

Sedco Hills Septic to Sewer Project

Draft Initial Study/
Mitigated Negative Declaration

April 2023 | 01008.00007.001

Prepared for:

Elsinore Valley Municipal Water District

31315 Chaney Street
Lake Elsinore, CA 92530

Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard
La Mesa, CA 91942

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Acronyms and Abbreviations

AB	Assembly Bill
AQMP	Air Quality Management Plan
BMP	best management practice
CAGN	Coastal California gnatcatcher
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CFG Code	California Fish and Game Code
City	City of Wildomar
CO ₂ e	carbon dioxide equivalent
County	County of Riverside
CTMP	Construction Traffic Management Plan
DOC	California Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
EIC	Eastern Information Center
EVMWD	Elsinore Valley Municipal Water District
GHG	greenhouse gas
GPD	gallons per day
GSP	Groundwater Sustainability Plan
I-	Interstate-
LST	Localized Significance Threshold
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MRZ	Mineral Resource Zone
MSHCP	Western Riverside Multiple Species Habitat Conservation Plan
MT	metric tons
NAHC	Native American Heritage Commission
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research

Acronyms and Abbreviations (cont.)

Pechanga	Pechanga Band of Indians
Rincon	Rincon Band of Luiseño Indians
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
ROW	right-of-way
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
Soboba	Soboba Band of Luiseño Indians
SRA	source receptor area
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TCP	Traditional Cultural Property
VHFHSZ	Very High Fire Hazard Severity Zone
WMC	Wildomar Municipal Code
WRCOG	Western Riverside Council of Governments
WRF	Water Reclamation Facility

1.0 Preface

This Draft Mitigated Negative Declaration was circulated previously in January 2023. However, the document is being re-circulated to follow the established procedure per Assembly Bill 52 Tribal Consultation requirements. Other than updates to document the most current Tribal coordination within Items 2.1, *Project Information*, Section 5, subsection V., *Cultural Resources*, and subsection XVIII, *Tribal Cultural Resources*, no substantive changes have been made to the Project or analysis within the Initial Study compared to the January 2023 version.

2.0 Introduction

2.1 Initial Study Information Sheet

1. Project title: Sedco Hills Septic to Sewer
2. Lead agency name and address: Elsinore Valley Municipal Water District (EVWMD)
31315 Chaney Street, Lake Elsinore, CA 92530
3. Contact person and phone number: Jason Dafforn, P.E.
(951) 674-3146
4. Project location: Between Mission Trail, Malaga Road, I-15, and Lemon Street, Wildomar, CA
5. Project sponsor's name and address: Elsinore Valley Municipal Water District
31315 Chaney Street, Lake Elsinore, CA 92530
6. General plan designations: Commercial Retail, Medium Density Residential,
Medium High Density Residential, Very High Density Residential
General Plan Overlay: Mixed-use Planning Area
7. Zoning: C-1/C-P (General Commercial), R-3 (General Residential), R-R (Rural Residential)
8. Description of project: See Section 2
9. Surrounding land uses and setting: See Section 2
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):
 - City of Wildomar (Encroachment Permits)
 - City of Lake Elsinore (Encroachment Permits)
 - State Water Resource Control Board (SWRCB)
 - Santa Ana Regional Water Quality Control Board (SARWQCB)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

On September 20, 2022, letters were sent to the to the 26 Native American representatives and interested parties identified by the Native American Heritage Commission (NAHC). Both the Quechan Indian Tribe and the Agua Caliente Band of Cahuilla Indians indicated that they have no comments on the project and defer to local tribes. The Rincon Band of Luiseño Indians (Rincon) indicated that the Project site is within their Area of Historic Interest and requested a copy of the records search and the cultural resources report. Rincon also recommended coordination with Pechanga given their proximity to the Project. As responses are received, they will be provided to EVMWD and the SWRCB. EVMWD will undertake consultation with interested Tribes under Assembly Bill (AB) 52, and the SWRCB will undertake Section 106 consultation with interested Tribes.

3.0 Project Description

3.1 Project Location

The Project area is roughly 380 acres in size in the City of Wildomar (City) in Riverside County (County), California. The Project site is bound by Malaga Road on the north, Interstate-15 on the east, Mission Trail on the west, and Lemon Street on the south. The boundary between the City of Wildomar and the City of Lake Elsinore is located along the roadway centerline of Mission Trail and Malaga Road. The majority of the Project would occur within the City of Wildomar; however, Project activities on the west side of Mission Trail or the north side of Malaga Road would occur within the City of Lake Elsinore. Refer to Figure 1, *Regional Vicinity*, and Figure 2, *Aerial Photograph*.

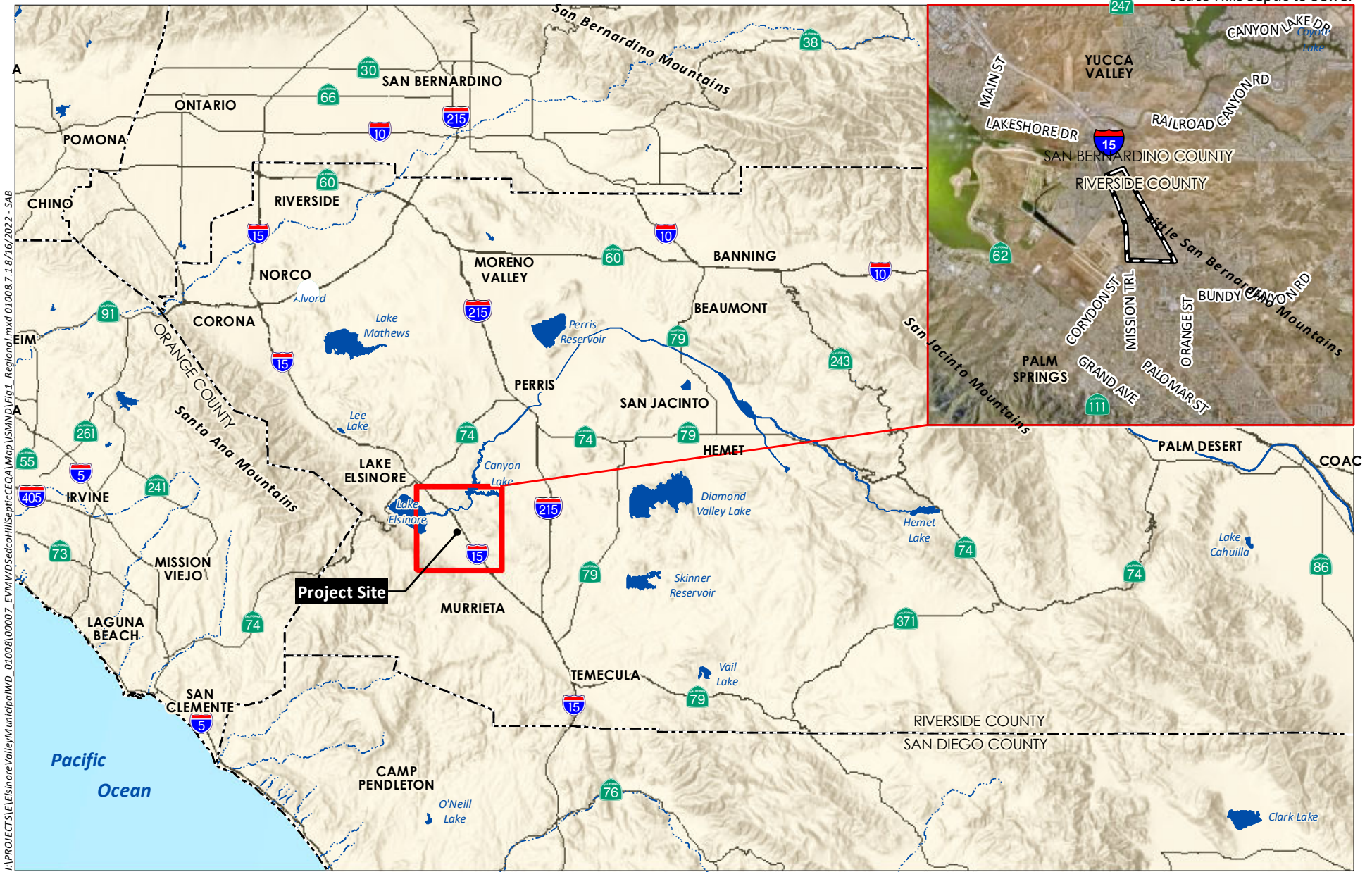
3.2 Project Background

EVMWD is a public non-profit agency, created on December 23, 1950, under the Municipal Water District Act of 1911. EVMWD provides public water service, water supply development and planning, wastewater treatment and disposal, and recycling. Currently, EVMWD has over 46,000 water, wastewater, and agricultural service connections over a 96-square-mile service area within the cities of Lake Elsinore, Wildomar, Canyon Lake, and Murrieta, and unincorporated portions of the County of Riverside. EVMWD is a sub agency of the Western Municipal Water District, a member agency of the Metropolitan Water District of Southern California.

Sedco Hills was identified as a priority for sewer conversion in the 2016 Sewer System Master Plan based on its proximity to domestic wells and density of septic tanks (EVMWD 2016). A goal for the sewer conversion is to prevent potential contamination of groundwater in the Project area.

3.3 Project Characteristics




The Project would convert 699 existing septic customers to sewer. The proposed Project would involve the construction and operation of approximately 40,800 feet (7.8 miles) of 8-, 10-, and 12-inch-diameter underground sewer pipelines within existing roadway rights-of-way (ROW) and private residences (for connections of laterals to sewer lines). The new sewer lines would connect to existing sewer mains

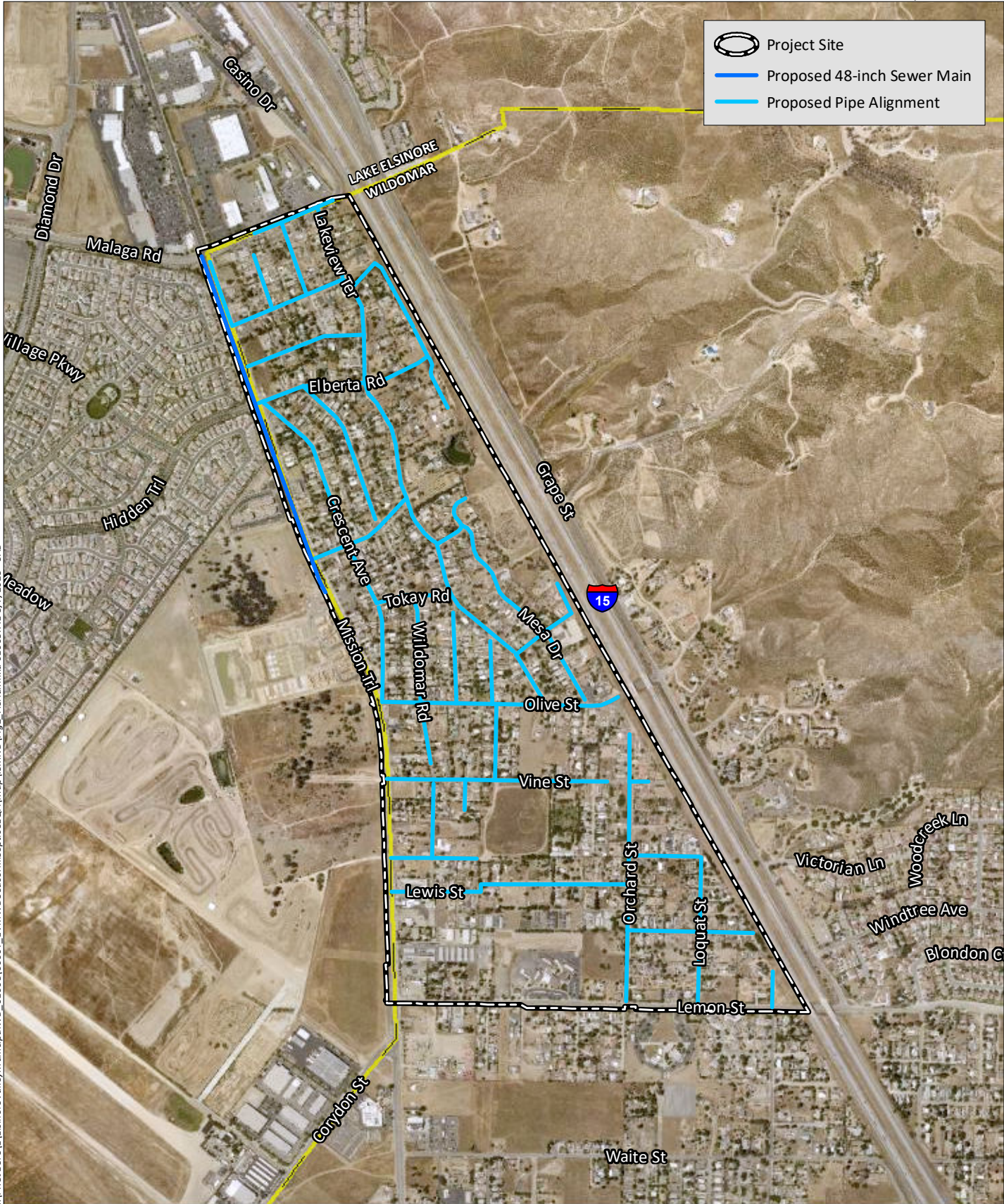


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Source: Base Map Layers (ESRI, 2013)

-  Project Site
-  Proposed 48-inch Sewer Main
-  Proposed Pipe Alignment



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Source: Aerial (RCIT, 2020)

underneath Mission Trail, Malaga Road, or Lemon Street. Potential improvements to the sewer main in Mission Trail are discussed below.

Wastewater collected via the proposed sewer lines would be transported to the EVMWD Regional Water Reclamation Facility (WRF). The Sedco Hills neighborhood consists of mobile home units, which typically generate 150 gallons per day (GPD) of wastewater, and single-family residences, which generate approximately 250 GPD of wastewater (EVMWD 2021). Based on the mix of residence types within the Project area, the Project is anticipated to generate approximately 130,000 GPD (or 0.13 million gallons per day [MGD]) of wastewater (EVMWD 2022a).

The 2016 Sewer System Master Plan identified a potential capacity deficiency for the 21-inch diameter sewer line in Mission Trail. In 2022, EVMWD constructed a short pipe segment that redirected flows to bypass the Washington Avenue Sewer Lift Station and send tributary sewer flows to the Santa Rosa Regional Resources Authority (EVMWD 2022b). The bypass project removed approximately 125,000 gallons per day (GPD) of sewer flow that, prior to the bypass, flowed north through the 21-inch diameter Mission Trail sewer line to the Regional WRF. With the removal of 125,000 GPD from the existing 21-inch sewer line, sufficient capacity should exist to accommodate the 130,000 GPD of additional flow from the Project (EVMWD 2022a).

Should additional engineering hydraulic analysis determine that the bypass construction is not sufficient to resolve the capacity deficiency of the existing 21-inch diameter sewer main, EVMWD proposes installing a new 48-inch diameter sewer line in Mission Trail. The new line would connect to an existing 48-inch diameter sewer line in Malaga Road and extend south along Mission Trail to the B-2 sewer lift station just south of Sedco Boulevard. In total, the new sewer line would extend 3,200 linear feet and be located at a depth of approximately 40 feet. To provide a conservative analysis, this Initial Study includes an assessment of potential impacts related to the installation of the optional 48-inch diameter sewer line in Mission Trail.

Existing septic tanks serving the residents would be abandoned per Riverside County Health Department requirements.

3.4 Construction Equipment and Sequencing

EVMWD anticipates that the proposed pipelines would be located within a 24- to 36-inch-wide trench and the potential sewer main would be located within a six-foot wide trench. Pipeline trench depth is anticipated generally to be approximately seven to twelve feet for pipelines and forty feet for the Mission Trail sewer main. The duration of construction is estimated to be 18 to 24 months, starting as early as August 2023. Full installation of the sewer facilities is anticipated by December 2026.

EVMWD estimates that pipeline installation would generally occur at a rate of approximately 250 feet per day and would involve the following steps:

- Street pavement would be cut, and soil would be removed to create the pipeline trench.
- An excavator with a sling would be used to lower the pipe sections into the trench. The pipeline would rest on a bedding of compacted sand inside the trench per EVMWD standards.
- The pipe in the trench zone (the area above the pipe to the surface) would be backfilled per EVMWD standards.

- Street cuts would be repaved in accordance with the City of Wildomar’s requirements.

Construction activities outside of the road ROW would be required to abandon septic tanks on private properties. Existing septic tanks would be emptied and then filled with sand. The tops would be removed, and bottoms perforated to allow for drainage.

EVMWD anticipates that construction would likely be divided between six phases within the Sedco Hills neighborhood and Mission Trail, with as many as three phases constructed simultaneously. Construction crews of approximately four to six workers would be working on each phase. The types of construction equipment projected to be required by each of the three construction crews for pipeline installation are presented in Table 1, *Anticipated Construction Equipment*.

Table 1
ANTICIPATED CONSTRUCTION EQUIPMENT

Phase	Equipment
Trenching	1 Excavator; 1 Tractor/Loader/Backhoe
Pipeline Installation	1 Crane; 1 Excavator; 1 Tractor/Loader/Backhoe; 1 Dump Truck
Resurfacing/Repaving	1 Roller; 1 Paver

When construction equipment is not in use, it would be stored at locations selected by the contractor and approved by EVMWD.

To minimize disruptions to the local community, construction and equipment maintenance are anticipated be limited to weekdays (excluding holidays) from 7:00 a.m. through 6:00 p.m.

EVMWD will provide notice to residents, property owners, businesses, and schools adjacent to the proposed pipeline alignments at least one week prior to the start of construction. Notices would include an anticipated construction schedule and description of anticipated construction activities and their expected duration in addition to any other pertinent information.

3.5 Construction Best Management Practices

Air Quality

Construction would implement standard dust control measures as required by South Coast Air Quality Management District (SCAQMD) Rule 403, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 miles per hour. All trucks hauling dirt, sand, soil, or other loose materials would be covered with a fabric cover and maintain a freeboard height of 12 inches.

Water Quality

Implementation of the proposed project would require conformance with the National Pollution Discharge Elimination System (NPDES) General Construction Activity Permit. Such conformance would entail implementation of a Storm Water Pollution Prevention Plan (SWPPP) to address the discharge of contaminants (including construction-related hazardous materials) and minimize runoff through appropriate best management practices (BMPs).

As a standard construction practice and regulatory requirement, EVMWD would implement best BMPs from the required SWPPP for the Project, which may include:

- Covering stockpiled excavated and/or fill materials to reduce potential off-site sediment transport.
- Employing appropriate standard spill prevention practices and clean-up materials;
- Maintaining the Project area free of trash and debris;
- Properly storing, handling, and disposing of toxins and pollutants, including waste materials.
- Use of erosion control devices, such as straw wattles, mulch, mats, and/or geotextiles.
- Use of sediment catchment structures such as hay bales, gravel or sand bags, silt fencing, fiber rolls, matting, berms, or similar devices along grading boundaries and drainage courses to prevent off-site sediment transport.
- Daily backfill, compaction, and/or covering of excavated trenches to minimize erosion potential.
- Regular inspection and maintenance of all erosion control and sediment catchment facilities to ensure proper function and effectiveness.

Noise

The following measures would be implemented during construction to minimize noise impacts to surrounding neighborhoods:

- Construction equipment, including vehicles, generators, and compressors, would be maintained in proper operating condition and will be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).
- Construction work, including on-site equipment maintenance and repair, would be limited to the hours specified in the Wildomar noise ordinance.
- Staging areas for construction equipment would be located as far as practicable from residences.
- EVMWD would identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise and other construction disturbance. EVMWD would also establish a program for receiving questions or complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person would be included in notices distributed to the public in accordance with the information above.

Construction Traffic Management Plan

A Construction Traffic Management Plan (CTMP) would be implemented during construction of the proposed Project. During construction, access along some portions of affected roadways may be limited. The CTMP would be prepared in accordance with all applicable requirements of the City of Wildomar and the City of Lake Elsinore (as applicable), encroachment permits, and applicable plans, ordinances, and policies. EVMWD would submit the CTMP to the cities of Wildomar and Lake Elsinore (as applicable)

for review, comment, and approval. The CTMP may include, but not be limited to, provisions for the following:

- Attempt to schedule the timing and duration of work to avoid the peak commuter hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.;
- Implementing standard safety practices, including installing appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices;
- Protecting traffic by using flaggers, warning signs, lights, and barricades to guide vehicles through or around construction zones;
- Restoring roadway capacity to the extent feasible during hours when construction activities are not occurring, which could include the use of road plates or temporary paving;
- Implementing construction schedules and techniques that minimize roadway closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities;
- Providing detours for cyclists and pedestrians when bike lanes or sidewalks must be closed;
- Coordinating with local schools prior to construction within close proximity of school property to ensure entryways are not blocked during peak drop off and pick up times;
- Notifying emergency response providers of road closures at least one week prior to closures and include the location, date, time, and duration of the closure;
- Coordinating with the City of Wildomar and City of Lake Elsinore (as applicable) to maintain adequate emergency evacuation routes; and
- Abiding by encroachment permit conditions, which shall supersede conflicting provisions in the CTMP.

Notice to Residents, Businesses, and Schools

EVMWD will provide notice to property owners and residents to the proposed pipeline alignments at least one week prior to the start of construction. Notices would include an anticipated construction schedule and description of anticipated construction activities and their expected duration in addition to any other pertinent information.

3.6 Surrounding Land Uses

Land uses in the vicinity of the proposed Project include residential, commercial, schools, parks, and undeveloped land mainly within the Sedco Hills neighborhood in the City of Wildomar (see Figures 3a and 3b, *Representative Site Photos*). As noted above, the proposed sewer pipelines would be mainly located within existing roads, as well as disturbed areas surrounded by development.



Photo 1: Representative photo of residential development and paved roadway. Photo taken 8/5/22.



Photo 2: Representative photo of undeveloped road bordered by rural residential development. Photo taken 8/5/22.

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Photo 3: Malaga Road, looking east. Photo taken 8/29/22.



Photo 4: Vine Street, looking west. Photo taken 8/29/22.

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4.0 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a “Potentially Significant Impact” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

<input type="checkbox"/> None		
<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input type="checkbox"/> Air Quality
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Energy
<input checked="" type="checkbox"/> Geology and Soils	<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards and Hazardous Materials
<input type="checkbox"/> Hydrology and Water Quality	<input checked="" type="checkbox"/> Land Use and Planning	<input type="checkbox"/> Mineral Resources
<input type="checkbox"/> Noise	<input type="checkbox"/> Population and Housing	<input type="checkbox"/> Public Services
<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation	<input checked="" type="checkbox"/> Tribal Cultural Resources
<input type="checkbox"/> Utilities and Service Systems	<input type="checkbox"/> Wildfire	<input checked="" type="checkbox"/> Mandatory Findings of Significance

3.1 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 revisions in the Project have been made by or agreed to by the Project proponent. 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 “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- 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

Jason Dafforn, Director of Engineering and Water Resources
Printed name



Date

Elsinore Valley Municipal Water District
For

5.0 Environmental Initial Study Checklist

The lead agency has defined the column headings in the environmental checklist as follows:

- A. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
- B. “Less Than Significant with Mitigation Incorporated” applies where the inclusion of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.
- C. “Less Than Significant Impact” applies where a project does not create an impact that exceeds a stated significance threshold.
- D. “No Impact” applies where a project does not create an impact in that category. “No Impact” answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

- a) Earlier Analyses Used. Identifies where earlier analyses are available for review.
- b) Impacts Adequately Addressed. Identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.
- c) Mitigation Measures. For effects that are “Less Than Significant with Mitigation Incorporated,” describes the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

I. Aesthetics

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

a) Have a substantial adverse effect on a scenic vista?

No Impact. Scenic vistas in the Project vicinity include views of surrounding mountain ridgelines; however, these views in the Project site are partially obstructed by existing development. During construction, equipment would be visible in the Project area but would be located there temporarily and removed upon completion of construction. The proposed Project would install sewer infrastructure, which would be located entirely underground after construction activities are complete. Therefore, no permanent changes to scenic vistas would occur due to the Project. No impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no designated state scenic highways with visibility to the Project site; however, the portion of Interstate- (I-) 15 adjacent to the Project site is an eligible state scenic highway (California Department of Transportation [Caltrans] 2019). As discussed in item I.a, permanent Project components would be located underground and construction activities that would occur above ground would be temporary in nature. Thus, the Project would not result in damage to scenic resources in a state scenic highway and no impact would occur.

- c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. Public Resources Code 21071 defines the term “urbanized area” for the purpose of CEQA to mean an incorporated city that has a population of at least 100,000 persons or has a population of less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons. U.S. Census Bureau data from 2021 indicates that the City has a population of 37,189 persons and the adjacent City of Lake Elsinore has a population of 71,563 persons (U.S. Census Bureau 2021). The Project site is within an urbanized area and therefore, is evaluated relative to applicable zoning and other regulations governing scenic quality.

No regulations govern the visual character of the Project, as it would exist underground upon the completion of construction. The Project would not conflict with zoning or scenic quality regulations. Construction equipment may be visible temporarily while the Project is constructed; however, once construction is complete, roadways would be repaved, and any disturbance to residences as a result of abandoning the septic tanks would be restored. 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. Construction of the proposed Project would occur between 7:00 a.m. and 6:00 p.m. Since construction would occur during daylight hours and no major light sources would be required for Project operation, no permanent new sources of light would be introduced by the Project. Once operational, Project components would be located underground and would not be a source of light or glare. Impacts would be less than significant.

II. Agriculture and Forestry Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non- forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. According to the California Important Farmland Finder, the majority of the Project site is designated as Urban and Built-up Land with a small area of Other Land (California Department of Conservation [DOC] 2018). The Project would occur primarily within existing roadway ROW and would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. Williamson Act contracts require 100 contiguous acres of agricultural land, which is not present at the Project site (County 2003). No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The Project site consists of developed roadways and properties zoned for residential and commercial use. No forest land, timberland, or timberland zoned Timberland Production is present within the Project site. Therefore, the Project would not result in rezoning of these uses or the conversion of forest land to a non-forest use. 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 discussed in items II.a through d above, the Project site does not contain agricultural or forest land uses. The Project would not result in conversion of these uses and no impact would occur.

III. Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Air Quality and Greenhouse Gas Emissions Assessment prepared by HELIX Environmental Planning, Inc. (HELIX 2022a), attached to this Initial Study as Appendix A.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The Project is located within the South Coast Air Basin (SCAB). The South Coast Air Quality Management District (SCAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws in the SCAB. As required by the California Clean Air Act, the SCAQMD has responded to the requirement to decrease emissions by preparing a sequence of Air Quality Management Plans (AQMPs). On March 3, 2017, the SCAQMD adopted the 2016 AQMP, which represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The plan seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, greenhouse gases (GHGs), and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). The AQMP is incorporated into the State Implementation Plan, which is subsequently submitted to the U.S. Environmental Protection Agency.

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. With regard to air quality planning, SCAG has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to Project trends out over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included

in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.¹

The two principal criteria for determining conformance to the AQMP are:

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards; and
2. Whether the project would exceed the assumptions in the AQMP.

With respect to the first criterion, as demonstrated in item III. B below, the Project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the Project proposes installing sewer infrastructure in an existing community and decommissioning a septic system. The Project would not result in population or employment increases and, therefore, would not exceed the growth projection assumptions in the AQMP. In addition, the construction workers that would construct the Project would be recruited from the local pool of labor and would not create employment growth exceeding growth estimates for the area. The proposed infrastructure improvements would serve existing residences and would not create conditions for the creation of new housing, which would thereby induce population growth.

Because the Project is consistent with the growth assumptions used in developing the AQMP, pursuant to SCAQMD guidelines, the proposed Project is considered consistent with the region's AQMP. As such, Project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Accordingly, the proposed Project would be consistent with the emissions projections in the AQMP. Impacts would be less than significant.

- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact. The Project would generate criteria pollutants in the short-term during construction. Once construction activity is complete, the Project components would be sealed pipelines, which would be located underground and operate passively. Therefore, the Project would not result in the emission of air pollutants during Project operation. To determine whether a project would result in emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SCAQMD.

The Project's construction emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 (California Air Pollution Control Officers Association [CAPCOA] 2021). CalEEMod is a computer model used to estimate air pollutant emissions resulting from construction and operation of land development projects throughout the state of California. CalEEMod was developed by CAPCOA with the input of several air quality management and pollution control districts.

¹ SCAG serves as the federally designated metropolitan planning organization for the southern California region.

To be conservative, construction emission calculations did not assume the implementation of standard dust control measures as required by SCAQMD Rule 403, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 miles per hour. Implementation of these measures would further decrease emissions of PM₁₀ and PM_{2.5}. Project-specific input was based on general Project information, assumptions provided by the Project engineers, and default model settings to estimate reasonably conservative conditions. Construction was assumed to occur over 24 months, commencing in January 2024, include all equipment presented in Table 1 for three construction crews operating simultaneously. The results of the calculations for Project construction are shown in Table 2, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 2
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	VOC (lbs/day)	NO _x (lbs/day)	CO (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Trenching	1.1	9.3	16.9	<0.1	0.6	0.5
Pipeline Installation	3.6	31.4	31.8	0.1	1.3	1.2
Paving	1.1	10.5	14.7	<0.1	0.7	0.5
Maximum Daily Emissions	5.7	51.2	63.4	0.1	2.6	2.2
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod; HELIX 2022a; SCAQMD 2019

lbs/day = pounds per day; VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SCAQMD = South Coast Air Quality Management District

As shown in Table 2, the Project's construction emissions would not exceed SCAQMD thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant. As described previously, the Project would consist of passive pipelines after construction and would not result in operational emissions of criteria pollutants. Impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The Project site is located in a residential area with sensitive receptors located throughout the Project site, directly adjacent to where construction activities would occur. Jean Hayman Elementary School is also located at the southern end of the Project area.

