed-use project area in the City of Oceanside. Oversaw field monitoring and documentation of finds. A significant archaeological and cultural resource is within the project, and there is a potential for unknown buried resources, given the alluvial setting. Work performed for National Community Renaissance.

Village Park Recycled Water (2014 - 2015). Project Manager/Principal Investigator of a cultural resources study for a proposed recycled water system consisting of approximately 6.6 miles of pipelines and a pump station mainly within existing roadways in the City of Encinitas. Oversaw background research, field checks, Native American coordination, and report preparation. Work performed for Olivenhain Municipal Water District.

Mary Robbins-Wade, RPA

Senior Archaeologist

Espola Road Widening and Improvements (2002 - 2010). Project Manager/ Principal Investigator for historic study, historic structures assessment, and archaeological survey for road widening and improvements under the City of Poway and Caltrans. Oversaw field survey, historic study, structures evaluation, and report preparation.

Bear Valley/East Valley Parkways Road Widening, Realignment, and Improvements (2000 - 2004). Project Manager/Principal Investigator for historic study, historic structures assessment, archaeological survey, and archaeological testing for road widening, realignment, and improvements under City of Escondido and Caltrans. Oversaw field survey, testing, historic study and structures assessment, and report preparation.

Torrey Meadows Drive Overcrossing at SR-56 (2014). Project Manager/Principal Investigator on a cultural resources survey for a proposed bridge over SR 56, which would connect two existing termini of Torrey Meadows Drive in the Carmel Valley community of the City of San Diego. The project is being undertaken by the City, but includes some Caltrans right-of-way, necessitating Caltrans encroachment permits. Oversaw survey, report preparation, and coordination with Caltrans cultural resources staff. Work performed as subconsultant for an engineering prime, with City of San Diego as lead agency.

SR-163/Friars Road Widening and Interchange Improvements (2002 - 2007). Project Manager/Principal Investigator for historic study, historic structures assessment, and archaeological survey for road widening and interchange improvements under City of San Diego and Caltrans. Oversaw field survey, historic study and structures assessment, and report preparation. Reports included Archaeological Survey Report, Historic Resources Evaluation Report, and Historic Property Survey Report for Caltrans, as well as Archaeological Survey Report and Historic Evaluation for City of San Diego.

SR-76 East Mitigation Monitoring (2015 - 2017). Project Manager/Principal Investigator for a cultural resources monitoring project for roadway improvements at the SR-76/I-15 Interchange and on SR-76 along the San Luis Rey River in the Bonsall area of San Diego County. The area along the San Luis Rey River is quite sensitive in terms of cultural resources. Overseeing field monitoring, report preparation, and monitor coordination with Caltrans field staff. Responsible for Native American coordination and coordination with Caltrans cultural resources staff. Work is being conducted for Caltrans and SANDAG.

Campo Bus Yard (2015 - 2016). Cultural Resources Task Manager/Principal Investigator for a cultural resources survey for a proposed MTS bus yard in the Campo area of the County of San Diego. The project is immediately adjacent to a County-listed and National Register-eligible historic property (Camp Lockett), and features associated with that historic district extend into the project area. Oversaw background research, field survey, coordination, Native American outreach, and report preparation. Work was conducted under an as-needed contract with SANDAG.

Mary Robbins-Wade, RPA

Senior Archaeologist

Batiquitos Lagoon Double Track Project (2015). Senior Archaeologist for the addition of a second main track along a 2.7-mile-long segment of the LOSSAN Rail Corridor in Encinitas and Carlsbad. Overseeing the Federal Aviation Administration (FAA) Section 106 process for addition of antenna sites. Work performed for HNTB Corporation, with SANDAG as the local lead agency and Federal Transit Administration as the federal lead agency for the overall project, and FAA as the federal lead agency for the antenna sites.