Criteria Pollutants

The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's Localized Significance Thresholds (LSTs) method (SCAQMD 2009). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The LST methodology is recommended to be limited to projects of five acres

or less and to avoid the need for complex dispersion modeling. For projects that exceed 5 acres, such as the proposed 380-acre Project, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The Project is in SRA 25, Lake Elsinore, and sensitive receptors are located within 25 meters of the Project site. Therefore, the LSTs being applied to the Project are based on SRA 25, receptors located within 25 meters, and a disturbed area not to exceed 5 acres. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. Table 3, *Maximum Localized Daily Construction Emissions*, presents the maximum anticipated daily on-site emissions for comparison with the applicable LSTs.

Table 3
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Phase	NO _x (lbs/day)	CO (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Trenching	9.3	16.5	0.5	0.4
Pipeline Installation	31.4	31.8	1.3	1.2
Paving	10.5	14.2	0.5	0.5
Maximum Daily Emissions	51.1	62.6	2.3	2.1
<i>SCAQMD LST</i>	<i>371</i>	<i>1,965</i>	<i>13</i>	<i>8</i>
<i>Significant Impact?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: CalEEMod; HELIX 2022a; SCAQMD 2009

lbs/day = pounds per day; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

As shown in Table 3, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs and impacts to sensitive receptors would be less than significant.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). In 1998, the California Air Resource Board (CARB) identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects.

Construction of the Project would result in the use of heavy-duty construction equipment, haul trucks, and construction worker vehicles. These vehicles and equipment could generate DPM, which is a TAC. Generation of DPM from construction projects typically occurs in a localized area (e.g., near locations with multiple pieces of heavy construction equipment working in close proximity) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of

construction, the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. Concentrations of DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose of TACs to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from the Office of Environmental Health Hazard Assessment [OEHHA]) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the relatively short duration of construction activities, and the fact that any concentrated use of heavy construction equipment would occur at various locations throughout the Project site only for short durations, construction of the Project would not expose sensitive receptors to substantial DPM concentrations. Impacts 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. The Project could produce odors during proposed construction activities resulting from heavy diesel equipment exhaust and application of asphalt; however, standard construction practices would minimize the odor emissions and their associated impacts. The increase of construction odors would be minimal, as vehicle exhaust is already prevalent in the area due to its proximity to I-15. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of construction. Therefore, odor impacts from construction of the Project would be less than significant due to the duration of exposure.

The Project proposes the installation of sewer infrastructure and the decommissioning of septic tanks. While wastewater has the potential to generate odors, the proposed sewer pipelines would be sealed underground and would not result in the emission of odors related to the transport of wastewater. Therefore, long-term operation of the Project would not result in a change to existing odors in the Project vicinity, and there would be no impact.

IV. Biological Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The discussion below is based on the Biological Resources Report prepared by HELIX Environmental Planning, Inc. (HELIX 2022b), attached to this Initial Study as Appendix B. The Biological Resources Report included a general biological survey, literature review, and preliminary jurisdictional delineation.

- 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. The Project site primarily consists of developed lands with undeveloped areas generally disturbed by regular mowing and disking. Five land cover or habitat types occur on the Project site: California buckwheat shrub-disturbed, open water, non-native woodland, disturbed habitat, and developed land. No sensitive natural communities or special-status

plant species occur on the Project site. Table 4, *Existing Vegetation Habitat and Land Uses in Study Area*, lists the type and size of each habitat found within the Project site.

Table 4
EXISTING VEGETATION HABITAT AND LAND USES IN STUDY AREA

MCV Habitat Name	Oberbauer Classification	Size (acres) ¹
California buckwheat scrub	Riversidian sage scrub	1.3
California buckwheat scrub –disturbed	Riversidian sage scrub-disturbed	5.0
Open water	Open water	0.6
Non-native Vegetation	Non Native Woodland	1.4
Disturbed Habitat	Disturbed Habitat	37.3
Developed Land	Developed Land	334.3
Total		379.9

Source: HELIX 2022b; Holland 1986; Oberbauer 2008

¹ Upland habitats are rounded to the nearest 0.1 acre and wetland/riparian habitats to the nearest 0.01 acre; thus, totals reflect rounding.

MCV = Manual of California Vegetation

No special-status animal species were observed on the Project site during the general biological survey. A total of 57 special-status animal species comprised of 8 invertebrates, 2 fish, 14 amphibians and reptiles, 20 birds, and 13 mammals were evaluated for the potential to occur in the Project area. Fourteen of the species evaluated have low potential to occur in the Project area and the remainder of the animal species do not have the potential to occur on-site due to the lack of suitable habitat and residential development on the site.

One state listed species, bald eagle, is known to forage at Lake Elsinore but is not known to nest in the vicinity. The Project site is approximately two miles from Lake Elsinore. The species may use trees within the Project area for temporary roosting but is unlikely to remain due to the high disturbance from human activities.

Limited portions of the Project site contain marginal nesting habitat (e.g., trees, shrubs, structures) for several common bird species, including raptors, protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code). Construction of the proposed Project could result in the removal or trimming of trees and other vegetation during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds in violation of the MBTA and CFG Code. Direct impacts could occur as a result of the removal of vegetation supporting an active nest. Indirect effects could occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active bird nest, such that the disturbance results in nest abandonment or nest failure. These impacts would be considered potentially significant. Mitigation measure Bio-1 would require the avoidance of nesting birds and raptors during the breeding season, either by constructing the Project outside of the breeding season or conducting nesting bird surveys to assess whether nesting birds are present and avoiding them. Implementation of this measure would reduce potentially significant impacts on nesting birds and raptors to a less than significant level.

Burrowing owl have low potential to occur in the open fields of disturbed habitat that occurs in patches within the Project area. Ground disturbance within 500 feet (150 meters) of an active burrow during the breeding season (February 1 through August 31) or within 165 feet (50 meters) of an active burrow outside the breeding season could result in impacts to burrowing owl in violation of the MBTA and CFG Code. Direct impacts could occur from ground disturbance at a burrow. Indirect impacts could occur as a

result of construction noise in the immediate vicinity as described above, such that the disturbance results in nest/burrow abandonment or nest failure. These impacts would be considered potentially significant. Mitigation measure Bio-2 would require the avoidance of burrowing owls during the breeding season, either by constructing the Project outside of the breeding season or conducting surveys to assess whether burrowing owls are present and avoiding them. Implementation of this measure would reduce impacts to a less than significant level.

Coastal California gnatcatcher (CAGN) “tends to occur most frequently within the California sagebrush-dominated stands” of sage scrub. The sage scrub (California buckwheat scrub) in the Project site occurs on the short slope between development and I-15. This sage scrub is dominated by California buckwheat and lacks a significant California sagebrush component. The minimal amount of California sage scrub, along with the habitat consisting of a narrow strip between what is primarily residential development and I-15, results in the CAGN as not likely to occur in this location. Should CAGN occur at this location, it is presumed they are adjusted to a significant noise level that occurs in the habitat as a combination of the residential development and vehicle traffic on I-15. If CAGN do occur in this habitat and the Project resulted in impacts to the habitat, these impacts would be considered significant. Although the Project does not propose direct impacts to the habitat, portions of the Project alignment do occur parallel to the sage scrub. Mitigation measure Bio-3 would require the avoidance of CAGN during the breeding season, either by constructing the Project outside of the breeding season or conducting surveys to assess whether CAGN are present and avoiding them. Implementation of this measure would reduce impacts to a less than significant level.

Project construction has the potential to result in significant impacts to nesting birds, burrowing owls, and CAGN. However, these impacts would be reduced to less than significant levels with implementation of mitigation measures Bio-1 through Bio-3. The Project would have no impact on any other special-status plant and animal species due to the lack of suitable habitat on the site and regular disturbance.

- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified 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 Impact. Project impacts are proposed to occur within the existing roadways and residential developments, which do not include riparian habitat and sensitive natural communities. Additionally, the Project would avoid impacts to the small drainages in the Project area. Direct impacts resulting from the Project would be restricted to existing disturbed habitats and developed land. If not properly contained, construction activities could result in adverse, inadvertent, and indirect impacts on resources located adjacent to work areas, such as storm drains, open water, and drainages. As described under Section 2.5, *Construction Best Management Practices*, EVMWD would implement BMPs from the required SWPPP for the Project. Thus, with the required implementation of BMPs and the Project’s SWPPP, no adverse effects to off-site sensitive resources, riparian habitat, or sensitive natural communities would occur. Impacts would be less than significant.

- 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?

Less Than Significant Impact. The Project site is characterized nearly entirely by uplands and includes three drainages and an open water pond. The drainage course includes two drainages that originate from culverts under I-15. One drainage occurs along the north side of Elberta Road and dissipates after traversing a disturbed lot for approximately 250 feet. The second drainage is from a culvert under I-15 at Sedco Boulevard and enters the open water pond. A third drainage is an open culvert as part of the storm drain system along Mission Trail south of Olive Street. The open water pond is located along Sedco Boulevard. A review of historic aerials shows that the pond was created between 1938 and 1967. Given that no state or federally protected wetlands occur on the Project site, no direct impacts to wetlands would occur. As described in item IV.b, EVMWD will implement BMPs during construction, which would prevent any indirect impacts to off-site federally protected wetlands (i.e., within or adjacent to Lake Elsinore or the San Jacinto River that occur west of the study area). Impacts would be less than significant.

- 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. Wildlife corridors connect isolated habitat and allow movement or dispersal of plant materials and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of the wildlife's daily routine and life history. Many linkages occur as stepping-stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance. The Project site does not, by itself, serve as or contribute to any known or potential corridors or linkages. Birds may use trees within the Project site; however, the Project site is primarily developed with residential land uses. Therefore, the Project site is not anticipated to serve as a wildlife corridor or nursery site. Impacts to wildlife movement and nursery sites would be less than significant.

- 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 any local policies or ordinances protecting biological resources. Tree removal, if required, may occur within the ornamental vegetation on the residential lots. The City tree ordinance does not apply to residential ornamental trees, with the potential exception of mature palm trees. The Project would not result in the removal of native trees or mature palms. The Project would not conflict with any City policies or ordinances, and no impact would occur.

- 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 site does not occur on lands identified for conservation or preserve configuration in the Project region. Lands to the northeast of the Project on the east side of I-15 are targeted for conservation under the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) but are outside the Project area (Dudek and Associates 2003). The Project area is within the Elsinore Area Plan of the MSHCP, and partially within Subunit 4: Sedco Hills and criteria cell 4838. The Project area does not include land targeted for conservation within the cell. The northeast portion of the Project site includes

approximately 26 acres of the criteria cell, comprised of 0.5 acre of California buckwheat scrub, 4.5 acres of disturbed habitat, and 21 acres of developed land in the southwest portion of the cell. These land uses include Lakeview Terrace, and the slope along I-15 and the residential development. Cell 4838 targeted conservation is for 15 to 25 percent of the cell, focusing on the northeast portion of the Cell, which is comprised of coastal sage scrub and chaparral. The Project area is not within the targeted conservation area for the cell.

The Project area is also not within the Narrow Endemic Plant Species (NEPS) Survey Area or within the Criteria Area Species (CAS) Survey Area for sensitive plant species. The Project area is also not within the burrowing owl, mammal, or other species survey area. Habitat for riparian/riverine species does not occur within the Project area, with the exception of two small drainages that originate from a culvert under I-15. These drainages do not provide habitat for the riparian/riverine species in the MSHCP. The MSHCP requires the conservation of 90 percent of plant populations that have long-term conservation value. The small pockets of undeveloped habitat in the Project area are not expected to support NEPS, CAS, or riparian/riverine species, as the habitat occurs as small, isolated pockets with regular human disturbance and do not represent habitat with potential long-term conservation value.

As the Project area is not within the targeted conservation area for the MSHCP conservation cell and is not within a survey area, no conflicts with the MSHCP would occur. No other habitat conservation plans apply to the Project. No impact would occur.

Mitigation

Potential impacts associated with nesting birds, burrowing owls, and CAGN would be reduced to less than significant levels with implementation of mitigation measures Bio-1 through Bio-3, described below.

Bio-1 Avoidance of Nesting Birds and Raptors. To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and CFG Code, the City shall enforce the following:

Project activities requiring the removal and/or trimming of vegetation suitable for nesting birds shall occur outside of the general bird breeding season (January 15 to September 15) to the extent feasible. If the activities cannot avoid the general bird breeding season, a qualified biologist shall be retained to conduct a pre-activity nesting bird survey within seven days prior to the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the qualified biologist, then the activities shall proceed with the reassurance that no violation of the MBTA and CFG Code would occur. If an active bird nest is found by the qualified biologist, then vegetation removal and/or trimming activities at the nest location shall not be allowed to occur until the qualified biologist has determined that the nest is no longer active. Avoidance buffers should start at 300 feet for passerine birds and 500 feet for raptors. However, buffers could be reduced at the discretion of the qualified biologist depending on the bird species and Project activities required in the vicinity of the active nest.

Bio-2 Avoidance of Burrowing Owl. To prevent direct impacts to burrowing owl, the following measures shall be implemented:

Burrowing owl surveys shall be conducted in accordance with CDFW staff report guidelines (CDFW 2012). This consists of a habitat assessment and burrow survey, along with a four-visit focused burrowing owl survey. The initial assessment indicates that burrowing owl habitat does

occur in the study area but burrows suitable for burrowing were not observed. If the focused burrow survey indicates that burrows suitable for burrowing owl are not present, then potential burrowing owl habitat does not occur, and focused burrowing owl surveys are not required. If suitable burrows are observed, then focused burrowing owl surveys will be conducted per CDFW protocol. If potential burrowing owl habitat is determined to be present, pre-construction surveys will also be conducted. Per the CDFW protocol two pre-construction surveys will occur, one within 14 days prior to the start of ground disturbance activities and a second within 24 hours of the start of ground disturbance.

If burrowing owls are observed, the CDFW will be notified. No work shall occur within 500 feet (150 meters) of the active burrow during the breeding season from February 1 to August 31 or within 165 feet (50 meters) during the non-breeding season without first consulting with CDFW. If work is required to be conducted within these limits, a minimization, avoidance, and exclusion plan is to be submitted to CDFW. The plan should include measures such as sound and visual barriers, work timing, biological monitoring, and if needed, temporary exclusion methods.

Bio-3 Avoidance of CAGN. Although CAGN are unlikely to occur, their potential presence in the sage scrub (California buckwheat scrub), including disturbed, along I-15 (see Appendix B Figure 5a and b) cannot be totally ruled out. To prevent direct impacts to coastal California gnatcatcher, the following measures shall be implemented.

No work shall occur within 500 feet of the sage scrub habitat during the breeding season (February 15 to August 30) unless visual and sound barriers are utilized. Existing residential houses and associated ornamental vegetation will serve as the barriers for the majority of the Project alignment. The Project shall avoid direct impacts to sage scrub habitats. This includes direct vegetation removal, using the habitat for spoils piles, staging areas, or worker break locations.

For the portions of the alignment that occur within 500 of the sage scrub habitat that do not include existing barriers, the Project will restrict work within the non-breeding window of September 1 to February 14. If work must occur within 500 feet of the sage scrub during the breeding season, the Project will implement the following:

The Project will conduct a USFWS protocol presence/absence survey for CAGN according to the current protocol. The survey will be conducted by a biologist with a permit to conduct CAGN surveys. If CAGN are present, and work within 500 feet of the habitat is to occur, the Project will initiate a consultation with the USFWS and CDFW. If CAGN are not present, no additional mitigation measures with respect to CAGN are required.

V. Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the Project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Cultural Resources Survey prepared by HELIX Environmental Planning, Inc. (HELIX 2022c), attached to this Initial Study as Appendix C. 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 pedestrian survey.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated. HELIX staff requested a record search of the California Historical Resources Information System from the Eastern Information Center (EIC) on August 3, 2022, which was received on September 3, 2022. The records search covered a half-mile radius around the Project area and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources and the state Office of Historic Preservation historic properties directories was also conducted.

The EIC has a record of 14 previously recorded cultural resources within a half-mile radius of the Project; two of these are recorded within the Project area, although they are outside any of the proposed pipeline alignments and are not within the properties of the customers planned for conversion to septic. Historic resources recorded within the search radius include a total of five Camp Haan barracks buildings, a 1920s-1930s farm/ranch complex, the Skylark Airport, two sites consisting of irrigation system elements, and an isolated bottle finish. The resources that have been documented within the Project area are both military buildings associated with Camp Haan that were moved from their original locations to their recorded ones. Site record updates from 2009 noted that four former Camp Haan barracks buildings documented in 1981 had all been either demolished or removed, including the two within the current Project area (P-33-007163 and P-33-007164). Prehistoric resources identified by the EIC records search included one isolated ground stone fragment, a site with bedrock milling and a lithic scatter, and two sites recorded as artifact scatters. One of these two artifact scatter sites, CA-RIV-4042, is a significant resource for which the site record was not updated following test excavations and monitoring. No impact to historical properties is anticipated.

However, the Lake Elsinore area, with the placename *Paayaxchi*, has been identified by Soboba and Pechanga as a highly significant cultural area. The lake and nearby *’Itengvu Wumowmu* (Lake Elsinore

Hot Springs) are tied directly to events that occurred during the creation of the world, per the Luiseño creation account. Although *Paayaxchi* has not been formally evaluated for National Register of Historic Places eligibility as a Traditional Cultural Property (TCP), it appears to meet the criteria for eligibility under Criteria A, B, C, and D. Based on this potential eligibility, the Project has the potential to affect a TCP.

Based on the results of the current Cultural Resources Survey, no historic properties would be affected by the Project. However, the Project has the potential to impact a TCP, which may qualify as a historic resource. If it is determined that *Paayaxchi* is a historic resource, mitigation measures Cul-1 through Cul-9 would be required to address potentially significant impacts to this resource. With implementation of mitigation measures Cul-1 through Cul-9, impacts would be less than significant.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant with Mitigation Incorporated. The records search discussed in item V.a did not identify archaeological resources within the proposed alignment. No cultural material was observed during the pedestrian survey of the Project area. Therefore, no impacts to historic archaeological resources are anticipated to result from Project implementation. While no archaeological resources are anticipated to be impacted, the Project area is sensitive for cultural resources.

HELIX contacted the NAHC on August 3, 2022 for a Sacred Lands File search and list of Native American contacts for the Project area. The response, received on September 12, 2022, was negative and letters were sent on September 20, 2022 to the 26 tribal contacts provided by the NAHC. To date, three responses have been received. Both the Quechan Indian Tribe and the Agua Caliente Band of Cahuilla Indians indicated that they have no comments on the project and defer to local tribes. Rincon indicated that the Project site is within their Area of Historic Interest and requested a copy of the records search and the cultural resources report. While Rincon was not aware of cultural resources in the Project area, these resources may be present and further coordination with Pechanga given the project location was recommended. If HELIX receives other responses to tribal outreach letters, the responses will be provided to EVMWD. EVMWD sent letters to Pechanga, Soboba, and Rincon via email on March 9, 2023 (Rincon) and March 10, 2023 (Soboba and Pechanga) notifying them of the project and inviting them to participate in consultation under AB 52. To date, Pechanga is the only Tribe who has responded to this outreach; they indicated via email on March 29, 2023 that the Tribe wishes to initiate consultation. That consultation meeting is being scheduled. The SWRCB will undertake Section 106 consultation with interested Tribes as well. Based on the sensitivity of the Project area, an archaeological monitoring program was recommended and would be required by mitigation measures Cul-1 through Cul-9. With implementation of mitigation measures Cul-1 through Cul-9, impacts to archaeological resources would be less than significant.

- c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact. The Project site is not located within or near a formal cemetery and is not known to be located on a burial ground. Since the Project site is primarily developed, it is unlikely the Project would disturb any human remains during construction. Should human remains be uncovered during construction, the Project would comply with existing regulations, including California Health and Safety Code Section 7050.5, and the remains would be protected, analyzed, and preserved as required. In the event that the remains are determined to be of Native American origin, the Most Likely

Descendant, as identified by the NAHC, would be contacted in order to determine proper treatment and disposition of the remains in accordance with California Public Resources Code section 5097.98. Therefore, impacts to human remains would be less than significant.

Mitigation

Implementation of mitigation measures Cul-1 through Cul-9 would reduce potential impacts to archaeological resources to a less-than-significant level.

- Cul-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 or the County of Riverside list of qualified archaeologists to monitor ground-disturbing activities.
- Cul-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.
- Cul-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 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.
- Cul-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.
- Cul-5 Authority to Stop and Redirect Excavation.** In accordance with the agreement required in Cul-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.

- Cul-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.
- Cul-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.
- Cul-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.
- Cul-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 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 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, the Eastern Information Center, and the Monitoring Tribe(s).

VI. Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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. Construction of the Project would consume energy, primarily in the form of the petroleum-based fuels (i.e., gasoline and diesel). Heavy-duty off-road construction equipment, haul trucks delivering and removing construction materials, and worker commute vehicles would consume these fuels. Project-related consumption of such energy resources for construction would be temporary, typical for this type of construction, and cease upon the completion of construction (estimated to last between 18 and 24 months). No inefficient or unnecessary construction methods are proposed such that excessive energy resources would be consumed during Project construction. During Project operation, no energy resources would be required since Project components would be passive infrastructure elements. Therefore, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and impacts would be less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. During construction, the construction contractor would be required to use equipment that complies with applicable regulations related to energy-efficient operations. The Project would not require energy during operation. Therefore, no conflicts with state or local plans for renewable energy or energy efficiency would occur. No impact would occur.

VII. Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Less Than Significant with Mitigation Incorporated. The Project is not within an Alquist-Priolo Fault Zone (DOC 2022). However, the Glen Ivy North Fault, part of a County fault zone, bisects the southwest corner of the Project site (County 2022). Based on the presence of a fault within the Project site, there is potential for ground rupture to occur. No people or structures would be adversely affected due to the Project in the event of ground rupture; however, potential impacts to Project components may be significant. The Project components would be constructed in compliance with current codes and standards, which would reduce the potential for damage to Project component in the event of ground rupture. In addition, mitigation measure Geo-1 would require a geotechnical investigation be completed and Project-specific recommendations be incorporated in Project design and construction. With implementation of mitigation measure Geo-1, impacts would be less than significant.

- ii. Strong seismic ground shaking?

Less Than Significant with Mitigation Incorporated. Based on the presence of the Glen Ivy North Fault and other regional faults, there is potential for strong ground shaking to occur at the Project. Since the Project would not result in habitable structures or a place of employment, there are no risks to people or structures related to ground shaking that would occur during Project operation. The proposed sewer lines would be constructed in compliance with current buildings codes and standards along with Project-specific measures determined by a geotechnical investigation. Inclusion of the measures resulting from mitigation measure Geo-1 would reduce the potential for significant Project damage to result in the

event of ground shaking. Impacts would be less than significant with implementation of mitigation measure Geo-1.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant with Mitigation Incorporated. Liquefaction occurs primarily in saturated, loose, fine to medium-grained soils in areas where the groundwater table is generally 50 feet or less below the surface. When these sediments are shaken during an earthquake, a sudden increase in pore water pressure can cause the soils to lose strength and behave as a liquid. The Project site is in an area of moderate liquefaction susceptibility, which may result in significant impacts to Project components (City 2022). Compliance with applicable building codes and regulations in addition to mitigation measure Geo-1 would prevent adverse effects in the event of seismic related ground failure and impacts would be less than significant.

iv. Landslides?

No Impact. The Project site is generally flat and is not in a landslide zone (City 2022). The Project would not create slopes or other features that would contribute to landslide potential. Therefore, no adverse effects related to landslides are anticipated. No impact would occur.

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 during construction due to the removal of stabilizing surfaces, excavation, and backfill. After completion of construction activities, these surfaces would be restabilized and there would be no change to erosion potential in the Project area.

Short-term erosion and sedimentation impacts would be addressed through conformance with applicable elements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit and related City requirements, including the City grading and water quality ordinances. Specifically, this would include implementing an approved SWPPP, which would include BMPs. Project-specific BMPs, examples of which are provided in Section 2.5, 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 erosion control measures such as geotextiles, mats, fiber rolls, or soil binders; sediment controls such as silt fencing, fiber rolls, gravel bags, or other methods; compliance with dust control measures; and preparation and implementation of a Rain Event Action Plan. Other BMPs may be added during the SWPPP process to ensure the Project complies with applicable regulations.

Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, the Project SWPPP and related City 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 with Mitigation Incorporated. As discussed above, the Project is in a moderate liquefaction potential zone and is not in a potential landslide zone. The potential for lateral spreading and subsidence is related to a site's potential for liquefaction. Therefore, there is potential for significant impacts related to lateral spreading and subsidence to occur at the Project site. Mitigation measure Geo-1 would require a Project-specific geotechnical investigation be conducted and any recommended measures be included in the Project design and construction. Impacts related to soil instability would be less than significant with implementation of mitigation measure Geo-1.

- 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 with Mitigation Incorporated. Expansive soils are those soils with a significant amount of clay particles that have the ability to take on water (swell) or give up water (shrink). When these soils swell, the change in volume exerts significant pressures on loads that are placed on them. Within Riverside County, expansive soils are widely dispersed and can be found in hillside areas as well as low-lying alluvial bases. The Project site primarily consists of sandy loam soils (HELIX 2022b). The Project would not construct habitable structures, thereby creating risks to life. However, expansive soils have the potential to impact the proposed pipelines. Implementation of mitigation measure Geo-1 would require a site-specific geotechnical investigation, which would include identification of potentially expansive soils and, if necessary, design measures to prevent damage to the Project within such soils. With implementation of mitigation measure Geo-1, impacts would be less than significant.

- 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. The Project would install sewer infrastructure where septic tanks are currently used for wastewater disposal. Existing septic tanks would be broken at the bottom and filled with sand to allow future drainage. Sewer installation would remove the need for septic tanks or alternative waste water disposal in the Project area. No impact would occur.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant with Mitigation Incorporated. The Project site is primarily within an area of high paleontological sensitivity with the exception of the southwestern corner of the site being an area of low paleontological sensitivity (County 2022). Specifically, the high sensitivity zone of the Project would occur within zone High A, which is known to have high paleontological sensitivity based on the mapped geologic formations and rock units in the area (County 2015). During ground disturbing activities in the mapped high sensitivity zone, the Project has the potential to impact paleontological resources. General Plan policies OS 19.8 through 19.10 require that where ground disturbing activities may result in impacts to paleontological resources, a report must be filed regarding the potential impacts and grading activities must be monitored (County 2003).

In addition to compliance with the General Plan policies, with implementation of mitigation measure Geo-2 during ground disturbance in the high sensitivity areas of the Project site, the Project would not

destroy unique paleontological resources or geologic features and impacts would be less than significant.

Mitigation

Implementation of mitigation measure Geo-1 would reduce potential seismic and geologic hazards to a less-than-significant level. Implementation of mitigation measure Geo-2 would reduce potential impacts to paleontological resources to a less-than-significant level.

Geo-1 Geotechnical Investigation. A geotechnical investigation shall be completed for the Project prior to final Project design and construction. The investigation shall identify site-specific criteria related to considerations such as grading, excavation, fill, and pipeline design. All applicable results and recommendations from the geotechnical investigation shall be incorporated into the final Project design and construction documents to address identified potential geologic and soil hazards, including but not necessarily limited to: (1) seismic hazards including ground rupture, ground acceleration (ground shaking), soil liquefaction (and related issues such as dynamic settlement and lateral spreading), and landslides/slope instability; and (2) non-seismic hazards including manufactured slope instability, subsidence/compressible soils, expansive or corrosive soils, and trench/excavation instability. The final Project design and construction documents shall also encompass applicable standard design and construction practices from established regulatory/ industry sources including the California Building Code, International Building Code, California Geological Survey, Greenbook and EVMWD standards, as well as the results/recommendations of geotechnical review and field observations/testing to be conducted during Project excavation, grading and construction activities (with all related requirements to be included in applicable engineering/design drawings and construction contract specifications).

Geo-2 Paleontological Monitoring. A paleontological grading observation schedule by a Certified Paleontologist shall be maintained when grading in high sensitivity areas, as defined by the County General Plan, to further evaluate the fossil resources of the site. Paleontological monitoring may be reduced upon observations and recommendations of the professional-level Project paleontologist. Salvage operations shall be initiated by the Certified Paleontologist and coordinated with the developer if other significant concentrations of fossils, as determined by the Certified Paleontologist, are encountered. Any paleontological resources shall be provided for curation at a local curation facility, or any other local museum or repository willing and able to accept and house the resource to preserve for future scientific study.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Air Quality and Greenhouse Gas Emissions Assessment prepared by HELIX Environmental Planning, Inc. (HELIX 2022a), attached to this Initial Study as Appendix A.

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. 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. CARB, the 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. For the proposed Project, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold (SCAQMD 2010). Therefore, a significant impact would occur if the proposed Project would exceed the SCAQMD proposed Tier 3 screening threshold of 3,000 metric tons (MT) of carbon dioxide equivalent (CO₂e) per year.

Construction of the Project would result in GHG emissions generated by vehicle engine exhaust from construction equipment and worker commuting trips. Construction GHG emissions were calculated by using CalEEMod. As previously discussed, the Project would contain passive components that would not result in GHG emissions during operation. The estimated construction GHG emissions for the Project are shown in Table 5, *Construction GHG Emissions*. For construction emissions, SCAQMD recommends that the emissions be amortized (i.e., averaged) over the anticipated lifespan of a project (30 years) and added to operational emissions. However, no operational emissions would result from the proposed Project.

**Table 5
CONSTRUCTION GHG EMISSIONS**

Source	Emissions (MT CO ₂ e)
2023	634.5
2024	1,524.5
2025	889.6
Total Construction Emissions¹	3,048.6
Amortized Construction Emissions	101.6
<i>SCAQMD Threshold</i>	<i>3,000</i>
Significant Impact?	No

Source: CalEEMod; HELIX 2022a; SCAQMD 2010

¹ Total may not sum due to rounding.

MT = metric tons; CO₂e = carbon dioxide equivalent

As shown in Table 5, proposed construction activities would contribute approximately 101.6 MT CO₂e emissions per year averaged over 30 years. The Project's construction emissions would not exceed the SCAQMD threshold of 3,000 MT CO₂e per year and would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Impacts would be less than significant.

- b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The initial quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. Senate Bill 32 would require further reductions of 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the low carbon fuel standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the Project level is not addressed.

The twelve cities of the Western Riverside Council of Governments (WRCOG), which includes the City of Wildomar, adopted a Subregional Climate Action Plan (CAP) in September 2014. The WRCOG CAP provides a 2010 baseline inventory of GHG emissions for the subregion cities of 5,834,400 MT of CO₂e. Approximately 57 percent of the GHG inventory was from transportation sources, 21 percent from commercial/industrial energy use, 20 percent from residential energy use, and the remaining from wastewater and solid waste sources. Less than one percent of emissions were attributed to the wastewater sector and no increases to this percentage were projected in a business-as-usual scenario. The WRCOG CAP established a target of reducing subregional GHG emissions 15 percent below 2010 levels by 2020 and 49 percent below 2010 levels by 2035. To achieve the 2020 reduction target, the WRCOG CAP identifies 14 State and regional measures, 3 local energy sector measures, 18 local transportation sector measures, and 2 solid waste sector measures. The WRCOG CAP does not identify GHG reduction measures for achieving goals beyond 2020 (WRCOG 2014). It also does not include thresholds for determining the significance of a project's GHG emissions, nor does it include a checklist or other methodology for determining consistency of a project with the goals and measures in the WRCOG CAP.

The adjacent City of Lake Elsinore, which contains the portion of the Project site within the ROW of Mission Trail and Malaga Road, adopted a CAP in December 2011 (City of Lake Elsinore 2011). The CAP provides a 2008 baseline inventory of GHG emissions for the City of Lake Elsinore of 506,727 MT of CO₂e. Approximately 61 percent of the GHG inventory was from transportation sources, 32 percent from energy use, 4 percent from solid waste sources, and the remaining 3 percent from recreation. The CAP identified a combination of state-level regulations and local strategies and measures in the focus areas of Transportation and Land Use, Energy, Solid Waste, and Public Education and Outreach, which would help the City of Lake Elsinore to achieve statewide reduction goals. The CAP does not include thresholds for determining the significance of a project's GHG emissions, nor does it include a checklist or other methodology for determining consistency of a project with the goals and measures in the CAP.

The Project would involve the installation of sewer infrastructure and none of the WRCOG or City of Lake Elsinore CAP measures would apply to Project operation. WRCOG CAP Measure SR-13, *Construction & Demolition Waste Diversion*, describes the waste diversion requirements enacted by California Green

Building Standards Code (CALGreen; California Code of Regulations Title 24, Part 11), which have evolved since approval of the CAP in 2014. City of Lake Elsinore CAP Measure S-1.4, *Construction and Demolition Waste Diversion*, lead to the establishment of Lake Elsinore Municipal Code Chapter 14.12, *Construction and Demolition Waste Management*, which initially contained more stringent construction waste diversion requirements than CALGreen. However, neither CALGreen nor Lake Elsinore Municipal Code construction waste diversion requirements apply to the proposed Project type. In addition, the Project is not anticipated to result in construction waste since excavated material would be used to refill trenched areas. Therefore, no conflicts with the WRCOG or City of Lake Elsinore CAP would result from Project implementation.

The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and impacts would be less than significant.

IX. Hazards and Hazardous Materials

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 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. Construction activities may involve the limited transport, storage, use, and/or disposal of hazardous materials, such as for the fueling and servicing of construction equipment onsite. These activities would be short-term or one-time in nature and would be subject to federal, state, and local health and safety regulations, which would minimize hazards related to the use of these materials. Long-term operation of the Project would involve little or no hazardous materials since pipelines would be sealed and do not emit hazardous materials. The Project would not result in a significant hazard related to the transport, use, or disposal of hazardous materials and impacts 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 discussed above in item IX.a, limited amounts of hazardous materials would be used during construction; however, these materials would be used and stored in accordance with applicable regulations that would limit the potential for their accidental release. During Project operation, hazardous materials would not be used or emitted, as the Project pipelines would be sealed underground. Since the Project is intended to replace existing deteriorated septic systems, it is likely to have a positive impact by reducing potential contamination or other issues that may result in the release of hazardous materials contained in septic systems. Existing septic systems would be abandoned in accordance with County Health Department guidelines, which would reduce the potential for the release of sewage stored in existing septic tanks. The Project would not result in accident conditions or the release of hazardous materials that would create a significant hazard to the public or the environment. Impacts would be 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?

Less Than Significant Impact. Jean Hayman Elementary School is located within the Project area. The hazardous materials that would be used during Project construction would be used and stored in accordance with applicable regulations and would not result in adverse impacts to individuals at the school. In order to abandon the existing septic tanks, contents would be pumped and the tanks would be abandoned in accordance with County Health Department guidelines, which would prevent the discharge of hazardous wastes. Project operation would not result in emissions or handling of acutely hazardous materials. Impacts would be less than significant.

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The Department of Toxic Substances Control (DTSC) EnviroStor database and the SWRCB GeoTracker databases were consulted to identify if the Project site or surrounding nearby properties are on a list compiled pursuant to Government Code 65962.5. No sites were recorded in EnviroStor or GeoTracker within the Project site or within a 1,000-foot radius of the site (DTSC 2022; SWRCB 2022). As such, the Project would not create a significant hazard to the public or the environment and no impact would occur.

- 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 airstrip to the Project site is Thompson Airstrip, located approximately five miles south of the site. This airstrip has no land use plan; however, it is five miles from the Project site and not active as a commercial airport. The airstrip would not pose a safety hazard or result in excessive noise at the site based on the distance to the Project site. Other airports in the region are further than five miles from the Project site and would not pose a safety risk or result in excessive noise at the Project site. Further, the Project would not have residents or permanent employees on-site. Therefore, no impacts would occur.

- f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. Construction activity would occur in the public ROW and require encroachment permits from the cities of Wildomar and Lake Elsinore. The conditions of the encroachment permits would require a CTMP be developed with measures to ensure traffic safety is maintained throughout Project construction. Potential provisions of the CTMP are provided in Section 2.5 and include conditions to ensure that Project construction would not interfere with emergency response or evacuations. After construction, no Project components would be aboveground and there would be no interference with emergency operations. Adherence to conditions of the encroachment permits and CTMP would reduce potential conflicts with emergency response or evacuation plans 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 not designated as a Very High Fire Hazard Severity Zone (VHFHSZ) by the California Department of Forestry and Fire Protection (CAL FIRE) and is a developed area (CAL FIRE 2009). The area east of the Project site, opposite of I-15, is designated as a VHFHSZ. The Project site does not contain wildlands and would not create habitable or aboveground structures that would be at risk in the event of a wildland fire. Impacts would be less than significant.

X. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv. Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. Potential water quality impacts associated with the Project include short-term construction-related discharges. The Project would disturb more than one acre of land and would be subject to the NPDES Construction General Permit, which requires the implementation of a SWPPP. The Project's SWPPP would be submitted to the SARWQCB and would require implementation of BMPs to prevent polluted runoff. Upon completion of construction, Project components would be located underground and would not result in runoff that could degrade water quality. With implementation of construction BMPs required by the Project-specific SWPPP, discussed further in Section 2.5, impacts related to water quality would be less than significant.

- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Project would primarily be located within existing, paved roadways and would not increase the amount of impermeable surface at the Project site. The Project would not require the

withdrawal of groundwater. Therefore, the Project would not decrease groundwater supplies or interfere with groundwater recharge and no impact would occur.

- 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. During construction, the removal of paved surfaces would expose soils, which may result in erosion or siltation on- or off-site. Upon completion of construction, Project components would be underground and roadways would be repaved, which would minimize the potential for erosion. Where Project activities require work in unpaved areas, such as septic tank abandonment, surfaces would be returned to their pre-Project conditions upon the completion of construction. With implementation of the BMPs required by the Project's SWPPP provided in Section 2.5, impacts related to erosion and siltation would be less than significant.

- ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?

No Impact. The Project site primarily consists of existing, paved streets. Existing septic tanks would have their tops removed, be perforated at the bottom, and be filled with sand to allow for future drainage. All improvements would be below ground once Project construction is completed the Project areas would be returned to their pre-Project conditions. As such, no changes to the volume or rate of runoff from the Project area are anticipated. No impact would occur.

- 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?

Less Than Significant Impact. As discussed in item X.ii above, the Project would not result in changes to the amount of runoff from the Project area. The Project would also not contribute pollutants to the Project area that would result in polluted runoff during Project operation. Existing septic tanks would have their tops removed, be perforated at the bottom, and be filled with sand to allow for future drainage. Abandonment of septic tanks in accordance with County Health Department guidelines would ensure polluted runoff does not occur as a result of the Project. During construction activities, BMPs would be implemented to prevent substantial polluted runoff from entering the stormwater drainage system. Impacts would be less than significant.

- iv. Impede or redirect flood flows?

No Impact. A small portion of the Project site is designated by Federal Emergency Management Agency (FEMA) as a 100-year floodplain (FEMA 2008; FEMA 2019). The majority of Project improvements would be installed under existing roadways. All surfaces would be returned to pre-Project conditions upon the completion of construction. Therefore, the Project would not impede or redirect flood flows and no impact would occur.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. The Project site is located over 20 miles from the Pacific Ocean and would not be subject to tsunamis. Lake Elsinore lacks significant potential for a damaging seiche because it is very shallow and flood control devices have been constructed by the U.S. Army Corps of Engineers (City of Lake Elsinore 2011). Since Project improvements would be located underground during operation, the Project would not be subject to inundation events that would risk the release of pollutants. Further, construction materials would be stored in accordance with applicable regulation that would minimize the potential for hazardous pollutants to be released in the event of Project inundation during construction. Impacts would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. The Project would comply with the Water Quality Control Plan for the Santa Ana River Basin and NPDES Stormwater Program by implementing a SWPPP listing BMPs to prevent construction pollutants and products from violating any water quality standards or waste discharge requirements (SARWQCB 1995). The Project site is also located within the plan area for the Elsinore Valley Subbasin Groundwater Sustainability Plan (GSP; EVMWD 2022c). Abandonment of existing septic tanks and installation of sewer infrastructure would prevent future groundwater contamination associated with septic tank leaks. As part of the Project, existing septic tanks would be emptied and abandoned in accordance with County guidelines, which would prevent sewage leaks from existing septic tanks. The Project would not require groundwater supplies or interfere with groundwater recharge and would not otherwise conflict with the GSP. Impacts would be less than significant.

XI. Land Use and Planning

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

a) Physically divide an established community?

No Impact. The Project would install sewer infrastructure in an existing community that is currently served by septic tanks. All Project components would be located underground upon completion of construction. As such, the Project would not physically divide an established community and no impact would occur.

- 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?

Less Than Significant with Mitigation Incorporated. The Project would primarily occur in the public ROW. The improvements proposed on private property are the decommissioning of septic tanks and the connection of properties to the new sewer infrastructure. These activities would not result in changes to land use types in the Project area.

As described throughout this Initial Study, the Project has the potential to result in a conflict with policies and/or regulations adopted for the purpose of avoiding or mitigating environmental impacts. As evaluated above in Section 4.IV, the proposed Project could result in potential impacts to biological resources. Implementation of mitigation measures Bio-1 through Bio-3 would reduce or avoid construction-related impacts and would be consistent with the goals of the MSHCP.

During excavation activities, the Project also has the potential to result in impacts to paleontological resources, as discussed in Section 4.VII. Implementation of mitigation measure Geo-2 would ensure the Project complies with General Plan policies intended to protect paleontological resources.

As evaluated in Sections 4.IX, 4.XVII, and 4.XX, the Project proposes work within the ROW, which has the potential to result in traffic hazards and impacts to circulation. Adherence to a CTMP, as required by the encroachment permits and detailed in Section 2.5, would reduce the potential for adverse impacts related to circulation and ensure consistency with local traffic policies. After construction is completed, surfaces would be returned to their pre-Project conditions and circulation elements would resume functioning as outlined in the General Plan Circulation Element.

As evaluated in Section 4.XIII, construction activities have the potential to generate noise adjacent to residences; however, these activities would occur during the hours prescribed by the WMC and BMPs, outlined in Section 2.5, would be incorporated to ensure impacts related to construction noise remain less than significant.

The proposed Project would not result in changes to land use and would not result in other land use policy conflicts. With implementation of the mitigation measures discussed above, impacts would be less than significant.

XII. Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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?

No Impact. Mineral Resource Zone (MRZ) categories are used by the State Geologist to classify the lands according to their potential to contain mineral resources. The entire City is within MRZ-3, except for a small portion of the City, which is designated as MRZ-2a (City 2022). The Project site is within MRZ-3, which indicates an area that contains known or inferred mineral deposits that may qualify as mineral resources. The Project would occur primarily within existing roadways that are surrounded by existing development. Therefore, there is little to no potential for mineral resource recovery to occur within the Project site. The Project would not result in the loss of availability of mineral resources or a delineated mineral resource recovery site. No impact to mineral resources would occur.

XIII. Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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. The City's noise regulations are contained in WMC Chapter 9.48; however, Section 9.48.020 exempts the duties of public utility personnel from these regulations. Typically, construction projects located within one-quarter mile of an inhabited dwelling are also exempt from the City's noise limits provided that construction does not occur between the hours of 6:00 p.m. and 6:00 a.m. from June through September, and does not occur between the hours of 6:00 p.m. and 7:00 a.m. from October through May. Project construction and associated noise would occur during

these hours and would not conflict with the WMC. For informational purposes, the noise levels generated by anticipated construction equipment at 20 feet, the shortest anticipated distance between construction activities and residences, are shown in Table 6, *Construction Equipment Noise Levels*.

Table 6
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Percent Operating Time	dBa L _{MAX} at 20 feet	dBa L _{EQ} at 20 feet
Backhoe	40	85.5	81.5
Crane	16	88.5	80.6
Dump Truck	40	84.4	80.4
Excavator	40	88.7	84.7
Loader	40	87.1	83.1
Paver	50	85.2	82.2
Roller	20	88	81
Tractor	40	92	88

Source: Roadway Construction Noise Model (U.S. Department of Transportation 2008)
L_{MAX} = maximum noise level; dBA = A-weighted decibel; L_{EQ} = equivalent sound level

As noted in Table 6, construction of the proposed Project would generate elevated noise levels in the short-term. Construction activities, however, would be temporary and limited to the daytime hours specified by the WMC. Further, construction would occur in different locations within the Project site throughout the Project site such that no particular residence would be exposed to elevated noise levels for the entire construction period. Pipeline installation activities along the proposed alignments is expected to proceed at a rate of approximately 250 feet per day. Based on this rate of progression, the maximum amount of time that most residences would be exposed to adjacent, high-intensity construction activity would be one to two days. In addition, the following construction BMPs described in Section 2.5 would be implemented to reduce noise levels at nearby residences:

- Construction equipment, including vehicles, generators, and compressors, would be maintained in proper operating condition and will be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).
- Construction work, including on-site equipment maintenance and repair, would be limited to the hours specified in the Wildomar noise ordinance.
- Staging areas for construction equipment would be located as far as practicable from residences.
- EVMWD would identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise and other construction disturbance. EVMWD would also establish a program for receiving questions or complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person would be included in notices distributed to the public in accordance with the information above.

No permanent noise sources would be created by the Project. No conflict with the WMC would occur and impacts would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. The highest potential for vibration during construction would be associated with the roller used during the repaving/resurfacing phase. According to Caltrans, a vibratory roller typically produces peak particle velocity (PPV) of 0.210 inches per second at a distance of 25 feet (Caltrans 2020). The Caltrans threshold for damage to older residential structures, such as those located throughout the Project area, is a PPV of 0.3 inches per second. PPV of 0.3 inches per second could occur at a structure in the Project area if a roller is used within 18 feet of the structure.² As previously noted, construction activities, including repaving/resurfacing, are anticipated to occur a minimum of 20 feet from residences. Therefore, a roller would not be used within 18 feet of a residential structure and damage due to vibration would not occur.

At 20 feet, the roller could produce 0.268 PPV, which would exceed the Caltrans "strongly perceptible" annoyance threshold of 0.10 PPV. However, this level of vibration would be temporary and would not occur in one location for an extended duration. A vibratory roller moves at a speed of approximately two miles per hour, which equates to approximately 175 feet per minute. The maximum width of residences located adjacent to the roadways where a roller would be used is approximately 90 feet. Therefore, the vibratory roller would be in front of a single residence for approximately 30 seconds. No permanent sources of vibration would be created by the Project. While vibration generated during construction may be perceptible, it would be temporary and impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The nearest airstrip to the Project site is Thompson Airstrip, located approximately five miles south of the site. This airstrip has no land use plan, however as it is five miles from the Project site and not as active as a commercial airport, the Project area would not experience excessive noise from this airstrip. Other airports in the region are further than five miles from the Project site. Further, the Project would not have residents and would only expose construction workers temporarily to noise in the Project vicinity. Temporary construction employees would not be exposed to excessive noise levels from airports and no impact would occur.

² Equipment PPV = Reference PPV * (25/D)ⁿ (inches per second), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2020.

XIV. Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 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)?

No Impact. Installation of the new sewer system would occur at existing properties using septic systems and would not extend infrastructure such that the Project would indirectly provide the opportunity for population growth. Sewer infrastructure would not be extended to any presently undeveloped areas. The proposed increase in the Mission Trail sewer main size would not support population growth but would accommodate planned sewer flows anticipated from existing development if found necessary by further hydraulic analysis. No impact would occur.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project site contains approximately 750 residences. The Project would connect the existing residences to sewer infrastructure but would not require the displacement of any people or housing. Therefore, no impact would occur.

XV. Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Fire protection?

No Impact. The Project would not induce population growth or create new aboveground structures that would require fire protection services. The pipelines would be passive infrastructure components contained underground and would not be a potential fire source. No new or altered fire protection facilities would be required and no impact would occur.

b) Police protection?

No Impact. The Project would not result in population growth or the construction of features that would require police protection. Since the Project components would be contained underground, no police protection services would be required. No impact would occur.

c) Schools?

No Impact. The Project would not induce population growth, including that of school-aged children. Therefore, no new or altered school facilities would be required and no impact would occur.

d) Parks?

No Impact. The Project would not result in population growth and thereby would not result in an increased need for park facilities or the need for upgrades to existing park facilities. No impact would occur.

e) Other public facilities?

No Impact. No population growth would occur as a result of the Project. Therefore, no increased use of public facilities or need for new public facilities would occur and there would be no impact.

XVI. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) 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 Project would not result in population growth and would not increase the use of parks or recreational facilities. Thus, substantial physical deterioration of these facilities would not occur or be accelerated and no impact would occur.

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. The Project would install sewer infrastructure and does not propose any recreational facilities. Additionally, the Project would not induce population growth that would require the construction or expansion of park or recreational facilities. No impact would occur.

XVII. Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less Than Significant Impact. During construction, the Project would temporarily alter existing circulation patterns and would require encroachment permits from the cities of Wildomar and Lake Elsinore. As described in Section 2.5, the Project would implement a CTMP that would outline procedures and traffic control measures necessary to ensure adequate access would be maintained during the altered traffic conditions. Potential provisions of the CTMP include:

- Scheduling the timing and duration of work to avoid the peak commuter hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.;
- Implementing standard safety practices, including installing appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices;
- Protecting traffic by using flaggers, warning signs, lights, and barricades to guide vehicles through or around construction zones;
- Restoring roadway capacity to the extent feasible during hours when construction activities are not occurring, which could include the use of road plates or temporary paving;
- Implementing construction schedules and techniques that minimize roadway closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities;
- Providing detours for cyclists and pedestrians when bike lanes or sidewalks must be closed;
- Coordinating with local schools prior to construction within close proximity of school property to ensure entryways are not blocked during peak drop off and pick up times;
- Notifying emergency response providers of road closures at least one week prior to closures and include the location, date, time, and duration of the closure;
- Coordinating with the City of Wildomar and City of Lake Elsinore (as applicable) to maintain adequate emergency evacuation routes; and

- Abiding by encroachment permit conditions, which shall supersede conflicting provisions in the CTMP.

The existing circulation elements of the Project site would be returned to pre-Project conditions upon the completion of construction activities in compliance with circulation programs, plans and policies. Impacts would be less than significant.

- b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. According to CEQA Guidelines Section 15064.3 subdivision (b), vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. The Office of Planning and Research (OPR) technical advisory regarding transportation impacts indicates that small projects generating fewer than 110 trips per day can be assumed to cause a less than significant transportation impact (OPR 2018). Traffic impacts associated with the Project would be limited to the construction period of the Project as the pipelines would be passive after construction. Therefore, the Project would not exceed the 110-trip threshold and no conflicts with CEQA Guidelines Section 15064.3 subdivision (b) would occur. Impacts would be less than significant.

- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. During construction, the Project would require altered traffic patterns. Adherence to conditions of the Project's encroachment permits and CTMP (see Section 2.5) would ensure that altered circulation would not result in substantial hazards to construction personnel or users of the circulation system. After construction, the roadways would be returned to pre-Project conditions and would not introduce hazardous design features or incompatible uses. Impacts would be less than significant.

- d) Result in inadequate emergency access?

Less Than Significant Impact. During construction occurring in the public ROW, measures included in the encroachment permits and CTMP (see Section 2.5) would be implemented to ensure that emergency access would remain adequate throughout construction of the Project. After construction activities in the ROW are complete, roadways would be returned to pre-Project conditions, which would accommodate emergency vehicle access. Impacts would be less than significant.

XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The discussion below is based on the Cultural Resources Survey prepared by HELIX Environmental Planning, Inc. (HELIX 2022c), attached to this Initial Study as Appendix C.

- 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:
- i. 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)?
 - ii. 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?

Less Than Significant with Mitigation Incorporated. As discussed in Section V, although the Sacred Lands File search results were negative, the Project area has been identified as culturally sensitive, HELIX sent letters on September 20, 2022, to the tribal contacts provided by the NAHC and has received three

responses to date. Responses from the Quechan Indian Tribe and the Agua Caliente Band of Cahuilla Indians indicated that they have no comments on the project and defer to local tribes. Rincon indicated that the Project site is within their Area of Historic Interest, though no known resources are within the site, and requested a copy of the records search and the cultural resources report. Further coordination with Pechanga given the project location was recommended. Future responses will be provided to EVMWD. EVMWD will undertake consultation with interested Tribes under AB 52, and the SWRCB will undertake Section 106 consultation with interested Tribes as well. A Native American monitoring program was recommended by the Project's Cultural Resources Survey and is detailed in mitigation measures Cul-1 through 9. Consultation in accordance with AB 52 and Section 106, along with implementation of mitigation measures Cul-1 through Cul-9, would reduce potential impacts to tribal cultural resources to a less than significant level.

XIX. Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 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. No water, storm water, electric, natural gas, or telecommunications utilities would be required for operation of the proposed Project. The minimal water supplies needed during Project construction would be provided by existing infrastructure and any runoff would be

accommodated by existing storm drain infrastructure. The wastewater generated by the installation of the proposed sewer system is estimated at 130,000 GPD (0.13 MGD) based on the generation rate for mobile home units (EVMWD 2021). The bypass constructed in 2021 removed 125,000 GPD of wastewater from the Mission Trail sewer main. With the removal of 125,000 GPD from the existing 21-inch sewer line, sufficient capacity should exist to accommodate the 130,000 GPD of additional flow from the Project. If required based on hydraulic analyses, the proposed sewer line upgrade in Mission Trail, the potential environmental effects of which have been included in this Initial Study, would accommodate existing and projected flows. Impacts 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 does not involve activities that would require permanent water supplies. Water supplies required during the construction of the Project would be limited to water utilized for dust suppression on the Project site. Sufficient water supplies from the EVMWD are available to provide these limited water supplies to the Project during construction. As such, a less than significant impact would occur.

- 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. Additional capacity to treat the 0.13 MGD of wastewater that would result from the Project at Regional WRF was planned and accounted for in the 2016 Sewer System Master Plan (EVMWD 2016). The Regional WRF has a capacity of 8 MGD and receives an average of 6.5 MGD; therefore, there is sufficient capacity to accommodate the Project's wastewater (EVMWD 2022d EVMWD 2016). If the Mission Trail sewer main upgrade is required based on further hydraulic analyses, the sewer line would accommodate existing and projected wastewater flows. It would not be proposed to accommodate increased wastewater flows that would result in the capacity of Regional WRF being exceeded. The wastewater treatment provider (EVMWD) has sufficient capacity to serve to the Project in addition to existing commitments and 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?
- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. The Project is not anticipated to generate solid waste since excavated material would be used to refill trenched areas. Operation of the pipelines would not generate solid waste and wastewater would be treated at the Regional WRF. If unanticipated solid waste is generated by construction activities, waste would be diverted from the landfill in accordance with WMC Section 8.104.420. CALGreen construction debris standards do not apply to this Project type. No conflicts with solid waste goals or regulations would occur and impacts would be less than significant.

XX. Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. See item IX.f. Adherence to conditions of the encroachment permits, and the CTMP (see Section 2.5), would ensure the Project would not interfere with emergency response or evacuation plans. During Project operation, no Project components would interfere with emergency operations and impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less Than Significant Impact. The area east of the Project site, opposite the I-15, is a VHFHSZ but the Project site is not a VHFHSZ (CAL FIRE 2009). The Project site is developed and does not contain features that would exacerbate the risk of wildfire spread. Project components would be located underground and roadways would be returned to pre-Project conditions, which would not result in an increased risk of wildfire. Further, the Project would not introduce residents or permanent employees to the Project area who could be exposed to wildfire pollutants. Therefore, impacts would be less than significant.

- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less Than Significant Impact. The Project proposes the installation of sewer infrastructure that would result in passive utilities located underground and would not exacerbate a fire risk. After construction activities are complete, existing roadways would be returned to pre-Project conditions. The Project would not exacerbate fire risks. Temporary and ongoing impacts to the environment related to other issues are analyzed throughout this Initial Study. Impacts would be less than significant.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less Than Significant Impact. As discussed in item XX.ii above, the Project site is not located in a VHFHSZ and is separated from the nearby VHFHSZ by I-15. The Project would not create habitable or aboveground structures that could be exposed to significant wildfire risks and would not alter drainage patterns in the Project area. Impacts would be less than significant.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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. The Project has the potential to result in impacts to nesting birds, burrowing owl, and CAGN; however, implementation of mitigation measures Bio-1 through Bio-3 would reduce these impacts to a less than significant level. No special status plant species or communities would be impacted by Project implementation. The Project also has the potential to impact significant cultural and tribal cultural resources. Implementation of mitigation measures Cul-1 through Cul-9 would ensure these impacts are reduced to a less than significant level. Therefore, the Project would not substantially degrade the environment, decrease the number or habitat of special status plant or animal species, or eliminate major periods of California history. Impacts would be less than significant with mitigation incorporated.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present, and probable future projects)?

Less Than Significant with Mitigation Incorporated. CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project’s incremental effect is “cumulatively considerable,” meaning that the project’s incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects.

The Avenues Septic to Sewer Project (EVMWD 2023) was identified for inclusion in the cumulative analysis of the proposed Project. The Avenues Septic to Sewer Project is a similar project as the proposed Project—it would convert 250 customers from septic systems to sewer. It would occur one mile northwest of the Project site, north of East Lakeshore Drive and generally between Country Club Boulevard, Mill Street, and Irwin Drive. The estimated construction schedule for the Avenues Septic to Sewer Project is currently planned to overlap (at least partially) with the proposed Project.

Based on the distance between the Project areas, construction noise from the Project and Avenues Septic to Sewer Project would be too far apart to contribute to cumulative noise impacts to any singular location. Each project would require four to six workers per construction crew, with a maximum of five construction crews operating at any one time. The addition of vehicle trips associated with the 20 to 30 construction workers required to construct these projects would not contribute to significant, cumulative transportation impacts as they would travel along different roadways and would not generate a significant number of vehicle trips.

As discussed under item III.b, the Project’s construction emissions of criteria pollutants would not exceed the SCAQMD daily screening thresholds. Table 7, *Cumulative Construction Emissions*, shows the combined construction period emissions for the proposed Project and Avenues Septic to Sewer Project for comparison with the SCAQMD daily thresholds.

**Table 7
CUMULATIVE CONSTRUCTION EMISSIONS**

Project	VOC (lbs/day)	NO_x (lbs/day)	CO (lbs/day)	SO_x (lbs/day)	PM₁₀ (lbs/day)	PM_{2.5} (lbs/day)
Sedco Hills Septic to Sewer	5.7	51.2	63.4	0.1	2.6	2.2
Avenues Septic to Sewer	3.8	34.1	42.3	0.1	1.8	1.5
Maximum Combined Daily Emissions	9.5	85.3	105.7	0.2	4.4	3.7
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Exceedance?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: CalEEMod; HELIX 2022a; SCAQMD 2019; EVMWD 2023

lbs/day = pounds per day; VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter 10 microns or less in diameter; PM_{2.5} = particulate matter 2.5 microns or less in diameter

As shown in Table 7, cumulative construction emissions for the two projects would not exceed the SCAQMD screening-level thresholds. Because emissions of these pollutants are below the screening-level thresholds, emissions would not be cumulatively considerable for the SCAB. Similarly, the Project would have a less than significant impact in relation to GHG emissions, which are inherently discussed in terms of cumulative impacts. Combined, the two projects would contribute approximately 152.6 MT CO_{2e} emissions per year averaged over 30 years, which would be below the SCAQMD threshold of 3,000 MT CO_{2e} emissions per year.