Summary of Qualifications

Ms. Roy has over 20 years of experience as an archaeologist, field lead, and supervisor on more than 130 projects throughout California, Nevada, Arizona, and Guam. Conducted archaeological studies for a wide variety of development and resource management projects including work on military installations, energy and transmission projects, commercial and residential developments, historic archaeology projects, and water projects. Competent in all areas of archaeology and efficient in report preparation for a range of cultural resource studies including monitoring projects and archaeological Phase I, II and III studies. Ms. Roy is proficient in laboratory activities including artifact preparation, cataloging, identification, and illustration. Accomplished in the initiation, coordination and completion of field assignments including survey, site testing, dry and wet screening, and data recovery projects. She is also knowledgeable in the preparation of proposals and report writing and research, client, contractor and subcontractor correspondence, laboratory, computer software including Microsoft, Adobe, Geographic Information System (GIS)/ArcView, Computer-Aided Design and Drafting (CADD), Global Positioning System (GPS) and total-station operations, as well as in the illustration of archaeological features, artifacts, and burials. Ms. Roy is established as a qualified archaeological monitor for the City and the County of San Diego. Her experience includes working closely with representatives of San Diego County Parks and Recreation for the past 10 years and she has received accolades from numerous county representatives for her work at park facilities. For the past 4 four years, she has served as the monitoring coordinator for the San Diego Gas & Electric Company (SDG&E) Fire Resource Mitigation Initiative (FiRM) project, where she regularly provided effective communication between field monitors, construction managers/foremen, and Principal Investigators for construction projects and assisted in scheduling and tracking of project progress.

Selected Project Experience

Blythe to Eagle Mountain TLRR Survey (2017). Field Director on this Southern California Edison (SCE) Survey project, which included supervising two crews during a period of two weeks. Conducted survey, mapping, recording new cultural resources and updating previously recorded sites along the transmission line corridor. Other responsibilities included report writing and completion of site records for distribution to SCE and the South Coastal Information Center (SCIC).

On-call Archaeological Services (Present). Archaeologist and Field Lead for SDG&E infrastructure operations and transmission line maintenance activities for over 12 years. Projects include survey, testing, excavations, and data recovery of both historic and prehistoric resources including Native American burial sites. Approved to monitor for City projects throughout San Diego and Imperial counties. Other duties include records search, survey, archaeological documentation and investigations, and

Education

Master of Arts,
Archaeology,
University of
Leicester, England,
In progress

Bachelor of Arts,
Anthropological
Archaeology,
University of
California San Diego,
2002

Associate of Arts,
Psychology, San
Diego City College,
2000

Registrations/ Certifications

OSHA 30-hour
Construction Safety
Training Certification

Competent Person
Certification

Professional Affiliations

Society for California
Archaeology

Society for American
Archaeology

Association of
Environmental
Professionals

Julie A. Roy

Archaeologist

preparation of reports under California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) guidelines.

Fire Resource Cultural Resources Mitigation (Present). Monitoring Coordinator and Lead Archaeologist on this FiRM project for SDG&E. Monitoring Coordinator duties consist of close communication with SDG&E supervisors and staff, liaisons, and contractors in conjunction with the coordination of FiRM project activities associated with cultural and Native American archaeological and monitoring efforts throughout San Diego and Imperial Counties. Archaeological Supervisor duties consists of record search, survey, archaeological site documentation, testing, excavations, and data recovery projects, and preparing reports following CEQA and NEPA guidelines.

Archaeological Monitoring, Bird Rock Avenue Utility Undergrounding Project (2005).

Archaeological Monitor for the undergrounding of residential utilities in the Bird Rock community of La Jolla. The project was conducted under CEQA and the City of San Diego guidelines while working closely with San Diego Gas and Electric Company and the construction contractor. No cultural resources were identified during this project.