Impacts to biological resources would be reduced through mitigation measures Bio-1 through Bio-3 and would not be considered significant impacts at the Project level or in combination with cumulative projects, as no net loss of habitat or special status species would occur. Impacts to paleontological resources would require mitigation measure Geo-2 be implemented and with this mitigation measure the Project would not contribute to the cumulative loss of paleontological resources.

All resource topics have been analyzed in accordance with the CEQA Guidelines and found to pose no impact, a less than significant impact, or a less than significant impact with mitigation. Potential cumulative projects that could be constructed in the vicinity of the Project would also be required to comply with existing applicable federal, state, and local regulations.

- c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The Project would not consist of any construction activities or operational components that would negatively affect any persons in the vicinity. In addition, all resource topics have been analyzed in accordance with the State CEQA Guidelines or associated thresholds and found to pose no impact, a less than significant impact, or a less than significant impact with mitigation incorporated. As discussed in Section 4.III, no violations of air quality thresholds would occur and no significant impacts to sensitive receptors related to pollutants would occur. As discussed in Section 4.IX of this Initial Study, there are no concerns from past activities at the Project site and no hazardous materials and/or wastes would be generated by the Project. As detailed in Section 4.XIII, the Project would not generate excessive noise that would conflict with local noise ordinances and cause disturbances to local residents. During construction, temporarily altered traffic conditions may occur; however, implementation of a CTMP (see Section 2.5) would ensure emergency access and evacuation routes are maintained. As discussed in Section 4.XX, the Project would not increase risks related to wildfires. Consequently, the Project would not result in any environmental effects that would cause substantial adverse effects on human beings directly or indirectly.

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7.0 Preparers

Elsinore Valley Municipal Water District

Jason Dafforn, P.E., Director of Engineering and Water Resources
Matthew Bates, P.E., Engineering Manager

HELIX Environmental Planning, Inc.

Joanne Dramko, AICP, Project Manager
Shelby Bocks, Environmental Planner
Victor Ortiz, Senior Air Quality Specialist
Sean Bohac, GIS Specialist
Ana Topete, Document Processing

IS/MND Appendix A

Air Quality and Greenhouse Gas Emissions Assessment

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942
619.462.1515 tel
619.462.0552 fax
www.helixepi.com



November 9, 2022

01008.00007.001

Matthew Bates, P.E.
Engineering Manager
Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92530

Subject: Air Quality and Greenhouse Gas Emissions Assessment for Sedco Hills Septic to Sewer Project

Dear Mr. Bates:

HELIX Environmental Planning, Inc. (HELIX) has assessed air quality and greenhouse gas (GHG) emission impacts associated with the construction of the proposed Sedco Hills Septic to Sewer Project (project). In addition, the analysis also addresses impacts to sensitive receptors from exposure to toxic air contaminants (TACs) and the project's conformity with the Federal Clean Air Act (CAA). This letter summarizes the findings of the air quality and GHG emissions assessment.

PROJECT LOCATION

The project area is approximately 380 acres in size in the City of Wildomar in Riverside County, California. The project site is bound by Malaga Road on the north, Interstate-15 on the east, Mission Trail on the west, and Lemon Street on the south. The boundary between the City of Wildomar and the City of Lake Elsinore is located along the roadway centerline of Mission Trail and Malaga Road. The majority of the project would occur within the City of Wildomar; however, project activities on the west side of Mission Trail or the north side of Malaga Road would occur within the City of Lake Elsinore. Refer to Figure 1, *Regional Vicinity*, and Figure 2, *Aerial Photograph*.

PROJECT DESCRIPTION

The project would convert about 750 existing septic customers to sewer, which involves installing about 40,000 linear feet of sewer main and lateral pipelines within roadway rights-of-way (ROW). The proposed project would involve the construction and operation of approximately 40,000 feet (7.6 miles) of 4-, 8-, and 12-inch-diameter underground sewer pipelines within existing ROW. The new sewer lines would connect to existing sewer mains underneath Mission Trail, Malaga Road, or Lemon Street.

Should additional engineering hydraulic analysis determine that the existing 21-inch diameter sewer main in Mission Trail is insufficient for the projected flows, EVMWD proposes installing a new 48-inch

diameter sewer line in Mission Trail. The new line would connect to an existing 48-inch diameter sewer line in Malaga Road and extend south along Mission Trail to the B-2 sewer lift station just south of Sedco Boulevard. In total, the new sewer line would extend 3,200 linear feet and be located at a depth of approximately 40 feet.

Wastewater collected via the proposed sewer lines would be transported to the EVMWD Regional Water Reclamation Facility. Additional capacity to treat the 0.13 million gallons per day (MGD) of wastewater that would result from the project has been planned and accounted for in the 2016 Sewer System Master Plan. Existing septic tanks serving the residents would be abandoned per Riverside County Health Department requirements.

Sedco Hills was identified as a priority for sewer conversion in the 2016 Sewer System Master Plan based on its proximity to domestic wells and density of septic tanks. Completion of this project would prevent contamination of groundwater in the project area.

PROJECT CONSTRUCTION METHODOLOGY AND ASSUMPTIONS

Construction would commence as early as August 2023 and require 24 months to complete. The pipelines (besides the potential sewer main) would be installed in 24- to 36-inch-wide trenches with a depth of approximately 7 to 12 feet. The sewer main would be installed in a six-foot wide trench at a depth of 40 feet. EVMWD estimates that lateral pipeline installation would occur at a rate of approximately 250 feet per day and would involve the following steps:

- Street pavement would be cut, and soil would be removed to create the pipeline trench.
- An excavator with a sling would be used to lower the pipe sections into the trench. The pipeline would rest on a bedding of sand inside the trench per EVMWD standards.
- The pipe in the trench zone (the area above the pipe to the surface) would be backfilled per EVMWD standards.
- Street cuts would be repaved in accordance with the City of Wildomar's requirements.

The project's construction emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 (California Air Pollution Control Officers Association [CAPCOA] 2021). CalEEMod is a computer model used to estimate air pollutant emissions resulting from construction and operation of land development projects throughout the state of California. CalEEMod was developed by CAPCOA with the input of several air quality management and pollution control districts.

CalEEMod has the capability to calculate reductions in construction emissions from the effects of dust control, diesel-engine classifications, and other selected emissions reduction measures. Construction emission calculations presented herein assume the implementation of standard dust control measures as required by South Coast Air Quality Management District (SCAQMD) Rule 403, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 miles per hour. Project-specific input was based on general project information, assumptions provided by the project engineers, and default model settings to estimate reasonably conservative conditions.

Construction would require the use of off-road equipment and would include trenching, pipeline installation, and resurfacing/repaving. EVMWD anticipates that construction would likely be divided between six phases within the Sedco Hills neighborhood, with as many as three phases constructed simultaneously. Table 1, *Construction Equipment Assumptions*, presents a summary of the equipment assumed by EVMWD to be involved in each phase of pipeline construction. The project would install 40,000 linear feet of lateral pipeline, with approximately 250 feet installed per day. Modeling assumes that each day of construction would involve every phase (trenching, pipeline installation, and resurfacing), with construction occurring in up to three sections of the project site, including installation of the Mission Trail sewer main. With the anticipated completion rate of 250 feet per day plus onsite improvements to abandon the private septic systems and connect each property to the new public sewer system, the entire project would take approximately 18 months to complete. However, to be conservative and to provide EVMWD with the most flexibility, modeling assumes that project construction would take a full 24 months, with all equipment used by each of three construction crews each day.

**Table 1
CONSTRUCTION EQUIPMENT ASSUMPTIONS**

Phase	Equipment	Number	Horsepower
Trenching	Excavator	1	158
	Tractor/Loader/Backhoe	1	97
Pipeline Installation	Crane	1	231
	Excavator	1	158
	Tractor/Loader/Backhoe	1	97
	Dump Truck	1	402
Resurfacing/Repaving	Roller	1	80
	Paver	1	130

Source: CalEEMod (output data is provided in Attachment A)

PROJECT OPERATION METHODOLOGY AND ASSUMPTIONS

Once construction activity is complete, the project components would be sealed pipelines, which would be located underground and operate passively. The project components would not require ongoing maintenance once installed and would not result in increased vehicle trips or other operational activities. Therefore, the project would not result in operational air pollutant or GHG emissions and no impacts related to such emissions would occur.

AIR QUALITY

Climate and Meteorology

The project site is within the South Coast Air Basin (SCAB), which consists of all or part of four counties: Los Angeles, San Bernardino, Riverside, and Orange. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills. It is bound by the Pacific Ocean to the southwest and high mountains around the rest of its perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light, average wind speeds.

The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. Winds in the project area are usually driven by the dominant land/sea breeze circulation system. Regional wind patterns are dominated by daytime onshore sea breezes. At night, the wind generally slows and reverses direction traveling toward the sea. Local canyons can also alter wind direction, with wind tending to flow parallel to the canyons. The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. High pressure systems, such as the semi-permanent high-pressure zone in which the SCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basin-wide occurrence of inversions at 3,500 feet above mean sea level or less averages 191 days per year (SCAQMD 1993).

Regulatory Framework

Criteria Pollutants

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (USEPA), the federal agency that administrates the Federal CAA of 1970, as amended in 1990, has established national ambient air quality standards for several air pollution constituents known as criteria pollutants, including: ozone (O₃); carbon monoxide (CO); coarse particulate matter (PM₁₀; particles 10 microns or less) and fine particulate matter (PM_{2.5}; particle 2.5 microns or less); sulfur dioxide (SO₂); and lead (Pb). As permitted by the Federal CAA, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents. Ground-level ozone is not emitted directly into the environment but is generated from complex chemical and photochemical reactions between precursor pollutants, primarily reactive organic gases (ROGs; also known as volatile organic compounds [VOCs]),¹ and oxides of nitrogen (NO_x). PM₁₀ and PM_{2.5} are generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM₁₀ and PM_{2.5} can also be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. The air quality attainment status of the SCAB is shown in Table 2, *South Coast Air Basin – Attainment Status*.

¹ CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

Table 2
SOUTH COAST AIR BASIN – ATTAINMENT STATUS

Pollutant	Federal Attainment Status	State of California Attainment Status
1-hour Ozone (O ₃)	(No federal standard)	Nonattainment
8-hour Ozone (O ₃)	Extreme Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Respirable Particulate Matter (PM ₁₀)	Attainment (Maintenance)	Nonattainment
Fine Particulate Matter (PM _{2.5})	Serious Nonattainment	Nonattainment
Nitrogen Dioxide (NO ₂)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Attainment
Visibility	(No federal standard)	Attainment

Source: SCAQMD 2016

The SCAB is currently in nonattainment for federal and/or state ozone (O₃), suspended particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}) standards. Concentrations of all other pollutants meet applicable state and federal standards.

The SCAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in the SCAB. As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments, and cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. As required by the California CAA, the SCAQMD has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs).

On March 3, 2017, the SCAQMD adopted the 2016 AQMP, which is a regional and multi-agency effort (SCAQMD, CARB, SCAG, and USEPA). The 2016 AQMP represents a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures. The plan seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, greenhouse gases, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement (SCAQMD 2017). The AQMP is incorporated into the State Implementation Plan, which is subsequently submitted to the USEPA.

Toxic Air Contaminants

TACs are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on

the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2018). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2018).

Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The project site is located in a residential area with sensitive receptors located throughout the project site, directly adjacent to where construction activities would occur. Jean Hayman Elementary School is also located at the southern end of the project area.

Significance Criteria

The following significance thresholds are based on Appendix G of the state CEQA Guidelines. A significant impact is identified if the project would result in any of the following:

- (1) Conflict with or obstruct implementation of the applicable air quality plan;
- (2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;
- (3) Expose sensitive receptors to substantial pollutant concentrations; or
- (4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Appendix G of the State CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SCAQMD has established significance thresholds to assess the regional and

localized impacts of project-related air pollutant emissions. The significance thresholds are updated, as needed, to appropriately represent the most current technical information and attainment status in the SCAB. Table 3, *SCAQMD Air Quality Significance Thresholds*, presents the most current significance thresholds, including regional daily thresholds for short-term construction and long-term operational emissions; maximum incremental cancer risk and hazard indices for TACs; and maximum ambient concentrations for exposure of sensitive receptors to localized pollutants. A project with daily emission rates, risk values, or concentrations below these thresholds is generally considered to have a less than significant effect on air quality.

Table 3
SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operation
Mass Daily Thresholds (lbs/day)		
VOC	75	55
NO _x	100	55
CO	550	550
PM ₁₀	150	150
PM _{2.5}	55	55
SO _x	150	150
Lead	3	3
Toxic Air Contaminants		
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Ambient Air Quality for Criteria Pollutants		
NO ₂	1-hour average ≥ 0.18 ppm Annual average ≥ 0.03 ppm	
CO	1-hour average ≥ 20.0 ppm (state) 8-hour average ≥ 9.0 ppm (state/federal)	
PM ₁₀	24-hour average ≥ 10.4 µg/m ³ (construction) 24-hour average ≥ 2.5 µg/m ³ (operation) Annual average ≥ 1.0 µg/m ³	
PM _{2.5}	24-hour average ≥ 10.4 µg/m ³ (construction) 24-hour average ≥ 2.5 µg/m ³ (operation)	
SO ₂	24-hour average ≥ 25 µg/m ³	

Source: SCAQMD 2019

SCAQMD = South Coast Air Quality Management District; lbs/day = pounds per day; VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SO_x = sulfur oxides; TACs = toxic air contaminants; NO₂ = nitrogen dioxide; ppm = parts per million; SO₂ = sulfur dioxide; µg/m³ = micrograms per cubic meter

Project Air Quality Analysis

(1) *Conflict with or obstruct implementation of the applicable air quality plan?*

Less than Significant Impact. SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to

transportation, economy, community development, and environment. With regard to air quality planning, SCAG has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to project trends out over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.²

The two principal criteria for determining conformance to the AQMP are:

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards; and
2. Whether the project would exceed the assumptions in the AQMP.

With respect to the first criterion, the analyses presented below demonstrate that the project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the proposed project is installing a sewer system and decommissioning a septic system. The project would not result in population or employment increases and, therefore, would not exceed the growth projection assumptions in the AQMP. In addition, the construction workers that would construct the project would be recruited from the local pool of labor and would not create employment growth exceeding growth estimates for the area. The proposed infrastructure improvements would serve existing residences and would not create conditions for the creation of new housing, which would thereby induce population growth.

Because the project is consistent with the growth assumptions used in developing the AQMP, pursuant to SCAQMD guidelines, the proposed project is considered consistent with the region's AQMP. As such, proposed project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Accordingly, the proposed project would be consistent with the emissions projections in the AQMP, thus resulting in a less than significant impact.

(2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. The project's construction emissions were estimated using CalEEMod, as described above. The emissions generated from construction activities include:

- Dust (including PM₁₀ and PM_{2.5}) primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces; and

² SCAG serves as the federally designated metropolitan planning organization for the southern California region.

- Combustion emissions of air pollutants (including ROG, NO_x, PM₁₀, PM_{2.5}, CO, and sulfur oxides [SO_x]), primarily from operation of heavy off-road equipment.

The results of the calculations for project construction are shown in Table 4, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds. The model output is included as Attachment A to this letter. As shown in Table 4, the project’s construction emissions would not exceed SCAQMD thresholds and would not result in a cumulatively considerable net increase of any criteria pollutant. As described previously, the project would consist of passive pipelines after construction and would not result in operational emissions of criteria pollutants. The impact would be less than significant.

Table 4
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	VOC (lbs/day)	NO _x (lbs/day)	CO (lbs/day)	SO ₂ (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Trenching	1.1	9.3	16.9	<0.1	0.6	0.5
Pipeline Installation	3.6	31.4	31.8	0.1	1.3	1.2
Paving	1.1	10.5	14.7	<0.1	0.7	0.5
Maximum Daily Emissions	5.7	51.2	63.4	0.1	2.6	2.2
<i>SCAQMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Significant Impact?	No	No	No	No	No	No

Source: CalEEMod (output data is provided in Attachment A); SCAQMD 2019

lbs/day = pounds per day; VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide;

SO₂ = sulfur dioxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less;

PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SCAQMD = South Coast Air Quality Management District

(3) Expose sensitive receptors to substantial pollutant concentrations?

Criteria Pollutants

Less than Significant Impact. The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD’s Localized Significance Thresholds (LSTs) method (SCAQMD 2009). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The LST methodology is recommended to be limited to projects of five acres or less and to avoid the need for complex dispersion modeling. For projects that exceed 5 acres, such as the proposed 380-acre project, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a 5-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The project is in SRA 25, Lake Elsinore, and sensitive receptors are located within 25 meters of the project site. Therefore, the LSTs being applied to the project are based on SRA 25, receptors located within 25 meters, and a disturbed area not to exceed 5 acres. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. As shown in Table 5, *Maximum Localized Daily Construction Emissions*, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs. Therefore, impacts would be less than significant.

Table 5
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

Phase	NO _x (lbs/day)	CO (lbs/day)	PM ₁₀ (lbs/day)	PM _{2.5} (lbs/day)
Trenching	9.3	16.5	0.5	0.4
Pipeline Installation	31.4	31.8	1.3	1.2
Paving	10.5	14.2	0.5	0.5
Maximum Daily Emissions	51.1	62.6	2.3	2.1
<i>SCAQMD LST</i>	<i>371</i>	<i>1,965</i>	<i>13</i>	<i>8</i>
Significant Impact?	No	No	No	No

Source: CalEEMod (output data is provided in Attachment A); SCAQMD 2009
lbs/day = pounds per day; NO_x = nitrogen oxides; CO = carbon monoxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

Toxic Air Contaminants

Less than Significant Impact. Construction of the project would result in the use of heavy-duty construction equipment, haul trucks, and construction worker vehicles. These vehicles and equipment could generate DPM, which is a TAC. Generation of DPM from construction projects typically occurs in a localized area (e.g., near locations with multiple pieces of heavy construction equipment working in close proximity) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction, the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. Concentrations of DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005). As discussed above, sensitive receptors, including homes and schools, are located throughout and adjacent to the project site.

The dose of TACs to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the

carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (OEHHA 2015). Considering this information, the relatively short duration of construction activities, and the fact that any concentrated use of heavy construction equipment would occur at various locations throughout the project site only for short durations, construction of the project would not expose sensitive receptors to substantial DPM concentrations, and the impact would be less than significant.

(4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The project could produce odors during proposed construction activities resulting from heavy diesel equipment exhaust and application of asphalt; however, standard construction practices would minimize the odor emissions and their associated impacts. The increase of construction odors would be minimal, as vehicle exhaust is already prevalent in the area due to its proximity to I-15. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the completion of construction. Therefore, odor impacts from construction of the project would be less than significant due to the duration of exposure.

The project proposes the installation of sewer infrastructure and the decommissioning of septic tanks. While wastewater has the potential to generate odors, the proposed sewer pipelines would be sealed underground and would not result in the emission of odors related to the transport of wastewater. Therefore, long-term operation of the project would not result in a change to existing odors in the project vicinity, and there would be no impact.

GREENHOUSE GAS EMISSIONS

Setting

Greenhouse gases, as defined under California's Assembly Bill (AB) 32, include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). AB 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020, which is a reduction of approximately 16 percent from forecasted emission levels, with further reductions to follow. In addition, AB 32 required CARB to develop a Scoping Plan to help the State achieve the targeted GHG emission reductions. In 2015, Executive Order (EO) B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of

leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. As a follow-up to AB 32 and in response to EO-B-30-15, Senate Bill (SB) 32 was passed by the California legislature in 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030. The most recent update to the Scoping Plan was adopted in December 2017 and establishes a proposed framework for California to meet the EO-B-30-15 reduction target (CARB 2017).

Significance Criteria

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG emissions impact is limited to cumulative impacts.

According to Appendix G of the CEQA Guidelines, a project would have a significant environmental impact if it would:

- (1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- (2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

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. CARB, the 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. For the proposed project, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold (SCAQMD 2010). Therefore, a significant impact would occur if the proposed project would exceed the SCAQMD proposed Tier 3 screening threshold of 3,000 metric tons (MT) of carbon dioxide equivalent (CO₂e) per year.

Project Greenhouse Gas Emissions Analysis

- (1) *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less than Significant Impact. Construction would result in GHG emissions generated by vehicle engine exhaust from construction equipment and worker commuting trips. Construction GHG emissions were calculated by using CalEEMod, as described above. Input details and the model output are provided in Attachment A to this letter. As previously discussed, the project would contain passive components that would not result in GHG emissions during operation. The estimated construction GHG emissions for the project are shown in Table 6, *Construction GHG Emissions*. For construction emissions, SCAQMD recommends that the emissions be amortized (i.e., averaged) over the anticipated lifespan of the project (30 years) and added to operational emissions. However, no operational emissions would result from

the proposed project. Averaged over 30 years, the proposed construction activities would contribute approximately 101.6 MT CO₂e emissions per year. The construction emissions would not exceed the SCAQMD threshold of 3,000 MT CO₂e per year and impacts would be less than significant.

Table 6
CONSTRUCTION GHG EMISSIONS

Year	Emissions (MT CO ₂ e)
2023	634.5
2024	1,524.5
2025	889.6
Total Construction Emissions¹	3,048.6
Amortized Construction Emissions	101.6
<i>SCAQMD Threshold</i>	<i>3,000</i>
Significant Impact?	No

Source: CalEEMod (output data is provided in Attachment A); SCAQMD 2010

¹ Total may not sum due to rounding.

MT = metric tons; CO₂e = carbon dioxide equivalent

(2) *Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less than Significant Impact. There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The initial quantitative goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the low carbon fuel standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed.

The twelve cities of the Western Riverside Council of Governments (WRCOG), which includes the City of Wildomar, adopted a Subregional Climate Action Plan (CAP) in September 2014. The WRCOG CAP provides a 2010 baseline inventory of GHG emissions for the subregion cities of 5,834,400 MT of CO₂e. Approximately 57 percent of the GHG inventory was from transportation sources, 21 percent from commercial/industrial energy use, 20 percent from residential energy use, and the remaining from wastewater and solid waste sources. Less than one percent of emissions were attributed to the wastewater sector and no increases to this percentage were projected in a business-as-usual scenario. The WRCOG CAP established a target of reducing subregional GHG emissions 15 percent below 2010 levels by 2020 and 49 percent below 2010 levels by 2035. To achieve the 2020 reduction target, the WRCOG CAP identifies 14 State and regional measures, 3 local energy sector measures, 18 local transportation sector measures, and 2 solid waste sector measures. The WRCOG CAP does not identify GHG reduction measures for achieving goals beyond 2020 (WRCOG 2014). It also does not include thresholds for determining the significance of a project's GHG emissions, nor does it include a checklist or other methodology for determining consistency of a project with the goals and measures in the WRCOG CAP.

The adjacent City of Lake Elsinore, which contains the portion of the project site within the ROW of Mission Trail and Malaga Road, adopted a CAP in December 2011 (City of Lake Elsinore 2011). The CAP provides a 2008 baseline inventory of GHG emissions for the City of Lake Elsinore of 506,727 MT of CO₂e. Approximately 61 percent of the GHG inventory was from transportation sources, 32 percent from energy use, 4 percent from solid waste sources, and the remaining 3 percent from recreation. The CAP identified a combination of state-level regulations and local strategies and measures in the focus areas of Transportation and Land Use, Energy, Solid Waste, and Public Education and Outreach, which would help the City of Lake Elsinore to achieve statewide reduction goals. The CAP does not include thresholds for determining the significance of a project's GHG emissions, nor does it include a checklist or other methodology for determining consistency of a project with the goals and measures in the CAP.

The project would involve the installation of sewer infrastructure and none of the WRCOG or City of Lake Elsinore CAP measures would apply to project operation. WRCOG CAP Measure SR-13, *Construction & Demolition Waste Diversion*, describes the waste diversion requirements enacted by California Green Building Standards Code (CALGreen; CCR Title 24, Part 11), which have evolved since approval of the CAP in 2014. City of Lake Elsinore CAP Measure S-1.4, *Construction and Demolition Waste Diversion*, lead to the establishment of Lake Elsinore Municipal Code Chapter 14.12, *Construction and Demolition Waste Management*, which initially contained more stringent construction waste diversion requirements than CALGreen. However, neither CALGreen nor Lake Elsinore Municipal Code construction waste diversion requirements apply to the proposed project type. In addition, the project is not anticipated to result in construction waste since excavated material would be used to refill trenched areas. Therefore, no conflicts with the WRCOG or City of Lake Elsinore CAP would result from project implementation.

The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs and impacts would be less than significant.

GENERAL CONFORMITY ANALYSIS

Regulatory Framework

National Ambient Air Quality Standards

The CAA identified and established the National Ambient Air Quality Standards (NAAQS) for a number of criteria pollutants in order to protect the public health and welfare. The criteria pollutants include ozone, CO, PM, SO₂, NO₂, and lead. PM emissions are regulated in two size classes: PM₁₀ and PM_{2.5}.

A region is given the status of "attainment" or "unclassified" if the NAAQS have not been exceeded. A status of "nonattainment" for particular criteria pollutants is assigned if the NAAQS have been exceeded. Once designated as nonattainment, attainment status may be achieved after three years of data showing non-exceedance of the standard. When an area is reclassified from nonattainment to attainment, it is designated as a "maintenance area," indicating the requirement to establish and enforce a plan to maintain attainment of the standard. The project is located within the SCAB, which is classified as being a serious nonattainment area for PM_{2.5}, and an extreme nonattainment area for ozone (see Table 2).

General Conformity Rule

Section 176(c) of the federal CAA states that a federal agency cannot issue a permit for, or support an activity within, a nonattainment or maintenance area unless the agency determines it will conform to the most recent U.S. Environmental Protection Agency-approved State Implementation Plan. Thus, a federal action must not:

- Cause or contribute to any new violation of a NAAQS.
- Increase the frequency or severity of any existing violation.
- Delay the timely attainment of any standard, interim emission reduction, or other milestone.

As part of the general conformity process, a conformity analysis is required if a federal action's direct and indirect emissions have the potential to emit one or more of the six criteria pollutants at or above emission rates shown in Table 7, *Emission Rates for Criteria Pollutants in Nonattainment Areas*.

Table 7
EMISSION RATES FOR CRITERIA POLLUTANTS IN NONATTAINMENT AREAS

Pollutant	Emission Rate (tons per year)¹
Ozone (VOCs or NO_x)	
Serious Nonattainment Area	50
Severe Nonattainment Area	25
Extreme Nonattainment Area	10
Other ozone nonattainment area outside an ozone transport zone	100
Other ozone nonattainment area inside an ozone transport zone	
VOC	50
NO _x	100
Carbon Monoxide	
All maintenance areas	100
SO₂ or NO₂	
All nonattainment areas	100
PM₁₀	
Moderate Nonattainment Area	100
Serious Nonattainment Area	70
PM_{2.5}	
Moderate Nonattainment Area	100
Serious Nonattainment Area	70
Pb	
All nonattainment areas	25

Source: 40 CFR 93.153

¹ De minimis threshold levels for conformity applicability analysis.

VOC = volatile organic compound; NO_x = nitrogen oxides; SO₂ = sulfur dioxide;

NO₂ = nitrogen dioxide; PM₁₀ = respirable particulate matter with a diameter of 10 microns

or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less; Pb = lead

If the total direct and indirect emissions associated with the project are below the de minimis levels indicated in Table 7, general conformity requirements do not apply and the project is considered in conformity and would not result in an adverse effect. The project would be located within the SCAB, which is classified as being a serious nonattainment area for PM_{2.5}, and an extreme nonattainment area for ozone. As the project region is in nonattainment for two of the criteria pollutants indicated in Table 7, ozone and PM_{2.5}, conformity for these pollutants must be completed.

Significance Criteria

A significant impact would be identified if the project would exceed the General Conformity Rule de minimis thresholds provided in Table 7 for the pollutants for which the SCAB is a nonattainment area (ozone and PM_{2.5}).

Conformity Analysis

Construction Emissions

The project's construction emissions were estimated using CalEEMod, as described above. The results of the calculations for project construction are shown in Table 8, *Construction Emission Conformity Analysis*, and the model output is included as Attachment A to this letter. The data are presented as the maximum annual construction emissions in tons and compared with the applicable de minimis thresholds, which are provided in tons per year. As shown in Table 8, the project's total construction emissions would not exceed the annual de minimis thresholds. As previously described, operation of the proposed project would not result in the emission of criteria pollutants. Emissions of criteria pollutants associated with the project would be below the de minimis thresholds established to ensure compliance with the CAA. Thus, impacts to air quality would be less than significant and the project would conform with the federal CAA.

Table 8
CONSTRUCTION EMISSION CONFORMITY ANALYSIS

Criteria Pollutant (Attainment Status)	De Minimis Threshold (tons/year)	Construction Emissions (tons/year)	Adverse Effect?
VOC (Extreme Nonattainment Area)	10	0.7	No
NO _x (Extreme Nonattainment Area)	10	6.2	No
CO (Maintenance)	--	8.3	No
SO ₂ (Maintenance)	--	<0.1	No
PM ₁₀ (Maintenance)	--	0.3	No
PM _{2.5} (Serious Nonattainment Area)	70	0.3	No

Source: CalEEMod (output data is provided in Attachment A); 40 CFR 93.153

VOC = volatile organic compound; NO_x = nitrogen oxides; CO = carbon monoxide; SO₂ = sulfur dioxide;

PM₁₀ = respirable particulate matter with a diameter of 10 microns or less; PM_{2.5} = fine particulate matter with a diameter of 2.5 microns or less

SUMMARY

This report conservatively assumes three construction teams using all listed equipment would be operating simultaneously and continuously throughout a 24-month construction period. As described above, emissions of criteria pollutants would be below SCAQMD thresholds and the project would be consistent with the AQMP. Sensitive receptors would not be exposed to substantial concentrations of TACs or odors. Thus, impacts to air quality would be less than significant and no mitigation measures would be required. GHG emissions resulting from construction activities would be below SCAQMD thresholds. The project would not conflict with the WRCOG Subregional CAP, City of Lake Elsinore CAP, or applicable State GHG reduction plans or policies. Therefore, GHG impacts would be less than significant no mitigation measures would be required. Criteria pollutant emissions would also be below General Conformity de minimis levels. Therefore, the project would not conflict with the federal CAA.

Sincerely,



Shelby Bocks
Air Quality Specialist



Victor Ortiz
Senior Air Quality Specialist

Attachments:

- Figure 1: Regional Location
- Figure 2: Aerial Photograph
- Attachment A: CalEEMod Model Output

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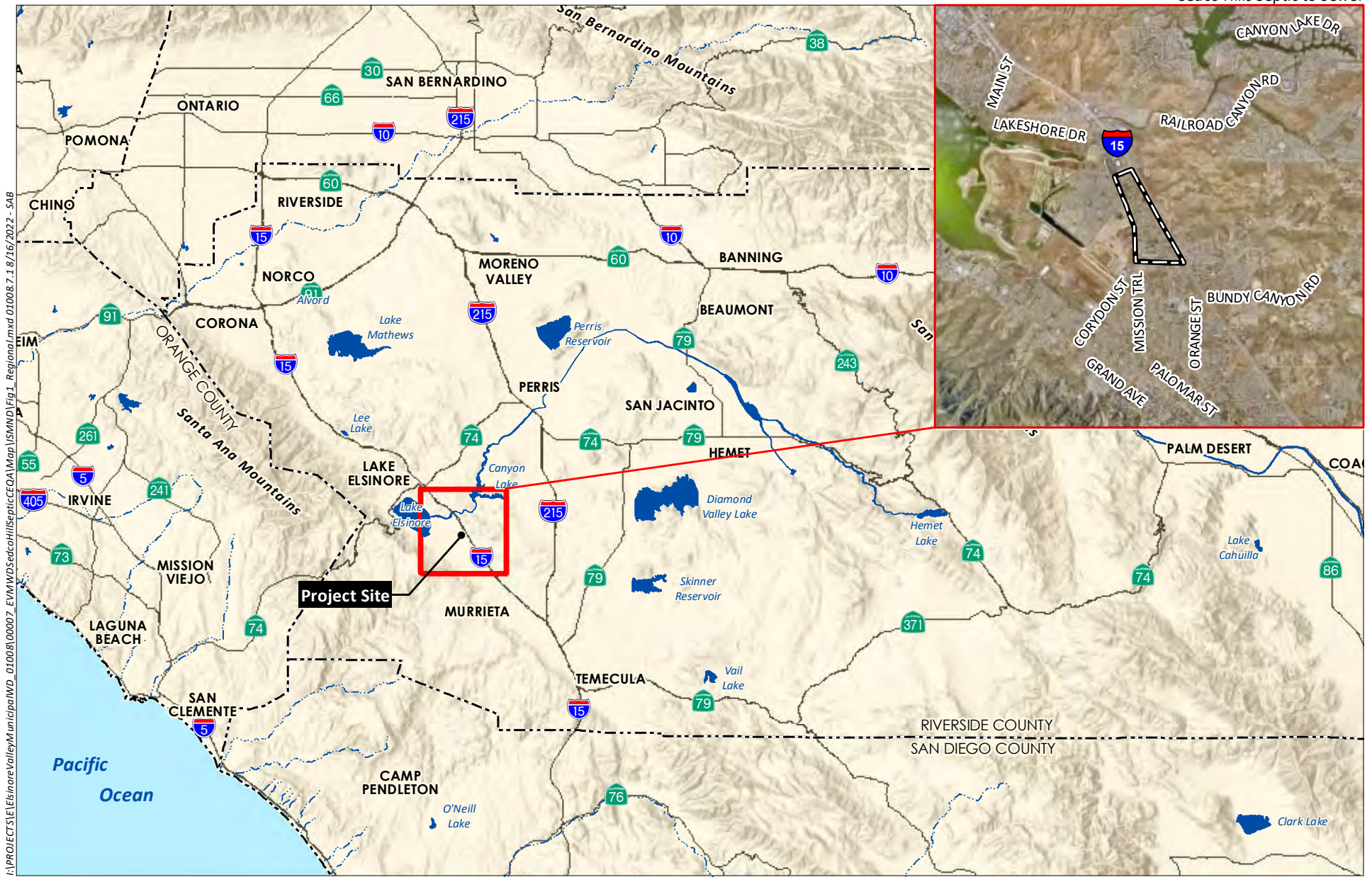
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

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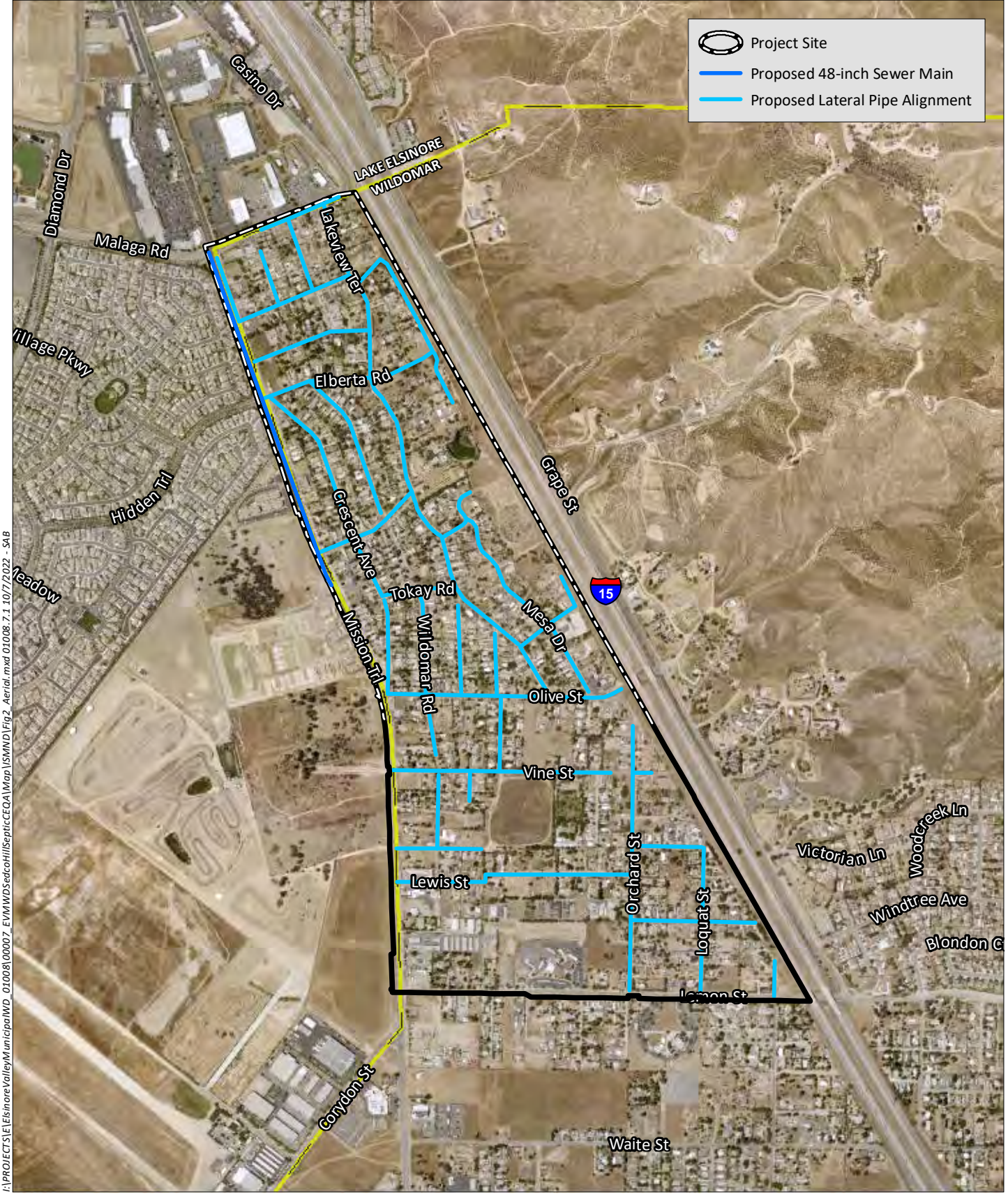
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-  Project Site
-  Proposed 48-inch Sewer Main
-  Proposed Lateral Pipe Alignment



I:\PROJECTS\EL\ElsinoreValleyMunicipal\WD_010008\00007_EVM\WDSedcoHillsSepticCEQA\Map\ISMND\Fig2_Aerial.mxd 010008.7.1 10/7/2022 - SAB

Source: Aerial (RCIT, 2020)



Attachment A

CalEEMod Model Output

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Sedco Hills - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Sedco Hills

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.20	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2027
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
 Land Use - 40,000 linear feet x 36 inch trench for laterals, 3200 linear feet x 6 foot trench for sewer main
 Construction Phase - Construction schedule per EVMWD
 Off-road Equipment - Per EVMWD assumptions
 Off-road Equipment - Per EVMWD Assumptions
 Off-road Equipment - Per EVMWD
 Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	524.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	18.00	524.00
tblLandUse	LotAcreage	0.00	3.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

2.0 Emissions Summary

Sedco Hills - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3129	2.7908	3.4580	7.1600e-003	0.0180	0.1258	0.1437	4.7700e-003	0.1157	0.1205	0.0000	629.4209	629.4209	0.1995	3.6000e-004	634.5163
2024	0.7218	6.2180	8.2774	0.0172	0.0432	0.2748	0.3180	0.0115	0.2528	0.2643	0.0000	1,512.2838	1,512.2838	0.4796	8.1000e-004	1,524.5142
2025	0.3966	3.2572	4.8000	0.0100	0.0252	0.1405	0.1657	6.7000e-003	0.1293	0.1360	0.0000	882.4590	882.4590	0.2800	4.4000e-004	889.5903
Maximum	0.7218	6.2180	8.2774	0.0172	0.0432	0.2748	0.3180	0.0115	0.2528	0.2643	0.0000	1,512.2838	1,512.2838	0.4796	8.1000e-004	1,524.5142

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3129	2.7908	3.4580	7.1600e-003	0.0180	0.1258	0.1437	4.7700e-003	0.1157	0.1205	0.0000	629.4202	629.4202	0.1995	3.6000e-004	634.5156
2024	0.7218	6.2180	8.2774	0.0172	0.0432	0.2748	0.3180	0.0115	0.2528	0.2643	0.0000	1,512.2821	1,512.2821	0.4796	8.1000e-004	1,524.5124
2025	0.3966	3.2572	4.8000	0.0100	0.0252	0.1405	0.1657	6.7000e-003	0.1293	0.1360	0.0000	882.4580	882.4580	0.2800	4.4000e-004	889.5893
Maximum	0.7218	6.2180	8.2774	0.0172	0.0432	0.2748	0.3180	0.0115	0.2528	0.2643	0.0000	1,512.2821	1,512.2821	0.4796	8.1000e-004	1,524.5124

Sedco Hills - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	8-1-2023	10-31-2023	1.8713	1.8713
2	11-1-2023	1-31-2024	1.8273	1.8273
3	2-1-2024	4-30-2024	1.7029	1.7029
4	5-1-2024	7-31-2024	1.7409	1.7409
5	8-1-2024	10-31-2024	1.7408	1.7408
6	11-1-2024	1-31-2025	1.6830	1.6830
7	2-1-2025	4-30-2025	1.5183	1.5183
8	5-1-2025	7-31-2025	1.5696	1.5696
9	8-1-2025	9-30-2025	0.0171	0.0171
		Highest	1.8713	1.8713

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	8/1/2023	8/1/2025	5	524	
2	Pipeline Installation	Building Construction	8/1/2023	8/1/2025	5	524	
3	Paving	Paving	8/1/2023	8/1/2025	5	524	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	3	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Cranes	3	8.00	231	0.29
Pipeline Installation	Excavators	3	8.00	158	0.38
Pipeline Installation	Forklifts	0	7.00	89	0.20
Pipeline Installation	Generator Sets	0	8.00	84	0.74
Pipeline Installation	Off-Highway Trucks	3	8.00	402	0.38
Pipeline Installation	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	3	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	3	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	12	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
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3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0556	0.5043	0.8975	1.3500e-003		0.0248	0.0248		0.0228	0.0228	0.0000	118.9093	118.9093	0.0385	0.0000	119.8707
Total	0.0556	0.5043	0.8975	1.3500e-003		0.0248	0.0248		0.0228	0.0228	0.0000	118.9093	118.9093	0.0385	0.0000	119.8707

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914
Total	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0556	0.5043	0.8975	1.3500e-003		0.0248	0.0248		0.0228	0.0228	0.0000	118.9091	118.9091	0.0385	0.0000	119.8706
Total	0.0556	0.5043	0.8975	1.3500e-003		0.0248	0.0248		0.0228	0.0228	0.0000	118.9091	118.9091	0.0385	0.0000	119.8706

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914
Total	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914

3.2 Trenching - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1274	1.1205	2.1618	3.2600e-003		0.0533	0.0533		0.0490	0.0490	0.0000	285.9434	285.9434	0.0925	0.0000	288.2554
Total	0.1274	1.1205	2.1618	3.2600e-003		0.0533	0.0533		0.0490	0.0490	0.0000	285.9434	285.9434	0.0925	0.0000	288.2554

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345
Total	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1274	1.1205	2.1618	3.2600e-003		0.0533	0.0533		0.0490	0.0490	0.0000	285.9430	285.9430	0.0925	0.0000	288.2550
Total	0.1274	1.1205	2.1618	3.2600e-003		0.0533	0.0533		0.0490	0.0490	0.0000	285.9430	285.9430	0.0925	0.0000	288.2550

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345
Total	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345

3.2 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0687	0.5868	1.2597	1.9000e-003		0.0262	0.0262		0.0241	0.0241	0.0000	167.0575	167.0575	0.0540	0.0000	168.4082
Total	0.0687	0.5868	1.2597	1.9000e-003		0.0262	0.0262		0.0241	0.0241	0.0000	167.0575	167.0575	0.0540	0.0000	168.4082

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434
Total	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0687	0.5868	1.2597	1.9000e-003		0.0262	0.0262		0.0241	0.0241	0.0000	167.0573	167.0573	0.0540	0.0000	168.4080
Total	0.0687	0.5868	1.2597	1.9000e-003		0.0262	0.0262		0.0241	0.0241	0.0000	167.0573	167.0573	0.0540	0.0000	168.4080

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434
Total	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434

3.3 Pipeline Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1954	1.7115	1.7351	4.4600e-003		0.0719	0.0719		0.0662	0.0662	0.0000	391.6351	391.6351	0.1267	0.0000	394.8016
Total	0.1954	1.7115	1.7351	4.4600e-003		0.0719	0.0719		0.0662	0.0662	0.0000	391.6351	391.6351	0.1267	0.0000	394.8016

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2023

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1954	1.7115	1.7351	4.4600e-003		0.0719	0.0719		0.0662	0.0662	0.0000	391.6346	391.6346	0.1267	0.0000	394.8012
Total	0.1954	1.7115	1.7351	4.4600e-003		0.0719	0.0719		0.0662	0.0662	0.0000	391.6346	391.6346	0.1267	0.0000	394.8012

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2023

Mitigated Construction Off-Site

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

3.3 Pipeline Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4531	3.8055	4.1366	0.0107		0.1577	0.1577		0.1451	0.1451	0.0000	941.6465	941.6465	0.3046	0.0000	949.2602
Total	0.4531	3.8055	4.1366	0.0107		0.1577	0.1577		0.1451	0.1451	0.0000	941.6465	941.6465	0.3046	0.0000	949.2602

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2024

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4531	3.8055	4.1366	0.0107		0.1577	0.1577		0.1451	0.1451	0.0000	941.6454	941.6454	0.3046	0.0000	949.2591
Total	0.4531	3.8055	4.1366	0.0107		0.1577	0.1577		0.1451	0.1451	0.0000	941.6454	941.6454	0.3046	0.0000	949.2591

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2024

Mitigated Construction Off-Site

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

3.3 Pipeline Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2501	1.9716	2.3893	6.2600e-003		0.0806	0.0806		0.0741	0.0741	0.0000	549.8315	549.8315	0.1778	0.0000	554.2772
Total	0.2501	1.9716	2.3893	6.2600e-003		0.0806	0.0806		0.0741	0.0741	0.0000	549.8315	549.8315	0.1778	0.0000	554.2772

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2025

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2501	1.9716	2.3893	6.2600e-003		0.0806	0.0806		0.0741	0.0741	0.0000	549.8309	549.8309	0.1778	0.0000	554.2765
Total	0.2501	1.9716	2.3893	6.2600e-003		0.0806	0.0806		0.0741	0.0741	0.0000	549.8309	549.8309	0.1778	0.0000	554.2765

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2025

Mitigated Construction Off-Site

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

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0565	0.5711	0.7742	1.2000e-003		0.0290	0.0290		0.0267	0.0267	0.0000	105.2104	105.2104	0.0340	0.0000	106.0611
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0565	0.5711	0.7742	1.2000e-003		0.0290	0.0290		0.0267	0.0267	0.0000	105.2104	105.2104	0.0340	0.0000	106.0611

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3.4 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914
Total	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0565	0.5711	0.7742	1.2000e-003		0.0290	0.0290		0.0267	0.0267	0.0000	105.2103	105.2103	0.0340	0.0000	106.0610
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0565	0.5711	0.7742	1.2000e-003		0.0290	0.0290		0.0267	0.0267	0.0000	105.2103	105.2103	0.0340	0.0000	106.0610

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3.4 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914
Total	2.6500e-003	1.9600e-003	0.0256	7.0000e-005	8.9900e-003	4.0000e-005	9.0300e-003	2.3900e-003	4.0000e-005	2.4300e-003	0.0000	6.8331	6.8331	1.7000e-004	1.8000e-004	6.8914

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1294	1.2836	1.8640	2.8800e-003		0.0637	0.0637		0.0586	0.0586	0.0000	252.8850	252.8850	0.0818	0.0000	254.9297
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1294	1.2836	1.8640	2.8800e-003		0.0637	0.0637		0.0586	0.0586	0.0000	252.8850	252.8850	0.0818	0.0000	254.9297

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3.4 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345
Total	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1294	1.2836	1.8640	2.8800e-003		0.0637	0.0637		0.0586	0.0586	0.0000	252.8847	252.8847	0.0818	0.0000	254.9294
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.1294	1.2836	1.8640	2.8800e-003		0.0637	0.0637		0.0586	0.0586	0.0000	252.8847	252.8847	0.0818	0.0000	254.9294

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345
Total	5.9500e-003	4.2000e-003	0.0575	1.7000e-004	0.0216	1.0000e-004	0.0217	5.7400e-003	9.0000e-005	5.8300e-003	0.0000	15.9045	15.9045	3.7000e-004	4.1000e-004	16.0345

3.4 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0713	0.6945	1.0884	1.6800e-003		0.0337	0.0337		0.0310	0.0310	0.0000	147.6245	147.6245	0.0477	0.0000	148.8181
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0713	0.6945	1.0884	1.6800e-003		0.0337	0.0337		0.0310	0.0310	0.0000	147.6245	147.6245	0.0477	0.0000	148.8181

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434
Total	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0713	0.6945	1.0884	1.6800e-003		0.0337	0.0337		0.0310	0.0310	0.0000	147.6243	147.6243	0.0477	0.0000	148.8180
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0713	0.6945	1.0884	1.6800e-003		0.0337	0.0337		0.0310	0.0310	0.0000	147.6243	147.6243	0.0477	0.0000	148.8180

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3.4 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434
Total	3.2500e-003	2.2000e-003	0.0313	1.0000e-004	0.0126	5.0000e-005	0.0127	3.3500e-003	5.0000e-005	3.4000e-003	0.0000	8.9727	8.9727	2.0000e-004	2.2000e-004	9.0434

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544951	0.056922	0.175129	0.132247	0.024165	0.006855	0.011655	0.018450	0.000608	0.000293	0.023172	0.001089	0.004464

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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5.3 Energy by Land Use - Electricity

Unmitigated

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

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

Sedco Hills - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Sedco Hills - Riverside-South Coast County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Sedco Hills

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.20	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2027
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
 Land Use - 40,000 linear feet x 36 inch trench for laterals, 3200 linear feet x 6 foot trench for sewer main
 Construction Phase - Construction schedule per EVMWD
 Off-road Equipment - Per EVMWD assumptions
 Off-road Equipment - Per EVMWD Assumptions
 Off-road Equipment - Per EVMWD
 Construction Off-road Equipment Mitigation - Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	524.00

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	NumDays	18.00	524.00
tblLandUse	LotAcreage	0.00	3.20
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

2.0 Emissions Summary

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	5.7457	51.2050	63.4006	0.1313	0.3353	2.3078	2.6431	0.0889	2.1231	2.2121	0.0000	12,724.3181	12,724.3181	4.0348	7.2000e-003	12,827.3348
2024	5.5153	47.4641	63.1413	0.1313	0.3353	2.0978	2.4331	0.0889	1.9300	2.0189	0.0000	12,719.1676	12,719.1676	4.0353	6.7000e-003	12,822.0431
2025	5.1888	42.5769	62.7037	0.1312	0.3353	1.8368	2.1721	0.0889	1.6898	1.7788	0.0000	12,709.7580	12,709.7580	4.0345	6.2400e-003	12,812.4805
Maximum	5.7457	51.2050	63.4006	0.1313	0.3353	2.3078	2.6431	0.0889	2.1231	2.2121	0.0000	12,724.3181	12,724.3181	4.0353	7.2000e-003	12,827.3348

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	5.7457	51.2050	63.4006	0.1313	0.3353	2.3078	2.6431	0.0889	2.1231	2.2121	0.0000	12,724.3181	12,724.3181	4.0348	7.2000e-003	12,827.3348
2024	5.5153	47.4641	63.1413	0.1313	0.3353	2.0978	2.4331	0.0889	1.9300	2.0189	0.0000	12,719.1676	12,719.1676	4.0353	6.7000e-003	12,822.0431
2025	5.1888	42.5769	62.7037	0.1312	0.3353	1.8368	2.1721	0.0889	1.6898	1.7788	0.0000	12,709.7580	12,709.7580	4.0345	6.2400e-003	12,812.4804
Maximum	5.7457	51.2050	63.4006	0.1313	0.3353	2.3078	2.6431	0.0889	2.1231	2.2121	0.0000	12,724.3181	12,724.3181	4.0353	7.2000e-003	12,827.3348

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000	0.0000	2.3000e-004

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Trenching	Trenching	8/1/2023	8/1/2025	5	524	
2	Pipeline Installation	Building Construction	8/1/2023	8/1/2025	5	524	
3	Paving	Paving	8/1/2023	8/1/2025	5	524	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Trenching	Excavators	3	8.00	158	0.38
Trenching	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Pipeline Installation	Cranes	3	8.00	231	0.29
Pipeline Installation	Excavators	3	8.00	158	0.38
Pipeline Installation	Forklifts	0	7.00	89	0.20
Pipeline Installation	Generator Sets	0	8.00	84	0.74
Pipeline Installation	Off-Highway Trucks	3	8.00	402	0.38
Pipeline Installation	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Pipeline Installation	Welders	0	8.00	46	0.45
Paving	Cement and Mortar Mixers	0	8.00	9	0.56
Paving	Pavers	3	8.00	130	0.42
Paving	Paving Equipment	0	8.00	132	0.36
Paving	Rollers	3	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Trenching	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation	12	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0201	9.2529	16.4673	0.0249		0.4549	0.4549		0.4185	0.4185		2,405.0464	2,405.0464	0.7778		2,424.4924
Total	1.0201	9.2529	16.4673	0.0249		0.4549	0.4549		0.4185	0.4185		2,405.0464	2,405.0464	0.7778		2,424.4924

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0201	9.2529	16.4673	0.0249		0.4549	0.4549		0.4185	0.4185	0.0000	2,405.0464	2,405.0464	0.7778		2,424.4924
Total	1.0201	9.2529	16.4673	0.0249		0.4549	0.4549		0.4185	0.4185	0.0000	2,405.0464	2,405.0464	0.7778		2,424.4924

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9725	8.5533	16.5019	0.0249		0.4067	0.4067		0.3742	0.3742		2,406.0963	2,406.0963	0.7782		2,425.5508
Total	0.9725	8.5533	16.5019	0.0249		0.4067	0.4067		0.3742	0.3742		2,406.0963	2,406.0963	0.7782		2,425.5508

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9725	8.5533	16.5019	0.0249		0.4067	0.4067		0.3742	0.3742	0.0000	2,406.0963	2,406.0963	0.7782		2,425.5508
Total	0.9725	8.5533	16.5019	0.0249		0.4067	0.4067		0.3742	0.3742	0.0000	2,406.0963	2,406.0963	0.7782		2,425.5508

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8977	7.6702	16.4671	0.0249		0.3420	0.3420		0.3146	0.3146		2,407.181 2	2,407.181 2	0.7785		2,426.644 5
Total	0.8977	7.6702	16.4671	0.0249		0.3420	0.3420		0.3146	0.3146		2,407.181 2	2,407.181 2	0.7785		2,426.644 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Trenching - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8977	7.6702	16.4671	0.0249		0.3420	0.3420		0.3146	0.3146	0.0000	2,407.181 2	2,407.181 2	0.7785		2,426.644 5
Total	0.8977	7.6702	16.4671	0.0249		0.3420	0.3420		0.3146	0.3146	0.0000	2,407.181 2	2,407.181 2	0.7785		2,426.644 5

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5860	31.4032	31.8360	0.0818		1.3199	1.3199		1.2143	1.2143		7,921.1696	7,921.1696	2.5619		7,985.2163
Total	3.5860	31.4032	31.8360	0.0818		1.3199	1.3199		1.2143	1.2143		7,921.1696	7,921.1696	2.5619		7,985.2163

Unmitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.5860	31.4032	31.8360	0.0818		1.3199	1.3199		1.2143	1.2143	0.0000	7,921.1696	7,921.1696	2.5619		7,985.2163
Total	3.5860	31.4032	31.8360	0.0818		1.3199	1.3199		1.2143	1.2143	0.0000	7,921.1696	7,921.1696	2.5619		7,985.2163

Mitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4588	29.0497	31.5768	0.0819		1.2036	1.2036		1.1073	1.1073		7,923.5696	7,923.5696	2.5626		7,987.6357
Total	3.4588	29.0497	31.5768	0.0819		1.2036	1.2036		1.1073	1.1073		7,923.5696	7,923.5696	2.5626		7,987.6357

Unmitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4588	29.0497	31.5768	0.0819		1.2036	1.2036		1.1073	1.1073	0.0000	7,923.5696	7,923.5696	2.5626		7,987.6357
Total	3.4588	29.0497	31.5768	0.0819		1.2036	1.2036		1.1073	1.1073	0.0000	7,923.5696	7,923.5696	2.5626		7,987.6357

Mitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2689	25.7723	31.2329	0.0819		1.0533	1.0533		0.9690	0.9690		7,922.686 2	7,922.686 2	2.5624		7,986.745 1
Total	3.2689	25.7723	31.2329	0.0819		1.0533	1.0533		0.9690	0.9690		7,922.686 2	7,922.686 2	2.5624		7,986.745 1

Unmitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Pipeline Installation - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.2689	25.7723	31.2329	0.0819		1.0533	1.0533		0.9690	0.9690	0.0000	7,922.686 2	7,922.686 2	2.5624		7,986.745 1
Total	3.2689	25.7723	31.2329	0.0819		1.0533	1.0533		0.9690	0.9690	0.0000	7,922.686 2	7,922.686 2	2.5624		7,986.745 1

Mitigated Construction Off-Site

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0370	10.4787	14.2061	0.0220		0.5315	0.5315		0.4889	0.4889		2,127.9751	2,127.9751	0.6882		2,145.1808
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0370	10.4787	14.2061	0.0220		0.5315	0.5315		0.4889	0.4889		2,127.9751	2,127.9751	0.6882		2,145.1808

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0370	10.4787	14.2061	0.0220		0.5315	0.5315		0.4889	0.4889	0.0000	2,127.9751	2,127.9751	0.6882		2,145.1808
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.0370	10.4787	14.2061	0.0220		0.5315	0.5315		0.4889	0.4889	0.0000	2,127.9751	2,127.9751	0.6882		2,145.1808

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226
Total	0.0513	0.0351	0.4456	1.3400e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		135.0635	135.0635	3.4300e-003	3.6000e-003	136.2226

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9880	9.7985	14.2291	0.0220		0.4860	0.4860		0.4471	0.4471		2,127.9237	2,127.9237	0.6882		2,145.1290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9880	9.7985	14.2291	0.0220		0.4860	0.4860		0.4471	0.4471		2,127.9237	2,127.9237	0.6882		2,145.1290

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9880	9.7985	14.2291	0.0220		0.4860	0.4860		0.4471	0.4471	0.0000	2,127.9237	2,127.9237	0.6882		2,145.1290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9880	9.7985	14.2291	0.0220		0.4860	0.4860		0.4471	0.4471	0.0000	2,127.9237	2,127.9237	0.6882		2,145.1290

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638
Total	0.0480	0.0313	0.4168	1.2900e-003	0.1677	7.5000e-004	0.1684	0.0445	6.9000e-004	0.0452		130.7890	130.7890	3.1200e-003	3.3500e-003	131.8638

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9323	9.0783	14.2275	0.0220		0.4401	0.4401		0.4049	0.4049		2,127.1656	2,127.1656	0.6880		2,144.3648
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9323	9.0783	14.2275	0.0220		0.4401	0.4401		0.4049	0.4049		2,127.1656	2,127.1656	0.6880		2,144.3648

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9323	9.0783	14.2275	0.0220		0.4401	0.4401		0.4049	0.4049	0.0000	2,127.1656	2,127.1656	0.6880		2,144.3648
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.9323	9.0783	14.2275	0.0220		0.4401	0.4401		0.4049	0.4049	0.0000	2,127.1656	2,127.1656	0.6880		2,144.3648

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630
Total	0.0450	0.0280	0.3881	1.2500e-003	0.1677	7.1000e-004	0.1684	0.0445	6.5000e-004	0.0451		126.3625	126.3625	2.8200e-003	3.1200e-003	127.3630

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.544951	0.056922	0.175129	0.132247	0.024165	0.006855	0.011655	0.018450	0.000608	0.000293	0.023172	0.001089	0.004464

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Sedco Hills - Riverside-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

IS/MND Appendix B

Biological Resources Report

October 14, 2022

01008.00007.001

Matthew Bates, P.E.
Engineering Manager
Elsinore Valley Municipal Water District
31315 Chaney Street
Lake Elsinore, CA 92530

Subject: Biological Resources Report for the Sedco Hills Septic to Sewer Project

Dear Mr. Bates:

This report documents the results of a biological resources technical study completed by HELIX Environmental Planning, Inc. (HELIX) for the Sedco Hills septic to sewer Project (project) located within the City of Lake Elsinore, Riverside County, California (Figure 1, *Regional Location*). The Elsinore Valley Municipal Water District (EVMWD) plans to install sewer pipelines to convert the residential homes in Sedco Hills off their existing septic systems and onto the local sewer system.