Archaeological Monitoring and Data Recovery, Princess Street Utility Undergrounding Project

(2005 - 2006). Archaeological Monitor/Crew Chief for utility undergrounding project, which included trenching through a major prehistoric and ethnohistoric Indian village site (the Spindrift Site/CA-SDI-39) in La Jolla. Crewmembers worked closely with Native American representatives during the recovery of human remains. A concurrent data recovery program incorporated all cultural material recovered from the trenching activities. This project was conducted pursuant to CEQA and City of San Diego guidelines while working closely with San Diego Gas & Electric Company and the construction contractor.

Environmental Impact Statement, Southern Nevada Supplemental Airport (2007 - 2009).

Archaeologist on this project that included survey and recordation of the northern portion of Ivanpah Valley from the California state line to Henderson, Clarke County, Nevada. Cultural sites located within the project area included a section of the pacific railroad, historic roads, camps, railroad and construction debris, transmission lines, trash scatters and prehistoric sites and features. The project was surveyed and recorded in compliance with the Nevada State Historic Preservation Office (SHPO) and Bureau of Land Management (BLM) guidelines.

Monitoring, Genesis Solar Power Project (2011 - 2012). Supervisor-in-Charge of over 20 cultural monitors on this solar power project located in Blythe, California. Responsible for conducting safety meetings and coordinating cultural monitors to all areas of the project site, as well as leading test excavations of discovered resources during construction activities. Also responsible for representing firm during onsite meetings with Nextera officials, Bureau of Veritas, BLM, and safety liaisons for the project. Communicated directly with Native American supervisors and monitors on a daily basis. Recorded and collected artifacts located during construction activities with the use of Global Positioning Satellite technology. Completed daily field notes and collection logs for all collected artifacts, and reviewed all staff monitoring logs prior to daily submission to the California Energy Commission (CEC). Work performed for Nextera.

Survey and Monitoring, Palen Solar Power Project (2009 - 2010). Archaeologist for survey and cultural monitoring in Desert Center, California. Monitored contract and personnel activities during traveling to and from proposed project sites, including trenching and testing within the proposed project areas. Work performed for Solar Millennium.

Julie A. Roy

Archaeologist

Ridgecrest Solar Power Project (2009 - 2010). Archaeologist for surveys of the project area undertaken to determine if cultural resources are present and if there would be any project effects on these resources. Monitored contractor activities during the testing phase of the project to ensure that sites were not impacted during work activities. The project was located in Ridgecrest and work was performed for Solar Millennium.

On-Call Archaeological Services (Present). Archaeologist and Field Lead for County Parks infrastructure and maintenance activities for San Diego County Department of Parks and Recreation. Responsible for communication with County supervisors and contractors, and the coordination of project activities with cultural and Native American monitors for projects throughout San Diego and Imperial Counties. Other duties include records search, field survey, archaeological documentation and investigations including testing, excavations and data recovery projects and preparation of reports following CEQA and NEPA guidelines.

Pacifica Street Utility Undergrounding Project (2006). Archaeological Monitor/Crew Chief for residential utility undergrounding project in the community of Pacific Beach in San Diego. Trenches and cultural materials were documented in conjunction with a concurrent data recovery program. The project included working with Native American representatives and the discovery of human remains. The project was conducted under CEQA and City of San Diego guidelines while working closely with the construction contractor.

Archaeological Monitoring, 20A Julian Conversion Project (2006). Archaeological Monitor for undergrounding of utilities in the City of Julian. The project was conducted under the County of San Diego guidelines while working closely with the construction contractor.

Data Recovery, Hill Street Utility Undergrounding Project (2006). Archaeological Monitor participated in the data recovery for this residential utility undergrounding project in the community of Point Loma in San Diego. The project was conducted under CEQA and City of San Diego guidelines while working closely with the construction contractor.

Archaeological Monitoring, 30th Street Utility Undergrounding Project (2006). Archaeological Monitor for residential utility undergrounding project in the community of South Park in San Diego. The project was conducted under CEQA and City of San Diego guidelines while working closely with the construction contractor.

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