This report intends to summarize the existing biological resources within the project 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.

PROJECT DESCRIPTION AND LOCATION

The project site is generally located in the City of Wildomar in southwest Riverside County (Figure 1). It is depicted on the Elsinore, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, within Sections 15, 16, and 22, Range 4 West and Township 6 South (Figure 2, *USGS Topography*). The Project site is bound by Malaga Road on the north, Interstate- (I-) 15 on the east, Mission Trail on the west, and Lemon Street on the south. The boundary between the City of Wildomar and the City of Lake Elsinore is located along the roadway centerline of Mission Trail and Malaga Road. The majority of the Project would occur within the City of Wildomar; however, Project activities on the west side of Mission Trail or the north side of Malaga Road would occur within the City of Lake Elsinore. (Figure 3, *Aerial Photograph of Project Location*). The project is primarily to occur within the existing road rights-of-way (ROW) within an approximately 379.7-acre study area that encompasses 791 small Assessor's Parcel Numbers (APNs) that are mostly comprised of existing residential homes and some commercial properties (Attachment A, APN list). The site is located outside of the Coastal Zone and outside of Critical Habitat designated by the U.S. Fish and Wildlife Service (USFWS).

EVMWD is a public non-profit agency, created on December 23, 1950, under the Municipal Water District Act of 1911. EVMWD provides public water service, water supply development and planning, wastewater treatment and disposal, and recycling. Currently, EVMWD has over 46,000 water, wastewater, and agricultural service connections over a 96-square-mile service area within the cities of Lake Elsinore, Wildomar, Canyon Lake, and Murrieta, and unincorporated portions of the County of Riverside. EVMWD is a sub-agency of the Western Municipal Water District, a member agency of the Metropolitan Water District of Southern California.

Sedco Hills was identified as a priority for sewer conversion in the 2016 Sewer System Master Plan based on its proximity to domestic wells and density of septic tanks (EVMWD 2016). A goal for the sewer conversion is to prevent potential contamination of groundwater in the Project area.

The project would convert about 750 existing septic customers to sewer, which involves installing about 40,000 linear feet of sewer main and lateral pipelines within ROW. The proposed Project would involve the construction and operation of approximately 40,000 feet (7.6 miles) of 4-, 8-, and 12-inch-diameter underground sewer pipelines within existing ROW (Figure 4, *Proposed Pipe Alignment*). The new sewer lines would connect to existing sewer mains underneath Mission Trail, Malaga Road, or Lemon Street.

The Sedco Hills neighborhood consists of mobile home units, which typically generate 150 gallons per day (GPD) of wastewater (EVMWD 2021) Therefore, the Project is anticipated to generate approximately 112,500 GPD (or 0.11 million gallons per day [MGD]) of wastewater (EVMWD 2021).

The 2016 Sewer System Master Plan identified a potential capacity deficiency for the 21-inch diameter sewer line in Mission Trail. In 2022, EVMWD constructed a short pipe segment that redirected flows to bypass the Washington Avenue Sewer Lift Station and send tributary sewer flows to the Santa Rosa Regional Resources Authority (EVMWD 2022a). The bypass project removed approximately 125,000 gallons per day (GPD) of sewer flow that, prior to the bypass, flowed north through the 21-inch diameter Mission Trail sewer line to the Regional WRF. With the removal of 125,000 GPD from the existing 21-inch sewer line, sufficient capacity should exist to accommodate the 130,000 GPD of additional flow from the Project.

Should additional engineering hydraulic analysis determine that the bypass construction is not sufficient to resolve the capacity deficiency of the existing 21-inch diameter sewer main, EVMWD proposes installing a new 48-inch diameter sewer line in Mission Trail. The new line would connect to an existing 48-inch diameter sewer line in Malaga Road and extend south along Mission Trail to the B-2 sewer lift station just south of Sedco Boulevard. In total, the new sewer line would extend 3,200 linear feet and be located at a depth of approximately 40 feet. To provide a conservative analysis, this Initial Study includes an assessment of potential impacts related to the installation of the optional 48-inch diameter sewer line in Mission Trail.

Existing septic tanks serving the residents would be abandoned per Riverside County Health Department requirements.

EVMWD anticipates that the proposed lateral pipelines would be located within a 24- to 36-inch-wide trench. Pipeline trench depth is anticipated generally to be approximately seven to twelve feet, with the exception of the Mission Trail sewer main, which would be about six feet wide and located at a depth of

40 feet. The duration of construction is estimated to be 18 to 24 months, starting as early as August 2023. Full installation of the sewer facilities is anticipated by December 2026.

Construction activities outside of the road ROW would be required to abandon septic tanks on private properties. Existing septic tanks would be emptied and then filled with sand. The tops would be removed, and the bottoms perforated to allow for drainage.

The types of construction equipment projected to be required by each of the three construction crews for pipeline installation are presented in Table 1, *Anticipated Construction Equipment*.

Table 1
ANTICIPATED CONSTRUCTION EQUIPMENT

Phase	Equipment
Trenching	1 Excavator; 1 Tractor/Loader/Backhoe
Pipeline Installation	1 Crane; 1 Excavator; 1 Tractor/Loader/Backhoe; 1 Dump Truck
Resurfacing/Repaving	1 Roller; 1 Paver

When construction equipment is not in use, it would be stored at locations selected by the contractor and approved by EVMWD.

In addition, construction best management practices would be implemented to prevent and reduce project impacts. Construction would implement standard dust control measures as required by South Coast Air Quality Management District (SCAQMD) Rule 403, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 miles per hour. All trucks hauling dirt, sand, soil, or other loose materials would be covered with a fabric cover and maintain a freeboard height of 12 inches.

Implementation of the proposed project would require conformance with the National Pollution Discharge Elimination System (NPDES) General Construction Activity Permit. Such conformance would entail the implementation of a Storm Water Pollution Prevention Plan (SWPPP) to address the discharge of contaminants (including construction-related hazardous materials) and minimize runoff through appropriate best management practices (BMPs).

As a standard construction practice and regulatory requirement, EVMWD would implement BMPs from the required SWPPP for the Project, which may include:

- Covering stockpiled excavated and/or fill materials to reduce potential off-site sediment transport.
- Employing appropriate standard spill prevention practices and clean-up materials;
- Maintaining the Project area free of trash and debris;
- Properly storing, handling, and disposing of toxins and pollutants, including waste materials.
- Use of erosion control devices, such as straw wattles, mulch, mats, and/or geotextiles.

- Use of sediment catchment structures such as hay bales, gravel or sand bags, silt fencing, fiber rolls, matting, berms, or similar devices along grading boundaries and drainage courses to prevent off-site sediment transport.
- Daily backfill, compaction, and/or covering of excavated trenches to minimize erosion potential.
- Regular inspection and maintenance of all erosion control and sediment catchment facilities to ensure proper function and effectiveness.

EVMWD estimates that pipeline installation would generally occur at a rate of approximately 250 feet per day and would involve the following steps:

- Street pavement would be cut, and soil would be removed to create the pipeline trench.
- An excavator with a sling would be used to lower the pipe sections into the trench. The pipeline would rest on a bedding of compacted sand inside the trench per EVMWD standards.
- The pipe in the trench zone (the area above the pipe to the surface) would be backfilled with material previously excavated from the trench.
- Street cuts would be repaved in accordance with the City of Wildomar’s requirements.
- When construction equipment is not in use, it would be stored at locations selected by the contractor and approved by EVMWD.

METHODS

Literature Review

Prior to conducting the general biological survey, HELIX performed an updated search of the California Natural Diversity Database (CNDDDB; California Department of Fish and Wildlife [CDFW] 2022a, b, and c), California Native Plant Society (CNPS) rare plant inventory (CNPS 2022a), USFWS Critical Habitat Portal (USFWS 2022a), USFWS National Wetlands Inventory (USFWS 2022b), and USFWS Information for Planning and Conservation (IPaC; USFWS 2022c), database applications to obtain information regarding sensitive biological resources known to occur within the vicinity of the study area.

General Biological Survey

A general biological survey of the study area, which encompassed the project site and immediate vicinity, was completed by HELIX biologists Rob Hogenauer and Kacee Morrell on August 5, 2022. The survey focused on inventorying existing vegetation communities; qualifying habitat suitability and potential for the occurrence of sensitive species, including species listed protected under the federal Endangered Species Act (ESA); preliminarily identifying potential wetlands and other potential jurisdictional waters, including waters of the U.S. protected under the Clean Water Act (CWA); and identifying other sensitive biological resources, such as potential nesting habitat for bird species protected under the Migratory Bird Treaty Act (MBTA). The study area was surveyed with the aid of

binoculars, and observed or detected plant and animal species were recorded in field notes (Attachments B and C). Animal identifications were made in the field by visual observation or detection of calls, burrows, tracks, scat, and other animal sign. Plant identifications were made in the field. Representative photos were taken and are included as Attachment D.

Preliminary Jurisdictional Delineation

HELIX completed an informal, preliminary jurisdictional delineation concurrent with the general biological survey. The preliminary delineation focused on assessing ordinary high-water mark and other hydrology indicators, riparian and wetland vegetation, surface soils, topography, and other data, but did not include excavation of soil pits and establishment of wetland sampling points. As such, the delineation is a conservative (over-inclusive) estimation of the limits of potential jurisdiction.

Prior to beginning fieldwork, aerial photographs (1"= 150 scale), topographic maps and data (1"= 150' scale), and National Wetlands Inventory maps were reviewed to assist in determining the location of potential jurisdictional areas in the study area. The field delineations were conducted to identify and map potential water and wetland resources that could be subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the CWA, RWQCB jurisdiction pursuant to CWA Section 401 of the California Porter-Cologne Water Quality Control Act, and CDFW jurisdiction pursuant to Section 1600 *et seq.* of the California Fish and Game Code (CFG Code). Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated.

Survey Limitations

The lists of species identified are not necessarily comprehensive accounts of all species that occur on the site, as species that are nocturnal, secretive, or seasonally restricted may not have been observed.

Nomenclature

Nomenclature for this report follows Baldwin et al. (2012) for Latin names of plants, and Manual of California Vegetation (CNPS 2022b) and Oberbauer (2008) for vegetation communities. Animal nomenclature follows North American Butterfly Association (2017) for butterflies, Center for North American Herpetology (Taggart 2020) for reptiles and amphibians, American Ornithological Society (2022) for birds, and Bradley et al. (2017) for mammals. Sensitive plant and animal status are from the CDFW's CNDDDB (2022a-c). Soils data is from the U.S. Department of Agriculture web soil survey (USDA 2022).

ENVIRONMENTAL SETTING

Existing Conditions

Regional Context

The project site is located within a mixed residential and commercial development within the City (Figure 3). The project site is currently developed with residential homes and a few commercial properties dominating the study area. The undeveloped areas within the study area are mostly

disturbed by regular mowing and disking. The majority of the study area is developed and highly disturbed.

The site does not occur on lands identified for conservation or preserve configuration in the region. Lands to the northeast of the study area on the east side of I-15 are targeted for conservation under the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) but are outside the study area. The only biological resources located nearby the site that are of local importance include Lake Elsinore and the San Jacinto River that flows into Lake Elsinore and the habitats adjacent to those water bodies. Both features are outside the study area to the north and west. Surface streams or channels that connect to Lake Elsinore and/or San Jacinto River do not occur within the study area.

Topography and Soils

The project site is sloped with steeper slopes to the north and west and gentle slopes throughout most of the project, with an elevation of approximately 1,400 feet above mean sea level (AMSL) in the west along I-15 to 1,290 AMSL in the southwest. The study area is mapped as Greenfield sandy loam 2 to 8 percent slopes, 8 to 15 percent slopes, and 15 to 25 percent slopes, Hanford coarse sandy loam 8 to 15 percent slopes, Monserate sandy loam shallow, 15 to 25 percent slopes, Ramona sandy loam 2 to 5 percent slopes and 5 to 8 percent slopes, Ramona very fine sandy loam 0 to 8 percent slopes, Visalia fine sandy loam, 0 to 2 percent slopes, Waukena loamy fine sand, saline alkaline, and Terrace escarpments. The Greenfield, Hanford, Monserate, Ramona series of soils are well drained and are alluvial derived from granite. The Visalia series of soils is characterized as somewhat poorly drained, and are alluvium derived from granite (USDA 2020). The Waukena series of soils is moderately well drained and is alluvium derived from granite. The majority of the surface soils of the project site show sign of significant disturbance and alteration from their native state.

Vegetation Communities/Habitat Types

Five land cover or habitat types occur on the project site: California buckwheat shrub-disturbed, open water, non-native woodland, disturbed habitat, and developed land (Figure 5, *Vegetation – North*; Table 2, *Existing Vegetation Habitat and Land Uses in Study Area*). Developed land is comprised of residential homes, commercial development and associated roads, and dominated the study area.

California buckwheat scrub or Riversidean sage scrub is a xeric expression of coastal sage scrub, typically found on xeric sites such as steep slopes, severely drained soils, or clays that release stored soil moisture slowly. Typical stands are fairly open and dominated by California buckwheat (*Eriogonum fasciculatum*) and may also include brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), and foxtail chess (*Bromus madritensis ssp. Rubens*). California buckwheat scrub within the Study Area is dominated by California buckwheat and also includes small amounts of brittlebush, chess, and short pod mustard (*Hirschfeldia incana*). Approximately 1.3 acres of California buckwheat scrub and 5.0 acres of California buckwheat scrub-disturbed occur in the study area.

Open water habitat is comprised of areas of open water that lack surface vegetation. This habitat can be naturally occurring or artificial in origin. Open water is often bordered by varieties of riparian vegetation. Within the study area, the open water is artificial and bordered by non-native woodland and is dominated by date palm (*Phoenix dactylifera*) and Mexican fan palm (*Washingtonia robusta*). Within the study area, there are approximately 0.6 acre of open water.

Non-native woodland habitat is comprised of clusters of trees that are not native to California. This habitat often includes eucalyptus (*Eucalyptus* sp.), date palm (*Phoenix dactylifera*), Mexican fan palm (*Washingtonia robusta*), Peruvian pepper (*Schinus molle*), Brazilian pepper (*Schinus terebinthifolius*), China berry tree (*Melia azedarach*), Olive (*Olea europea*), tree of heaven (*Ailanthus altissima*), and a variety of other species. The understory often includes a mix of native and non-native annuals. In the study area, this habitat includes China berry, date palm, Mexican fan palm, Peruvian pepper, eucalyptus, and olive. Approximately 1.4 acres of non-native woodland occur in the study area.

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species, such as ornamentals or ruderal exotic species, that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat. This habitat occurs primarily as small undeveloped lots mixed within the development and along the slope of the study area adjacent to I-15. Approximately 37.3 acres of disturbed habitat occur in the study area.

Developed or urban/developed includes land that has been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered developed. Within the study area, developed land is dominated by residential development, some commercial properties, and associated infrastructure. Approximately 334.3 acres of developed land characterized by these elements occur within the study area.

Table 2
EXISTING VEGETATION HABITAT AND LAND USES IN STUDY AREA¹

MCV Habitat Name	Oberbauer Classification	Acres²
California buckwheat scrub	Riversidian sage scrub	1.3
California buckwheat scrub –disturbed	Riversidian sage scrub-disturbed	5.0
Open water	Open water	0.6
Non-native Vegetation	Non Native Woodland	1.4
Disturbed Habitat	Disturbed Habitat	37.3
Developed Land	Developed Land	334.3
Total		379.9

¹ Vegetation categories and numerical codes are from Holland (1986) and Oberbauer (2008).

² Upland habitats are rounded to the nearest 0.1 acre and wetland/riparian habitats to the nearest 0.01 acre; thus, totals reflect rounding.

Flora

HELIX identified a total of 24 plant species in the project study area, most of which are non-native species (Attachment B). Additional non-native ornamental landscaping occurs within the residential development.

Fauna

A total of eight animal species were observed or otherwise detected in the project study area during the biological survey, consisting of one invertebrate, one reptile, five birds, and one mammal species (Attachment C).

Sensitive Biological Resources

Sensitive Natural Communities

Sensitive natural communities include land that supports unique vegetation communities or the habitats of rare, threatened, or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines. Developed land does not meet the definition of sensitive. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 are considered sensitive communities. No sensitive natural communities occur on-site.

Special-Status Plant and Animal Species

Special-Status Plant Species

Special-status plant species are those listed as federally threatened or endangered by the USFWS; State listed as threatened or endangered or considered sensitive by the CDFW; and/or are California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) List 1A, 1B, or 2 species, as recognized in the CNPS Inventory of Rare and Endangered Vascular Plants of California and consistent with the CEQA Guidelines. No special-status plant species were observed in the study area.

Special status plant species evaluated for their potential to occur in the study area are listed in Attachment F. A total of 70 plant species were evaluated for their potential to occur in the study area. The evaluated species include eight species listed on a state or federal level. There are no special status plant species with the potential to occur on-site due to a lack of suitable habitat and regular disturbance.

Special-Status Animal Species

Special-status animal species are those listed as threatened or endangered, proposed for listing, or candidates for listing by the USFWS, and considered sensitive animals by the CDFW. No special-status animal species were observed on the project site during the general biological survey.

Special status animal species evaluated for their potential to occur in the study area are listed in Attachment E. A total of 57 species comprised of eight invertebrates, two fish, 14 amphibians and reptiles, 20 birds, and 13 mammals were evaluated for the potential to occur in the study area. Fourteen of the species evaluated have low potential to occur in the study area. These species include one species state listed as endangered, seven state species of concern, three watch list species, and two with a low sensitivity but no official listing. The remainder of the animal species do not have the potential to occur on-site due to the lack of suitable habitat and residential development on the site.

One state listed species, bald eagle, is known to forage at Lake Elsinore but is not known to nest in the vicinity. The project study area is approximately two miles from Lake Elsinore. The species may use trees

within the study area for temporary roosting but is unlikely to remain due to the high disturbance from human activities.

Nesting Birds and Raptors

Limited portions of the project site contain marginal nesting habitat (e.g., trees, shrubs, structures) for several common bird species, including raptors, protected under the MBTA and CFG Code.

Jurisdictional Waters and Wetlands

The project site is characterized nearly entirely by uplands and includes three drainages and an open water pond (Figure 6, *Aquatic Resources - North*). The drainage course includes two drainages that originate from culverts under I-15. One drainage occurs along the north side of Elberta Road and dissipates after traversing a disturbed lot for approximately 250 feet. The second drainage is from a culvert under I-15 at Sedco Boulevard and enters the open water pond. A third drainage is an open culvert as part of the storm drain system along Mission Trail south of Olive Street. The open water pond is located along Sedco Boulevard. A review of historic aerials shows that the pond was created between 1938 and 1967 (NETROnline 2022).

Wildlife Corridors and Linkages

Wildlife corridors connect isolated habitat and allow movement or dispersal of plant materials and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of the wildlife's daily routine and life history. For example, animals can use these corridors to travel between their riparian breeding habitats and upland burrowing habitats. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A corridor is a specific route that is used for the movement and migration of species; it may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance.

The project site does not, by itself, serve as or contribute to any known or potential corridors or linkages.

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 project site could be subject to the federal, state, and local regulations discussed below.

Federal

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) (16 United States Code [USC] 1531 *et seq.*) extends legal protection to plants and animals listed as endangered or threatened by the USFWS and gives

authorization to the USFWS to review proposed federal actions to assess potential impacts to species listed as endangered or threatened. The ESA generally prohibits the unauthorized “taking” of a federally listed species and adverse modification of designated critical habitat.

“Taking” of a threatened or endangered species is deemed to occur when an intentional or negligent act or omission results in any of the following actions: “to harass, harm, pursue, hunt, shoot, kill, trap, capture, or collect, or attempt to engage in any such conduct.” Such acts may include significant habitat modification or degradation if it results in death or injury. Likewise, import, export, interstate, and foreign commerce of listed species are all prohibited. Sections 7 and 10 of the ESA permit “incidental take” of a listed species via a federal or private action, respectively, through formal consultation with the USFWS.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, 16 U.S.C. 703 et seq. The Migratory Bird Treaty Act (MBTA) prohibits the take (including killing, capturing, selling, trading, and transporting) of protected migratory bird species without prior authorization from USFWS.

Clean Water Act

The USACE regulates impacts to waters of the U.S. under Section 404 of the CWA (33 USC 1344). The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. A federal CWA Section 404 Permit would be required for a project to discharge dredged or fill in waters of the U.S. Projects impacting waters of the U.S. can be permitted on an individual basis or be covered under one of several approved nationwide permits. Individual permits are assessed individually based on the type of action, amount of fill, etc. Individual permits typically require substantial time (often longer than one year) to review and approve, while nationwide permits are pre-approved if a project meets appropriate conditions. Utility line activities may be authorized under CWA Section 404 Nationwide Permit (NWP) 12, which does not place a limit on impacts to linear feet of waters of the U.S. A CWA Section 401 Water Quality Certification administered by the RWQCB must be issued prior to issuance of a Section 404 Permit.

State

California Environmental Quality Act

Primary environmental legislation in California is found in the CEQA and its implementing guidelines (State CEQA Guidelines), requiring that projects with potential adverse effects or impacts on the environment undergo environmental review. Adverse impacts to the environment are typically mitigated as a result of the environmental review process in accordance with laws and regulations.

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in ESA and the section of the CFG Code dealing with rare or endangered plants and animals. CEQA Guideline Section 15380(d) allows a public

agency to undertake a review to determine whether a significant effect would occur on species that have not yet been listed by either the USFWS or CDFW (i.e., species of concern). Thus, if warranted under special circumstances, CEQA provides an agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as formally protected.

Pursuant to the requirements of CEQA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species.

California Fish and Game Code

The CFG Code prohibits the unauthorized taking of birds, mammals, fish, amphibians, and reptiles (CFG Code 2050 *et seq.*). Sections 1600 *et seq.* of the CFG Code includes definitions and provisions for the protection of lake and streambed resources. The CDFW requires notification for any activity that could result in an alteration of lake or streambed resources. Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the code or any regulation made pursuant thereto. Raptors (birds of prey) and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. In common practice, CDFW places timing restrictions on the clearing of potential nesting habitat (e.g., vegetation), as well as restrictions on disturbances allowed near active raptor nests.

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

This section provides a project-level biological resources impact analysis for the proposed project in support of an environmental review. The issues addressed in this section are derived from Appendix G of the State 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.

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?

Issue 1 Impact Analysis

Less than Significant Impact with Mitigation. Project construction could result in potential significant impacts on nesting birds protected under the federal MBTA and CFG Code; however, the impacts would be reduced to less than significant levels with the implementation of proposed mitigation, as described in further detail below. The project would have no impact on any other special-status plant and animal species due to the lack of suitable habitat on the site and regular disturbance.

Nesting Birds

Trees, shrubs, and other vegetation that provide suitable nesting habitat for common birds, including raptors, protected under the MBTA and CFG Code are present within and in the immediate vicinity of the potential direct disturbance area for the project, including staging areas. Construction of the proposed project could result in the removal or trimming of trees and other vegetation during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds in violation of the MBTA and CFG Code. Direct impacts could occur as a result of the removal of vegetation supporting an active nest. Indirect effects could occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active bird nest, such that the disturbance results in nest abandonment or nest failure. Impacts would be considered significant. Implementation of mitigation measure Bio-1 would reduce potentially significant impacts on nesting birds and raptors to less than significant levels.

Burrowing Owl

Burrowing owl have low potential to occur in the open fields of disturbed habitat that occurs in patches within the study area. Ground disturbance within 500 feet (150 meters) of an active burrow during the breeding season (February 1 through August 31) or within 165 feet (50 meters) of an active burrow outside the breeding season could result in impacts to burrowing owl in violation of the MBTA and CFG code. Direct impact could occur from ground disturbance at a burrow. Indirect impacts could occur as a result of construction noise in the immediate vicinity as described above, such that the disturbance results in nest/burrow abandonment or nest failure. Impacts would be considered significant. Implementation of mitigation measure Bio-2 would reduce potentially significant impacts on burrowing owl to less than significant levels.

Coastal California gnatcatcher

Coastal California gnatcatcher (CAGN) “tends to occur most frequently within the California sagebrush-dominated stands” of sage scrub (Dudek 2004). The sage scrub (California buckwheat scrub) in the study occurs on the short slope between the development and I-15. This sage scrub is dominated by California buckwheat and lacks a significant California sagebrush component. The minimal amount of California sage scrub, along with the habitat consisting of a narrow strip between what is primarily residential development and I-15, results in the CAGN as not likely to occur in this location. Should CAGN occur at this location, it is presumed they are adjusted to a significant noise level that occurs in the habitat as a combination of the residential development and vehicle traffic on I-15. If CAGN do occur in this habitat and the project resulted in impacts to the habitat, it would be considered significant under CEQA. Although the project does not propose direct impacts to the habitat, portions of the project alignment do occur parallel to the sage scrub. Implementation of mitigation measure Bio-3 would reduce potential impacts to CAGN to less than significant.

Issue 1 Mitigation Measures

Mitigation

Bio-1 **Avoidance of Nesting Birds and Raptors.** To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and CFG Code, the City shall enforce the following:

Project activities requiring the removal and/or trimming of vegetation suitable for nesting birds shall occur outside of the general bird breeding season (January 15 to September 15) to the extent feasible. If the activities cannot avoid the general bird breeding season, a qualified biologist shall be retained to conduct a pre-activity nesting bird survey within seven days prior to the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the qualified biologist, then the activities shall proceed with the reassurance that no violation of the MBTA and CFG Code would occur. If an active bird nest is found by the qualified biologist, then vegetation removal and/or trimming activities at the nest location shall not be allowed to occur until the qualified biologist has determined that the nest is no longer active. Avoidance buffers should start at 300 feet for passerine birds and 500 feet for raptors. However, buffers could be reduced at the discretion of the qualified biologist depending on the bird species and project activities required in the vicinity of the active nest.

Bio-2 **Avoidance of Burrowing Owl.** To prevent direct impacts to burrowing owl, the following measures shall be implemented:

Burrowing owl surveys shall be conducted in accordance with CDFW staff report guidelines (CDFW 2012). This consists of a habitat assessment and burrow survey, along with a four-visit focused burrowing owl survey. The initial assessment indicates that burrowing owl habitat does occur in the study area but burrows suitable for burrowing were not observed. If the focused burrow survey indicates that burrows suitable for burrowing owl are not present, then potential burrowing owl habitat does not occur, and focused burrowing owl surveys are not required. If suitable burrows are observed, then focused burrowing owl surveys will be conducted per CDFW protocol. If potential burrowing owl habitat is determined to be present, pre-construction surveys will also be conducted. Per the CDFW protocol two pre-construction surveys will occur, one within 14 days prior to the start of ground disturbance activities and a second within 24 hours of the start of ground disturbance.

If burrowing owls are observed, the CDFW will be notified. No work shall occur within 500 feet (150 meters) of the active burrow during the breeding season from February 1 to August 31 or within 165 feet (50 meters) during the non-breeding season without first consulting with CDFW. If work is required to be conducted within these limits, a minimization, avoidance, and exclusion plan is to be submitted to CDFW. The plan should include measures such as sound and visual barriers, work timing, biological monitoring, and if needed, temporary exclusion methods.

Bio-3 Avoidance of CAGN. Although CAGN are unlikely to occur, their potential presence in the sage scrub (California buckwheat scrub), including disturbed, along I-15 (Figure 5a and b) cannot be totally ruled out. To prevent direct impacts to coastal California gnatcatcher, the following measures shall be implemented.

No work shall occur within 500 feet of the sage scrub habitat during the breeding season (February 15 to August 30) unless visual and sound barriers are utilized. Existing residential houses and associated ornamental vegetation will serve as the barriers for the majority of the project alignment. The project shall avoid direct impacts to sage scrub habitats. This includes direct vegetation removal, using the habitat for spoils piles, staging areas, or worker break locations.

For the portions of the alignment that occur within 500 of the sage scrub habitat that do not include existing barriers, the project will restrict work within the non-breeding window of September 1 to February 14. If work must occur within 500 feet of the sage scrub during the breeding season, the project will implement the following:

The project will conduct a USFWS protocol presence/absence survey for CAGN according to the current protocol. The survey will be conducted by a biologist with a permit to conduct CAGN surveys. If CAGN are present, and work within 500 feet of the habitat is to occur, the project will initiate a consultation with the USFWS and CDFW. If CAGN are not present, no additional mitigation measures with respect to CAGN are required.

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?

Issue 2 Impact Analysis

Less than Significant. The project would have no impact on riparian habitat and sensitive natural communities, as the project impacts are proposed to occur within the existing roadways and residential developments. Additionally, the project will avoid impacts to the small drainages in the study area. Direct impacts are restricted to existing disturbed habitats and developed land. If not properly contained, construction activities could result in adverse inadvertent and indirect impacts on resources located adjacent to work areas, such as storm drain, open water, and drainages. As a standard construction practice and regulatory requirement, the EVMWD will implement Best Management Practices (BMPs) from the required Stormwater Pollution Prevention Plan (SWPPP) for the project, which may include:

- Installing and maintaining sediment and erosion control measures;
- Employing appropriate standard spill prevention practices and clean-up materials;
- Maintaining the project area free of trash and debris;
- Maintaining effective control of fugitive dust; and

- Properly storing, handling, and disposing of toxins and pollutants, including waste materials.

Thus, with the required implementation of BMPs and the project's SWPPP, no indirect impacts to off-site sensitive resources would occur.

Issue 2 Mitigation Measures

No mitigation is required.

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?

Issue 3 Impact Analysis

Less than Significant Impact. The project would have no direct impact on federally protected wetlands, given that none occurs on the project site. As described in Issue 2, the District will implement BMPs during construction, which would prevent any indirect impacts to off-site federally protected wetlands (i.e., within or adjacent to Lake Elsinore or the San Jacinto River that occur west of the study area).

Issue 3 Mitigation Measures

No mitigation is required.

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?

Issue 4 Impact Analysis

Less than Significant Impact. The project site is not expected to function as a wildlife corridor in its current condition, although birds may use trees on-site. The majority of the project site is developed with residential land uses. Impacts to wildlife movement and nursery sites would be less than significant, and no mitigation is required.

Issue 4 Mitigation Measures

No mitigation is required.

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?

Issue 5 Impact Analysis

No Impact. The project would not conflict with any local policies or ordinances protecting biological resources. Tree removal, if required, may occur within the ornamental vegetation on the residential lots. The City tree ordinance does not apply to residential ornamental trees, with the potential exception of mature palm trees. The project will not result in the removal of native trees or mature palms. The project would not conflict with any City policies or ordinances, and no impact would occur.

Issue 5 Mitigation Measures

No mitigation is required.

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?

Issue 6 Impact Analysis

No Impact. The study area is within the Elsinore Area Plan of the MSHCP, and partially within Subunit 4: Sedco Hills and criteria cell 4838. The study area does not include land targeted for conservation within the cell, as discussed below.

MSHCP CELL CONSERVATION CRITERIA

The northeast portion of the study area includes approximately 26 acres comprised of 0.5 acre of California buckwheat scrub, 4.5 acres of disturbed habitat, and 21 acres of developed land in the southwest portion of the cell. These land uses include Lakeview Terrace, and the slope along I-15 and the residential development. Cell 4838 targeted conservation is for 15 to 25 percent of the cell, focusing on the northeast portion of the Cell, comprised of coastal sage scrub and chaparral. The project area is not within the targeted conservation for the cell (Figure 7, *MSHCP Criteria Cells*).

MSHCP FOCUSED SPECIES SURVEY REQUIREMENTS

The study area is not within the Narrow Endemic Plant Species (NEPS) Survey Area or within the Criteria Area Species (CAS) Survey Area for sensitive plant species. The study area is also not within the burrowing owl, mammal, or other species survey area. Habitat for riparian/riverine species does not occur within the study area, with the exception of two small drainages that originate from a culvert under I-15. These drainages do not provide habitat for the riparian/riverine species in the MSHCP. The MSHCP requires the conservation of 90 percent of plant populations that have long-term conservation value. The small pockets of undeveloped habitat are not expected to support NEPS, CAS, or riparian/riverine species, as the habitat occurs as small, isolated pockets with regular human disturbance and do not represent habitat with potential long-term conservation value.

Issue 6 Mitigation Measures

No mitigation is required.

FEDERAL CONFORMANCE ANALYSIS FOR BIOLOGICAL RESOURCES ISSUES

ISSUE 1: Federal Endangered Species Act, Section 7

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may affect federally listed threatened or endangered species or their critical habitat that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

No adverse effect. The proposed disturbance area does not contain any critical habitat for federally listed species. The project study area includes a thin strip of sage scrub that is unlikely to support CAGN, but the potential presence of this species cannot be ruled out. Although the project does not propose direct impacts to the sage scrub if the species is present, the project could result in indirect impacts to CAGN. To reduce the potential impacts to less than significant, the project will implement mitigation measure Bio 3. Except for the CAGN discussed above the project does not include or is not adjacent to undeveloped areas characterized by native habitat that could support animal species listed under the ESA. No direct or indirect effects to federally listed animal species are expected. Further discussion is provided below regarding the potential effects of the proposed action on federally listed species.

Federally Listed Plant Species

No adverse effect. No federally listed plant species were found during the project survey, and none have more than a low potential to occur. The project is proposed to limit activities to developed land and minor impacts to disturbed habitat that has been previously impacted by human activities. The project site lacks suitable habitat, soils, and/or hydrology for listed plant species. Therefore, no direct or indirect effects on federally listed plant species are anticipated to occur as a result of the proposed project.

The following federally listed endangered (FE) and federally listed threatened (FT) plant species were analyzed for their potential to occur:

- California Orcutt grass (*Orcuttia californica*); FE
This species generally requires southern basaltic claypan vernal pools and alkaline vernal pools, which are absent from the study area.
- Munz onion (*Allium munzii*); FE
This species requires clay soils that are absent from the study area.
- San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*); FE
This species requires playas or vernal pools that do not occur in the study area.
- San Diego ambrosia (*Ambrosia pumila*); FE
This species requires floodplain terraces or vernal pool margins that do not occur in the study area.
- spreading navarretia (*Navarretia fossalis*); FT
This species occurs in vernal pools that are absent from the study area.

- thread-leaved brodiaea (*Brodiaea filifolia*); FT

This species occurs in mud flats and vernal pools that do not occur in the study area.

Federally Listed Animal Species

No adverse effect. No federally listed plant species were observed during the project survey, and none have more than a low potential to occur. The following federally listed endangered (FE), federally listed threatened (FT), and federal candidate for listing (FC) animal species were analyzed for their potential to occur:

- Monarch butterfly (*Danaus plexippus*); FC

This species requires milkweed for reproduction. Can use other flowering plant for nectar sources. Milkweed is absent from the study area; species has low potential to use ornamental species in development while migrating.

- Quino checkerspot butterfly (*Euphydryas editha quino*); FE

This species requires specific host plants for reproduction that are absent from the study area.

- Riverside fairy shrimp (*Streptocephalus woottoni*); FE

This species requires vernal pools that are absent from the study area.

- Vernal pool fairy shrimp (*Branchinecta lynchi*); FT

This species requires vernal pools that are absent from the study area.

- Coastal California gnatcatcher (*Polioptila californica californica*); FT

This species prefers sage scrub with a California sage component that is a dominant or co-dominant species that does not occur in the study area.

- Least Bell's vireo (*Vireo bellii pusillus*); FE

Species requires dense riparian habitats such as southern willow scrub that are absent from the study area.

- southwestern willow flycatcher (*Empidonax traillii extimus*); FE

This species requires dense riparian habitats that are absent from the study area.

- western snowy plover (*Charadrius alexandrinus nivosus*); FT

This species occurs on coastal and sand dune beaches, river mouths, and estuaries that do not occur in the study area.

- San Bernardino Merriam's kangaroo rat (*Dipodomys merriami parvus*); FE

This species occurs in sage scrub within alluvial fans, floodplains, and sandy soils. Soils in the study area are all mostly loams. Alluvial fan and floodplains are absent from the study area. All soils are highly disturbed from development.

- Stephens' kangaroo rat (*Dipodomys stephensi*); FT

This species requires an open area with sparse perennial cover and loose soils. Open areas with sparse vegetation are limited to the small patches of disturbed habitat in the study area.

The project study area, consisting primarily of developed habitat, lacks suitable habitat for most of these species. The sage scrub habitat on the slope adjacent to I-15 has a low potential for CAGN to occur. CAGN typically prefer sage scrub habitat with California sagebrush as a dominant or co-dominate species and the sage scrub habitat is dominated by California buckwheat with little to no California sagebrush being present. No impacts are proposed to occur to this habitat; therefore, the project would not directly or indirectly adversely affect federally listed species.

ISSUE 2: Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat

Does the project involve any direct effects from construction activities, or indirect effects such as growth inducement that may adversely affect essential fish habitat?

No adverse effect. The proposed project would be constructed within developed upland areas that lack marine resources and Essential Fish Habitat regulated under the Magnuson-Stevens Fishery Conservation and Management Act. Therefore, the proposed project would not adversely affect Essential Fish Habitat and would be in conformance with the Magnuson-Stevens Fishery Conservation and Management Act.

ISSUE 3: Coastal Zone Management Act

Is any portion of the project site located within the coastal zone?

No adverse effect. No portion of the project site is located within the coastal zone. Therefore, the proposed project would have no effect on resources protected under the Coastal Zone Management Act.

ISSUE 4: Migratory Bird Treaty Act

Will the project affect protected migratory birds that are known, or have a potential, to occur on-site, in the surrounding area, or in the service area?

No adverse effect. Construction of the project may require the removal or trimming of trees and shrubs within developed areas during the general bird nesting season (January 15 through September 15) and/or raptor nesting season (January 15 through July 31), which could result in potential adverse effects on nesting birds and raptors in violation of the MBTA. Indirect effects could occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active bird nest, such that the disturbance results in nest abandonment or nest failure.

With the implementation of mitigation measure Bio-1, the proposed action is not likely to adversely affect nesting birds, and the project would be in conformance with the MBTA.

ISSUE 5: Protection of Wetlands

Does any portion of the project boundaries contain areas that should be evaluated for wetland delineation or require a permit from the USACE?

No adverse effect. No federally protected wetlands occur within the project site. The drainages in the study area include two with no downstream connection and one that is a concrete roadside ditch. These drainages and the artificial pond are not wetlands, but they may be waters of the U.S. However, the project does not propose impacts to these features. Potential runoff and increase in pollutants associated with construction activities near storm drains would be controlled and reduced through the implementation of BMPs and other protective measures incorporated into the project as mandatory requirements for regulatory compliance and SWPPP implementation. With the incorporation of the protective measures, the project would not result in any adverse effects on federally protected wetlands that may occur off-site and would result in conformance with the CWA.

ISSUE 6: Wild and Scenic Rivers Act:

Is any portion of the project located within a wild and scenic river?

No adverse effect. None of the proposed project components are planned on or in the immediate vicinity of areas designated as Wild and Scenic River. Therefore, the proposed project would not adversely affect any areas designated as Wild and Scenic River and would be in conformance with the Wild and Scenic Rivers Act.

CLOSING

We appreciate the opportunity to provide you with this letter report. Please do not hesitate to contact me at (949) 244-3653 or SueM@helixepi.com or Rob Hogenauer at (562) 537-2426 or RobertH@helixepi.com if you have any questions or require further assistance.

Sincerely,



Sue Meyer
Biology Group Manager



Rob Hogenauer
Senior Scientist

Attachments:

- Figure 1: Regional Location
- Figure 2: USGS Topography
- Figure 3: Aerial Photograph of Project Location
- Figure 4: Proposed Pipe Alignment
- Figure 5: Vegetation - North
- Figure 6: Aquatic Resources - North
- Figure 7: MSHCP Criteria Cells

- Attachment A: APN List
- Attachment B: Representative Site Photos
- Attachment C: Plant Species Observed
- Attachment D: Animal Species Observed or Detected
- Attachment E: Special Status Plant Species with Potential to Occur
- Attachment F: Special Status Animal Species with Potential to Occur
- Attachment G: IPaC Report

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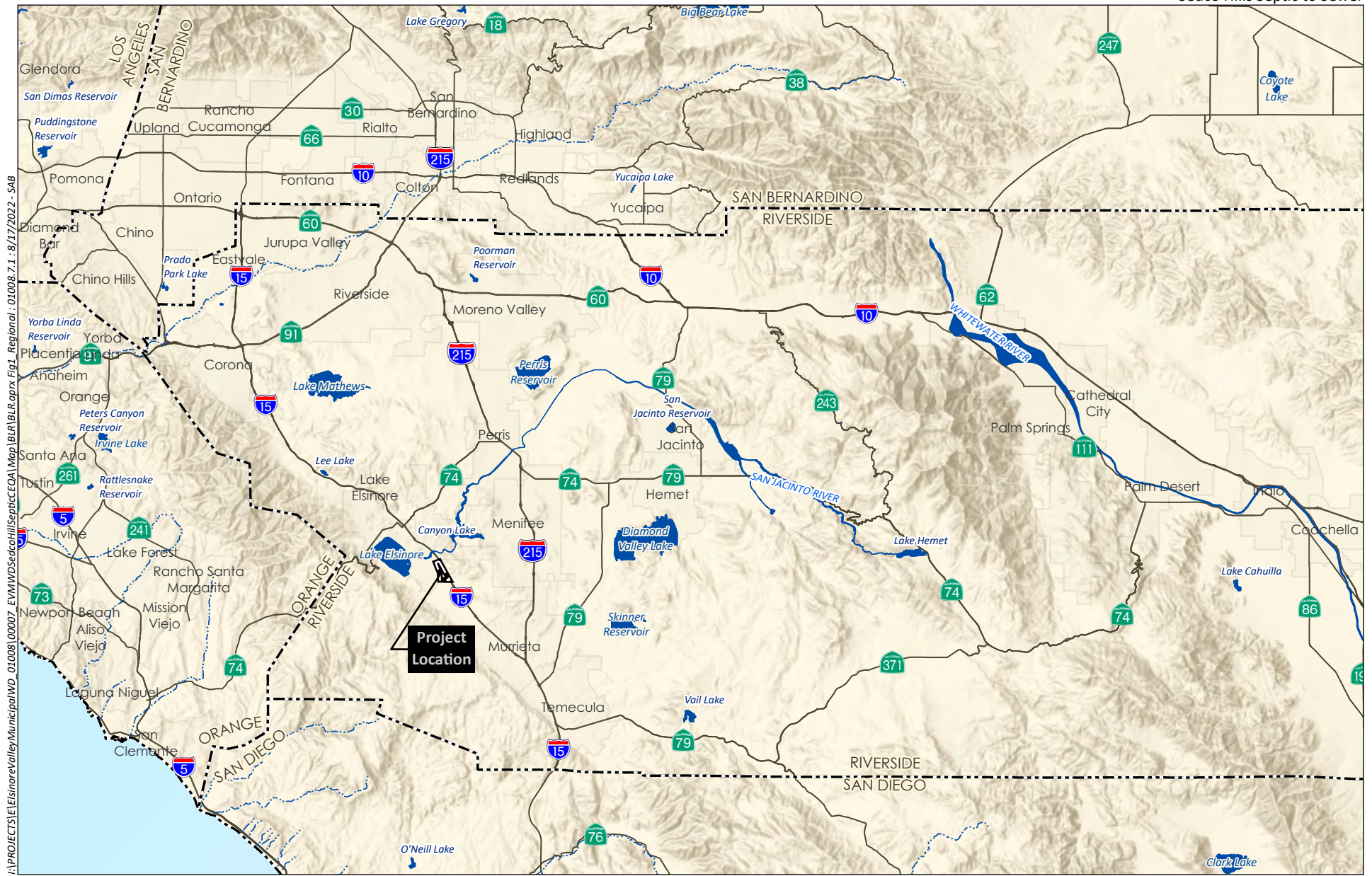
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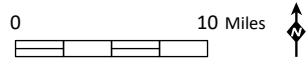
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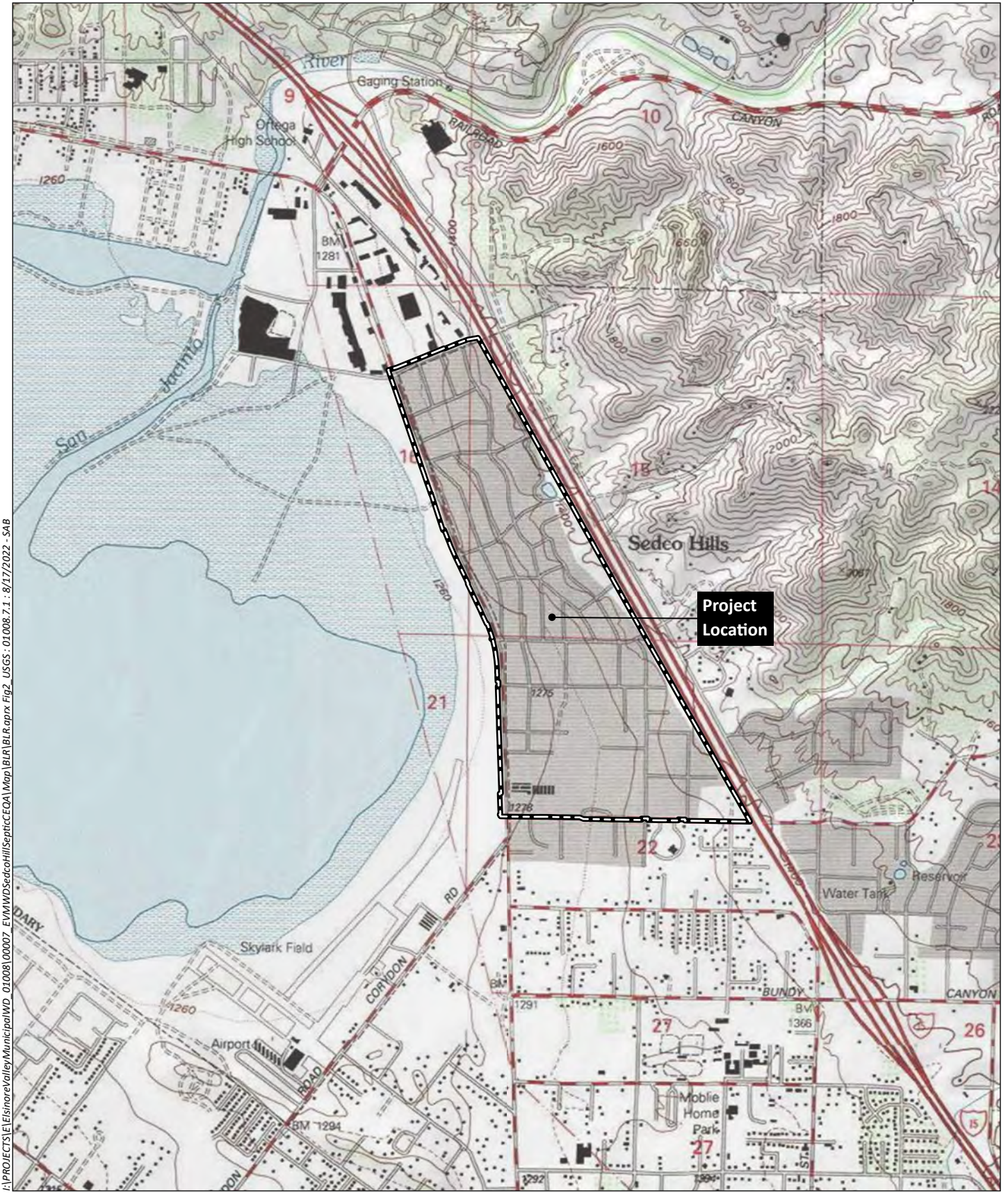
Figures



F:\PROJECTS\ElisnoreValleyMunicipal\WD_010008\00007 EVM\WD\SedcoHillsSepticCCEQA\Map\BLR\BLR.aprx Fig.1 Regional - 010008.7.1 : 8/17/2022 - SAB



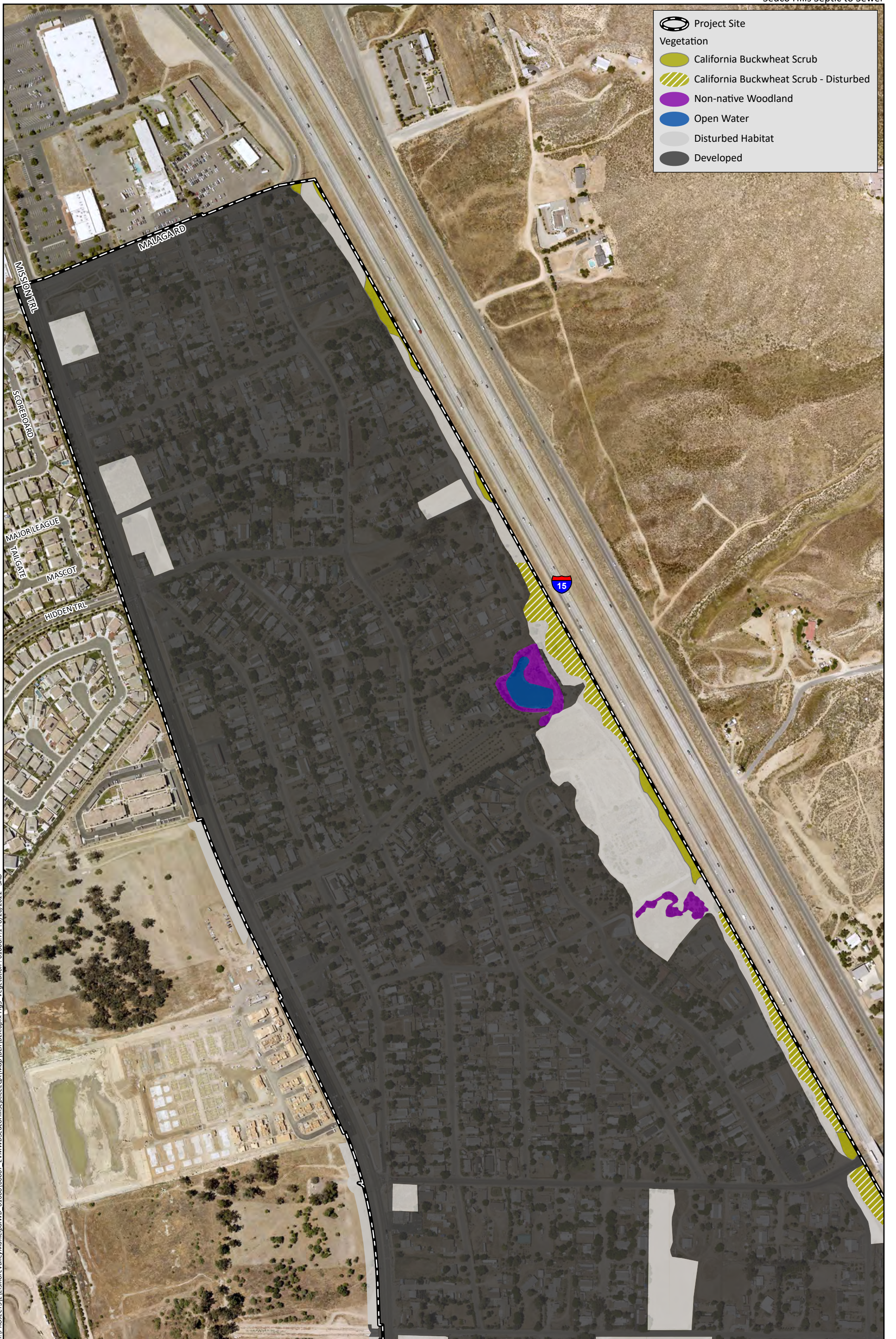
Source: Base Map Layers (ESRI, 2013)



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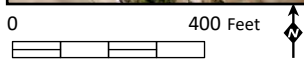
Source: LAKE ELSINORE 7.5' Quad (USGS)





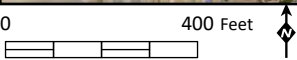
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



Source: Aerial (Riverside County, 2020)

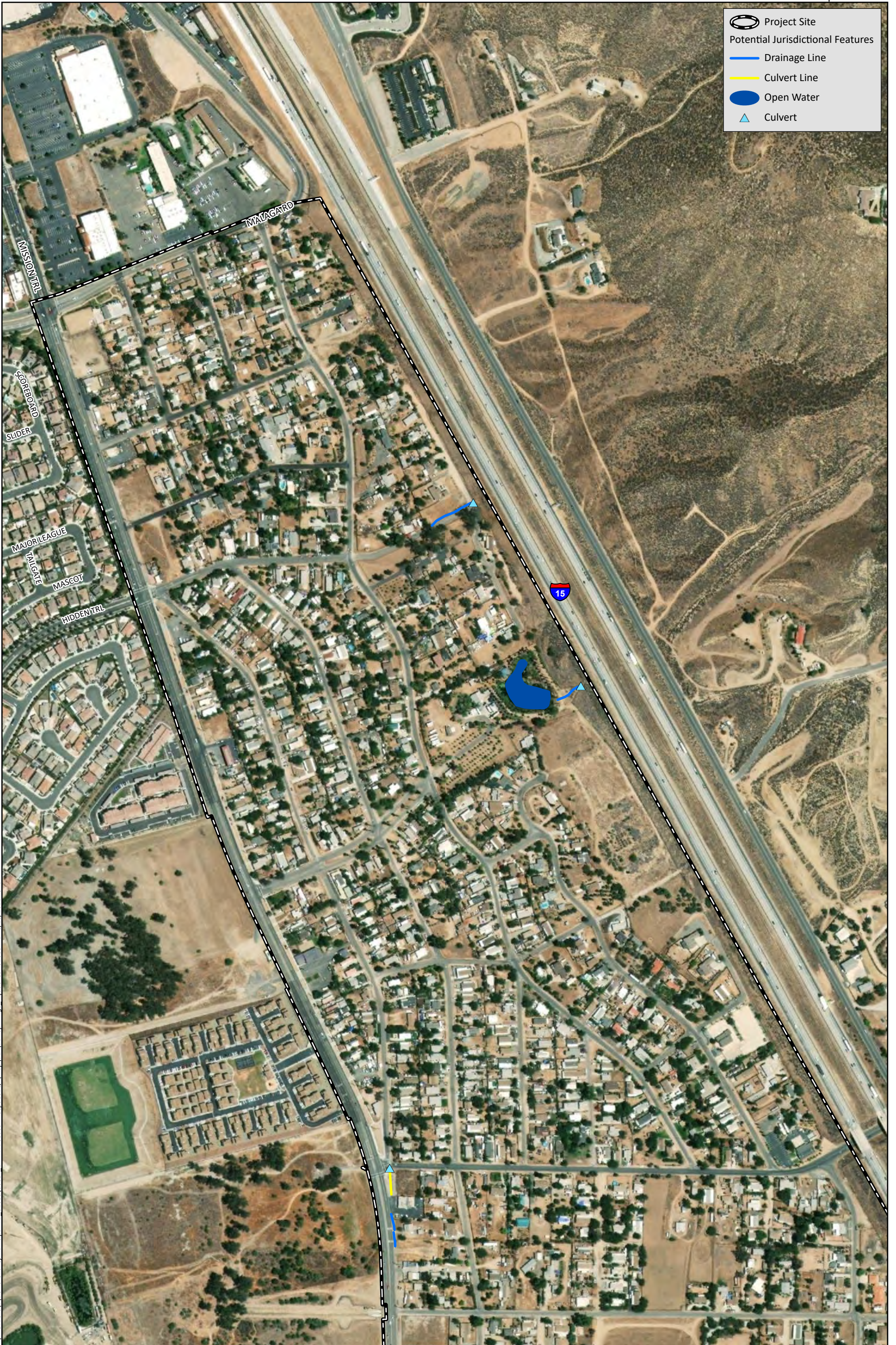




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




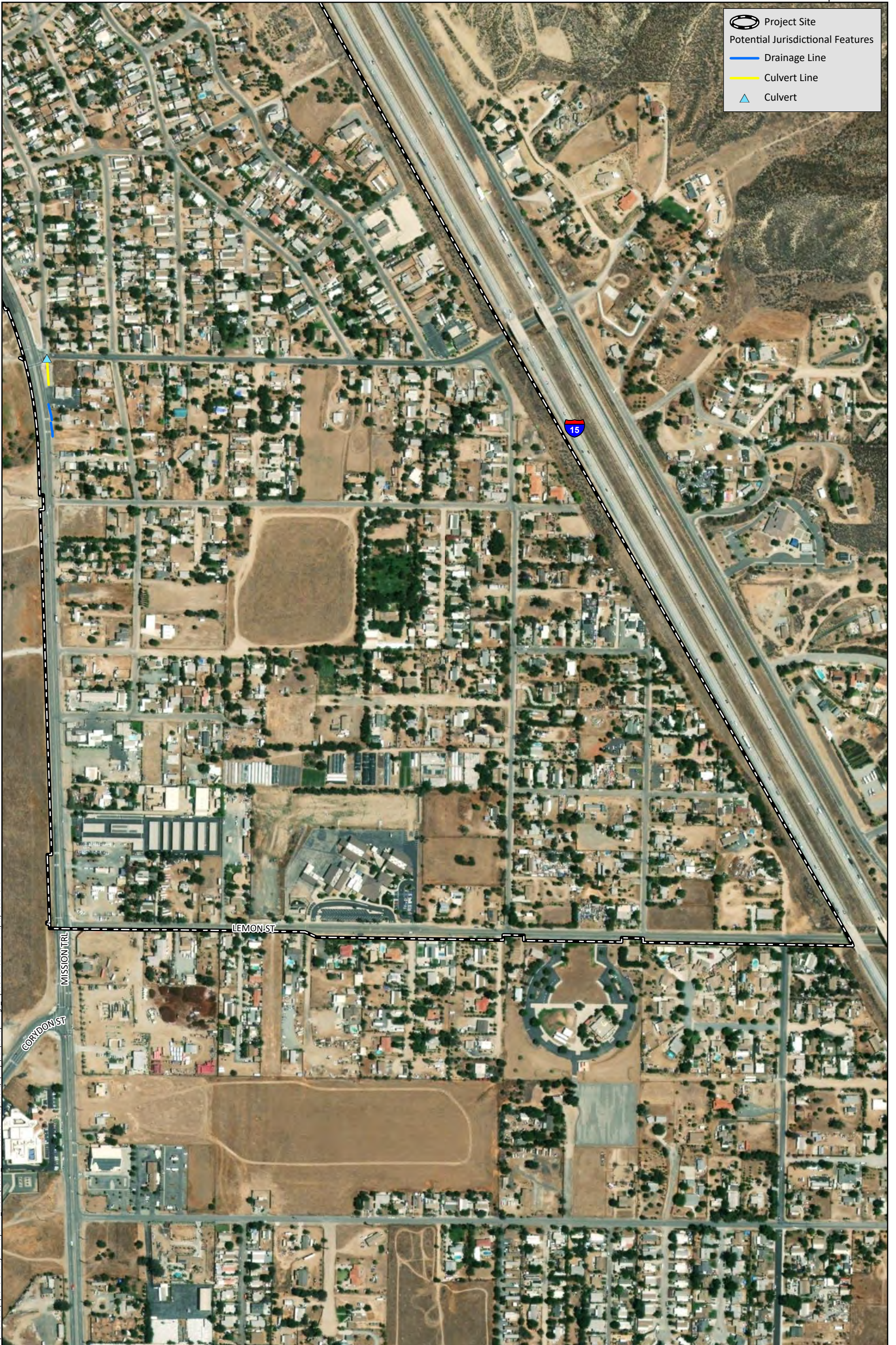
 Project Site
 Potential Jurisdictional Features
 Drainage Line
 Culvert Line
 Open Water
 Culvert



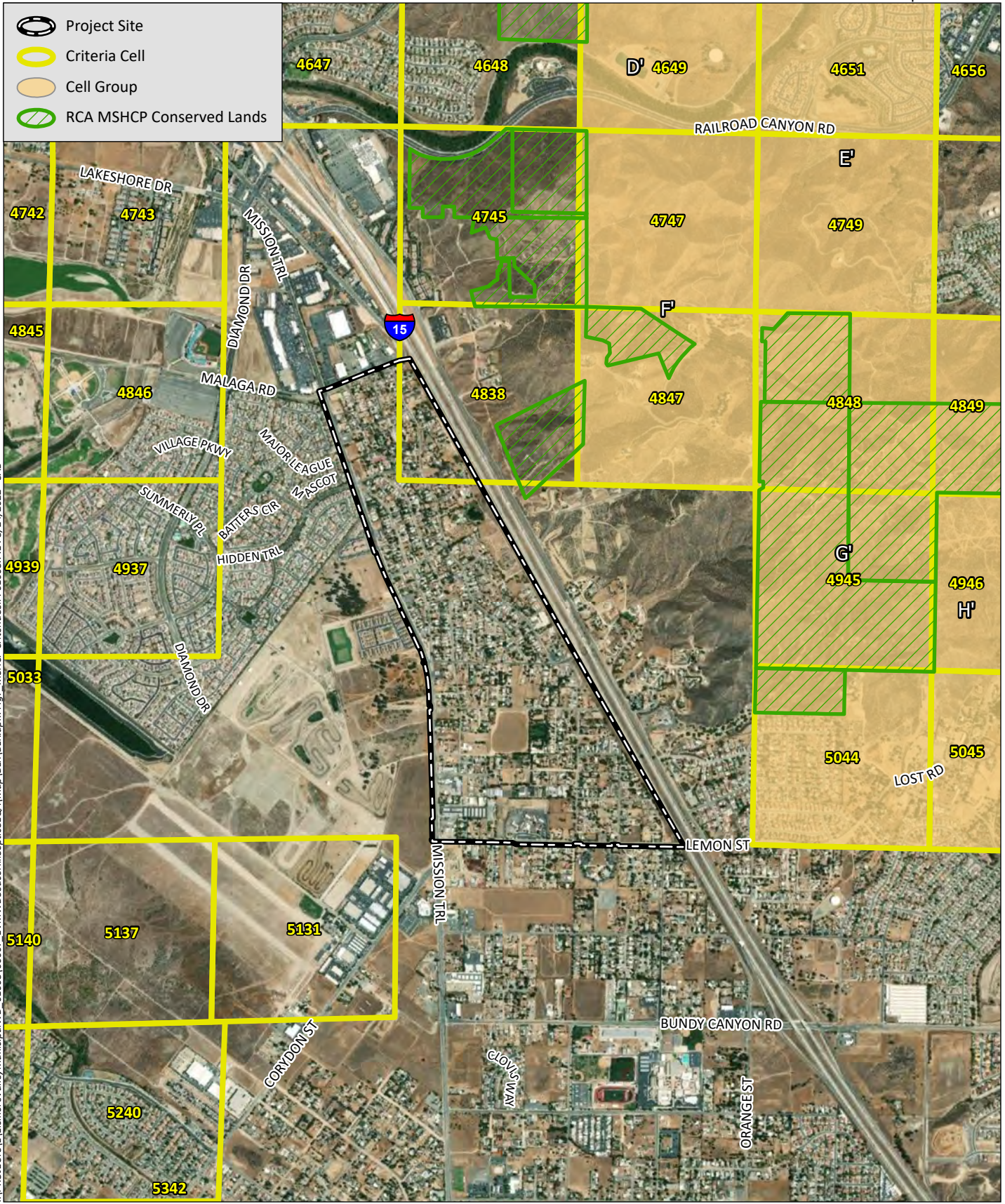
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Source: Aerial (Riverside County, 2020)

 Project Site
 Potential Jurisdictional Features
 Drainage Line
 Culvert Line
 Culvert



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Attachment A

APN List

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Attachment B

Representative Site Photos



Photo of residential development and roadway that dominates the project study area. Photo taken 8/5/2022.



Photo of rural residential development with ornamental vegetation. Photo taken 8/5/2022.

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Photo looking west along an undeveloped road bordered by rural residential habitat. Photo taken 8/5/2022.



Photo looking at disturbed private field in the study area. Photo taken 8/5/2022.

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Photo of large open disturbed field in the middle of the study area. Photo taken 8/5/2022.



Photo of an open storm drain along Mission Trail south of Olive Street. Photo taken 8/5/2022.

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Photo looking southeast of sage scrub on the slope adjacent to Interstate 15. Photo taken 8/5/2022.



Photo looking east at sage scrub with ornamental vegetation visible in the developed to each side. Photo taken 8/5/2022.

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Attachment C

Plant Species Observed

Family	Scientific Name ^{*,†}	Common Name	Habitat ¹
Dicots			
Anacardiaceae	<i>Schinus molle</i> *	Peruvian pepper tree	DEV
Apocynaceae	<i>Nerium oleander</i> *	oleander	DEV
Asteraceae	<i>Artemisia californica</i>	California sagebrush	CBS
	<i>Centaurea melitensis</i> *	tocalote	DH, CBS
	<i>Encelia farinosa</i>	brittlebush	DH, CBS
	<i>Helianthus annuus</i>	hairy leaved sunflower	DH
	<i>Oncosiphon piluliferum</i> *	stinknet	DH
Brassicaceae	<i>Raphanus sativus</i> *	wild radish	DH
Chenopodiaceae	<i>Salsola tragus</i> *	Russian thistle	DH, CBS
Euphorbiaceae	<i>Croton setiger</i>	turkey-mullein	DH, CBS
Meliaceae	<i>Melia azedarach</i> *	China berry tree	DEV
Myrtaceae	<i>Eucalyptus sp.</i> *	eucalyptus	DEV
Nyctaginaceae	<i>Bougainvillea sp.</i> *	bougainvillea	DEV
Oleaceae	<i>Olea europaea</i> *	olive	DEV
Polygonaceae	<i>Eriogonum fasciculatum</i>	California buckwheat	CBS
Simaroubaceae	<i>Ailanthus altissima</i> *	tree of heaven	DH
Solanaceae	<i>Datura wrightii</i>	jimsonweed	DH, CBS
Tamaricaceae	<i>Tamarix aphylla</i> *	athel	DH
Monocots			
Arecaceae	<i>Phoenix dactylifera</i> *	date palm	DEV
	<i>Washingtonia robusta</i> *	Mexican fan palm	DEV
Brassicaceae	<i>Hirschfeldia incana</i> *	short pod mustard	DH
Poaceae	<i>Avena sp.</i> *	wild oat	DH, CBS
	<i>Bromus madritensis</i> *	foxtail chess	DH, CBS
	<i>Cynodon dactylon</i> *	Bermuda grass	DH
	<i>Festuca myuros</i> *	rattail sixweeks grass	DH, CBS

* Non-native

¹ DH=Disturbed habitat; DEV=Developed land, CBS=California buckwheat shrub.

Attachment D

Animal Species Observed or Detected

Taxon Order	Taxon Family	Scientific Name	Common Name
INVERTEBRATES			
Hymenoptera	Apidae	<i>Apis</i> sp.	honey bee
VERTEBRATES			
Amphibians and Reptiles			
Squamata	Phrynosomatidae	<i>Uta stansburiana</i>	side-blotched lizard
Birds			
Accipitriformes	Accipitridae	<i>Buteo jamaicensis</i>	red-tailed hawk
Passeriformes	Mimidae	<i>Mimus polyglottos</i>	northern mockingbird
	Columbidae	<i>Zenaida macroura</i>	mourning dove
	Corvidae	<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>		common raven	
Mammals			
Lagomorpha	Leporidae	<i>Sylvilagus audubonii</i>	desert cottontail

Attachment E

Special Status Plant Species with
Potential to Occur

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Abronia villosa aurita</i>	chaparral sand verbena	--/-- CNPS Rank 1B.1	Sandy soils, requires bare ground; not tolerant of weeds.	Not Likely to Occur. Sandy soils and bare ground present, but site has significant disturbance and weed base present. Species readily identified, and was not observed.
<i>Allium marvinii</i>	Yucaipa onion	--/-- CNPS Rank 1B.1	Clay soils, open sage scrub or chaparral.	Not Likely to Occur. Soils not clay, minimal sage scrub at north side of study area.
<i>Allium munzii</i>	Munz's onion	FE/ST CNPS Rank 1B.1	Clay soils, opening in grassland, sage scrub.	Not Likely to Occur. No clay soils or sage scrub. Site highly disturbed.
<i>Almutaster pauciflorus</i>	Alkali marsh aster	--/-- CNPS Rank 2B.2	Alkaline meadows and seeps.	Not Likely to Occur. Alkaline meadows and seeps do not occur in study area.
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/-- CNPS Rank 1B.1	Stream floodplain terraces and vernal pool margins. Loam or clay soils, typically slightly acidic, often in disturbed areas.	Not Likely to Occur. Pools, streams and alluvial habitat not present in study area.
<i>Amsinckia douglasiana</i>	Douglas fiddleneck	--/-- CNPS Rank 4.2	Monterey shale, dry, cismontane woodland, grassland.	Not Likely to Occur. Appropriate soils not present.
<i>Arctostaphylos rainbowensis</i>	Rainbow manzanita	--/-- CNPS Rank 1B.1	Chaparral.	Not Likely to Occur. Species conspicuous and was not observed. Suitable habitat does not occur in study area.
<i>Asplenium verpertinum</i>	Western spleenwort	--/-- CNPS Rank 4.2	Rocky soils in Chaparral, woodland or coastal scrub.	Not Likely to Occur. Soils highly disturbed, rocky areas occurs in hills to north, but not in study area. No chaparral or woodland habitat.
<i>Atriplex coronata</i> var. <i>notator</i>	San Jacinto Valley crownscale	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 Likely to Occur. Playa, Chenopod scrub and vernal pool habitats not present.
<i>Atriplex parishii</i>	<i>Parish's brittle scale</i>	--/-- CNPS Rank 1B.1	Alkaline lowlands with saline soil.	Not Likely to Occur. Alkaline saline habitat does not occur in study area.
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	--/-- CNPS Rank 1B.2	Alkaline lowlands with saline soil.	Not Likely to Occur. Alkaline saline habitat does not occur in study area.
<i>Ayenia compacta</i>	California ayenia	--/-- CNPS Rank 2B.3	Washes associated with creosote bush scrub.	Not Likely to Occur. Washes and creosote habitat are not present in study area.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE CNPS Rank 1B.1	Semi alkaline mud flats and vernal pools, in clay soils.	Not Likely to Occur. No vernal pools, mud flats or clay soils.

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Brodiaea santarosae</i>	Santa Rosa basalt brodiaea	--/-- CNPS Rank 1B.2	Valley and foothill grasslands on basaltic soils.	Not Likely to Occur. Grasslands with basaltic soils do not occur.
<i>Calochortus catalinae</i>	Catalina mariposa lily	--/-- CNPS Rank 4.2	Chaparral, woodland, coastal scrub and grassland habitats.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Calochortus weedii</i> var. <i>intermedius</i>	intermediate mariposa lily	--/-- CNPS Rank 1B.2	Rocky, chaparral, scrub, and grassland.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Caulanthus simulans</i>	Payson's jewel-flower	--/-- CNPS Rank 4.2	Pinyon-juniper woodland, chaparral and sage scrub. Typically, on slopes and ridgelines with sandy granitic soil.	Not Likely to Occur. Woodland and chaparral not present. Slopes limited to edge of study area.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	--/-- CNPS Rank 1B.1	Riparian/watercourses, grassland, alkali scrub.	Not Likely to Occur. Riparian habitats not present. Species easy to detect when present and was not observed.
<i>Chorizanthe leptotheca</i>	Peninsular spineflower	--/-- CNPS Rank 4.2	Alluvial fans with granitic soils and chaparral, coastal scrub or coniferous forest habitats.	Not Likely to Occur. Alluvial fan habitat does not occur in study area.
<i>Chorizanthe parryi</i> <i>parryi</i>	Parry's spineflower	--/-- CNPS Rank 1B.1	Openings in chaparral and sage scrub, sandy or rocky soil.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Chorizanthe polygonoides longispina</i>	long-spined spineflower	--/-- CNPS Rank 1B.2	Chaparral, sage scrub, grassland, often in clay soils.	Not Likely to Occur. Clay soils not present, sage scrub limited to northern edge of study area.
<i>Clinopodium chandleri</i>	San Miguel savory	--/-- CNPS Rank 1B.2	Chaparral, woodland, scrub, grassland, rocky areas.	Not Likely to Occur. Chaparral, woodland and rocky habitat not present.
<i>Comarostaphylis diversifolia</i> spp. <i>diversifolia</i>	Summer holly	--/-- CNPS Rank 1B.2	Chaparral and cismontane woodland.	Not Likely to Occur. Chaparral and woodland habitat not present in study area.
<i>Convolvulus simulans</i>	Small-flowering morning-glory	--/-- CNPS Rank 4.2	Clay soils, seeps, in chaparral, coastal scrub and grasslands.	Not Likely to Occur. Clay soils and seeps not present in study area.
<i>Deinandra paniculata</i>	paniculate tarplant	--/-- CNPS Rank 4.2	Usually found in vernal mesic areas and sometimes sandy areas within coastal scrub, grassland, near ephemeral streambeds and vernal pools.	Not Likely to Occur. Sandy soils and mesic habitat not present in study area.
<i>Diplacus clevelandii</i>	Cleveland's bush monkeyflower	--/-- CNPS Rank 4.2	Rocky openings in chaparral, cismontane woodland and forest.	Not Likely to Occur. Rocky opening do not occur in study area.

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Dodecahema leptoceras</i>	slender-horned spineflower	FE/SE CNPS Rank 1B.1	Chaparral, woodland, scrub, sandy soil.	Not Likely to Occur. Chaparral and sandy soils not present and sage scrub limited to northern edge.
<i>Dudleya multicaulis</i>	many-stemmed dudleya	--/-- CNPS Rank 1B.2	Clay soils in barren, rocky areas with limited vegetation.	Not Likely to Occur. No clay soils present, chaparral or barren rocky areas present.
<i>Dudleya viscida</i>	sticky dudleya	--/-- CNPS Rank 1B.2	Chaparral, scrub, coastal bluffs, rocky.	Not Likely to Occur. Rocky bluffs not present.
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	FE/SE CNPS Rank 1B.1	Mesic area, sage scrub, grassland, vernal pools.	Not Likely to Occur. No vernal pools are present. Mesic areas limited to irrigation runoff.
<i>Geothallus tuberosus</i>	Campbell's liverwort	--/-- CNPS Rank 1B.1	Mesic soil, in wetlands, vernal pools, grassland, chaparral and coastal scrub.	Not Likely to Occur. No vernal pool habitat present. Mesic areas limited to irrigation runoff.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	--/-- CNPS Rank 4.2	Clay soil, chaparral, sage scrub, and grassland.	Not Likely to Occur. Chaparral and clay soils not present.
<i>Hesperocyparis forbesii</i>	Tecate cypress	--/-- CNPS Rank 1B.1	Clay, gabbroic or metavolcanic soils in coniferous forest or chaparral.	Not Likely to Occur. Habitat not present. Species obvious when present.
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	--/-- CNPS Rank 4.2	Woodland, sage scrub and grassland lacking a well-developed scrub cover. Only known in Riverside from Santa Rosa Plateau .	Not Likely to Occur. Woodland not present, grassland and sage scrub are limited and disturbed. Site not on or near Santa Rosa Plateau.
<i>Hordeum intercedens</i>	vernal barley	--/-- CNPS Rank 3.2	Mesic grasslands, vernal pools, and large saline flats or depressions.	Not Likely to Occur. No vernal pool, Mesic areas limited to irrigation runoff.
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Mesa horkelia	--/-- CNPS Rank 1B.1	Chaparral, woodland, and scrub, sandy or gravelly.	Not Likely to Occur. Chaparral, woodland habitats not present.
<i>Juglans californica</i>	southern California black walnut	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, alluvial soils.	Not Likely to Occur. Alluvial soils, woodland and chaparral not present.
<i>Juncus acutus</i> ssp. <i>Leopoldii</i>	Southwestern spiny rush	--/-- CNPS Rank 4.2	Coastal dunes, seeps, meadows, salt marshes, often in coastal strands.	Not Likely to Occur. Dune, seeps, and meadows not present.
<i>Juncus luciensis</i>	Santa Lucia dwarf rush	--/-- CNPS Rank 1B.2	Meadows, seeps, vernal pool in chaparral, coniferous forest and great basin scrub.	Not Likely to Occur. Chaparral, coniferous forest and great basin scrub not present.
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	--/-- CNPS Rank 1B.1	Sage scrub, oak woodland, grassland, usually in wetlands that are alkaline and associated with Travers or other clay soils.	Not Likely to Occur. No Travers or other clay soils. Mesic areas limited small irrigation runoff.

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Lathyrus splendens</i>	Pride-of-California	--/-- CNPS Rank 4.3	chaparral	Not Likely to Occur. Chaparral not present.
<i>Lepechinia cardiophylla</i>	Heart-leaved pitcher sage	--/-- CNPS Rank 1B.2	Perennial shrub found in coniferous forests, chaparral and cismontane woodland.	Not Likely to Occur. Forest, woodland and chaparral habitat not present.
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	--/-- CNPS Rank 4.3	Openings in chaparral and sage scrub, typically dry sites.	Low Potential to Occur. Dry sage scrub occurs on north edge of study area.
<i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	Ocellated Humboldt lily	--/-- CNPS Rank 4.2	Openings in chaparral, cismontane woodland, coastal scrub, riparian woodland.	Not Likely to Occur. Riparian woodland, chaparral and other woodland not present. Limited sage scrub at northern edge of study area.
<i>Lilium parryi</i>	lemon lily	--/-- CNPS Rank 1B.2	Banks of mountain seeps and stream with year round moisture, occurs above 3,000 feet amsl.	Not Likely to Occur. Study area is at 1,400 feet amsl and lower. Well below species known range.
<i>Limnanthes alba</i> ssp. <i>parishii</i>	Parish's meadowfoam	--/SE CNPS Rank 1B.2	Vernal pools, often in coniferous forest, meadows and seeps.	Not Likely to Occur. Vernal pools, seeps and forest not present.
<i>Microseris gouglasii</i> sp. <i>platycarpa</i>	Small-flowering microseris	--/-- CNPS Rank 4.2	Clay soils in woodland, coastal scrub, grasslands and vernal pools.	Not Likely to Occur. Clay soils and vernal pools, not present.
<i>Mimulus diffusus</i>	Palomar monkeyflower	--/-- CNPS Rank 4.3	Sandy or gravelly soil in chaparral or coniferous forest.	Not Likely to Occur. Chaparral and forest not present.
<i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	Intermediate monardella	--/-- CNPS Rank 1B.3	Chaparral, cismontane woodland and occasionally coniferous forest.	Not Likely to Occur. Chaparral, woodland and forest habitat not present.
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella	--/-- CNPS Rank 1B.3	Broad leaf forest, coniferous forest, chaparral, cismontane woodland and grassland.	Not Likely to Occur. Forest, chaparral and woodland habitat not present.
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mousetail	--/-- CNPS Rank 3.1	Alkaline vernal pools in grassland.	Not Likely to Occur. Vernal pools not present.
<i>Navarretia fossalis</i>	spreading navarretia	FT/-- CNPS Rank 1B.1	Vernal pools.	Not Likely to Occur. No vernal pool habitat present.
<i>Navarretia prostrata</i>	prostrate navarretia	--/-- CNPS Rank 1B.2	Mesic, alkaline, vernal pools, grassland, scrub. Nearly always occurs in wetlands.	Not Likely to Occur. No vernal pools present. Mesic habitat limited to minor irrigation runoff.
<i>Nolina cismontana</i>	chaparral nolina	--/-- CNPS Rank 1B.2	Chaparral and coastal scrub.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE CNPS Rank 1B.1	Vernal pools.	Not Likely to Occur. Vernal pool habitat does not occur.

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Phacelia keckii</i>	Santiago peak phacelia	--/-- CNPS Rank 1B.3	Closed cone coniferous forest, chaparral above 1,500 feet AMSL.	Not Likely to Occur. Site at or below 1,400 feet AMSL, forest and chaparral not present.
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	--/-- CNPS Rank 4.3	Shaded areas in woodland, also can occur in xeric and mesic chaparral.	Not Likely to Occur. Woodland and chaparral do not occur in study area.
<i>Pseudognaphalium leucocephalum</i>	white rabbit-tobacco	--/-- CNPS Rank 2.B2	Riparian areas, woodland, sandy or gravelly areas.	Not Likely to Occur. Species easily detected and was not observed. Woodland and riparian habitat not present.
<i>Quercus engelmannii</i>	Engelmann oak	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, riparian woodland, grasslands.	Not Likely to Occur. Riparian habitats present but species is conspicuous and no oaks were observed on site.
<i>Romneya coulteri</i>	Coulter's matilija poppy	--/-- CNPS Rank 4.2	Often in burns, chaparral, coastal scrub.	Not Likely to Occur. Chaparral and burn areas do not occur in study area.
<i>Scutellaria bolanderi</i> spp. <i>austromontana</i>	Southern mountains skullcap	--/-- CNPS Rank 1B.2	Woodland, chaparral, mesic	Not Likely to Occur. Woodland, chaparral does not occur. Mesic habitat limited to minor irrigation runoff.
<i>Sibaropsis hammittii</i>	Hammitt's clay cress	--/-- CNPS Rank 1B.2	Clay soils. In openings in chaparral or grassland.	Not Likely to Occur. Clay soils and chaparral not present.
<i>Sphaerocarpos drewei</i>	bottle liverwort	--/-- CNPS Rank 1B.1	Chaparral or coastal scrub below 2,000 feet amsl.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Symphotrichum defoliatum</i>	San Bernardino aster	--/-- CNPS Rank 1B.2	Near ditches, streams, seeps, marshes in grassland, scrub, forest.	Not Likely to Occur. Stream and wetland habitat do not occur in study area.
<i>Tetracoccus dioicus</i>	Parry's tetracoccus	--/-- CNPS Rank 1B.2	Chaparral and coastal scrub.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Texosporium sancti-jacobi</i>	woven spored lichen	--/-- CNPS Rank 3	Chaparral openings, usually on animal pellets, dead twigs or detritus rich soil.	Not Likely to Occur. Chaparral habitat not present.
<i>Tortula californica</i>	California screw moss	--/-- CNPS Rank 1B.2	Sandy soils in chenopod scrub or native grasslands.	Not Likely to Occur. No chenopod scrub or grassland present.
<i>Trichocoronis wrightii</i> var. <i>Wrightii</i>	Wright's trichocoronis	--/-- CNPS 2B.1	Vernal pools, marshes, meadows and other alkaline riparian habitats.	Not Likely to Occur. Pools, marshes, meadows not present.

Scientific Name	Common Name	Status	Habitat, Ecology and Life History	Potential to Occur
<i>Viguiera laciniata</i>	San Diego County viguiera	--/-- CNPS Rank 4.2	Chaparral, coastal scrub.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.
<i>Viguiera purisimae</i>	La Purisima viguiera	--/-- CNPS Rank 2B.3	Coastal scrub and chaparral.	Not Likely to Occur. Small amount of sage scrub present on slope adjacent to I-15 but is disturbed.

¹ Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare

² CNPS = California Native Plant Society Rare Plant Rank: 1A–presumed extirpated in California and either rare or extinct elsewhere; 1B–rare, threatened, or endangered in California and elsewhere; 2A–presumed extirpated in California, but more common elsewhere; 2B–rare, threatened, or endangered in California, but more common elsewhere; 3–more information needed; 4–watch list for species of limited distribution. Extension codes: .1–seriously endangered; .2–moderately endangered; .3–not very endangered.

³ County of San Diego Sensitive Plant Lists: A–rare, threatened, or endangered in California and elsewhere; B–rare, threatened, or endangered in California but more common elsewhere; C–may be quite rare but need more information; D–limited distribution and may be uncommon, but not presently endangered.

Not Likely to Occur–There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

Low Potential to Occur–There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

Moderate Potential to Occur–The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

High Potential to Occur–There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

Species Present–The species was observed on the Project Site at the time of the survey or during a previous biological survey

Attachment F

Special Status Animal Species with
Potential to Occur

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
INVERTEBRATES				
Insects				
<i>Bombus crotchii</i>	Crotch bumblebee	--/--	Scrub and grassland habitats. Uses sage, sunflowers, and similar species for nectar.	Low Potential to Occur. Disturbed habitat with similar species to non-native grassland is present along with small areas with sparse sage scrub species.
<i>Branchinecta lynchi</i>	vernal pool fairy shrimp	FT/--	Vernal pool and playa habitat, cool pools, preferable on clay soils.	Not likely to occur. No pools or similar habitat occurs.
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE/SSC	Vernal pools.	Not likely to occur. No pools or similar habitat occurs.
<i>Cicindela senilis frosti</i>	Senile tiger beetle	--/--	Occurs along marine shoreline, from central California coast south to salt marshes of San Diego, also found at Lake Elsinore.	Not likely to occur. Project alignment does not include marine or lake shore habitat. Salt creek crosses alignment but species not known to occur at this location.
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	FE/--	Open areas, sparse vegetation, and flowers. Host plants are <i>Plantago</i> spp., <i>Antirrhinum coulterianum</i> , and <i>Cordylanthus rigidus</i> .	Not likely to occur. Habitat along alignment is mostly disturbed or developed. Host plants not observed.
<i>Linderiella santarosae</i>	Santa Rosa Plateau fairy shrimp	--/--	Occurs in the vernal pools on the Santa Rosa Plateau on southern basalt flow vernal pools.	Not likely to occur. No pools or similar habitat occurs.
<i>Neolarra alba</i>	White cuckoo bee	--/--	Requires flowers for nectar.	Low potential to occur. Development includes ornamental vegetation with flowering species.
<i>Streptocephalus wootoni</i>	Riverside fairy shrimp	FE/--	Endemic to Western Riverside, Orange, and San Diego Counties. Found in deep long lasting seasonal vernal pools, ephemeral ponds and similar habitats.	Not likely to occur. No pools or similar habitat occurs.
VERTEBRATES				
Fish				
<i>Gila orcuttii</i>)	arroyo chub	--/SSC	Prefers slow moving streams or backwaters with sand or mud bottoms. Streams typically deeper than 40 centimeters (16 inches).	Not Likely to Occur. Flowing streams do not occur in the study area.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
<i>Oncorhynchus mykiss irideus</i>	Steelhead	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 Likely to Occur. Flowing streams do not occur in the study area.
Amphibians and Reptiles				
<i>Anaxyrus californicus</i>	arroyo toad	FE/SSC	Low flow streams with sparse cover in foothills, valleys and mountains. Requires sandy terraces.	Not Likely to Occur. Flowing streams do not occur in the study area.
<i>Anniella stebbinsi</i>	Southern California legless lizard	--/SSC	Coastal dune, sandy washes, alluvial fans, oak woodlands, conifer forest, sandy soils.	Not Likely to Occur. Study area is mostly developed or disturbed, dunes, washes and other habitats for species do not occur.
<i>Arizona elegans occidentalis</i>	California glossy snake	--/SSC	Scrub and grassland habitats, usually with loose or sandy soils. A generalist.	Low Potential to Occur. The eastern edge of the study area has scrub habitat on I-15 slope.
<i>Emys marmorata</i>	western pond turtle	--/SSC	Slow moving stream, ponds, reservoirs, and other water bodies deeper than 6 feet with logs or other submerged cover.	Not Likely to Occur. Ponds or other waters for species do not occur in study area.
<i>Cnemidophorus hyperthrus</i>	orange-throated whiptail	--/SSC	Chaparral, sage scrub, grassland, woodland, riparian areas.	Low Potential to Occur. Eastern edge of study area includes scrub habitat along I-15
<i>Cnemidophorus tigris stenjnegeri</i>	coastal western whiptail	--/SSC	Open rocky areas with sparse vegetation, usually scrub or grassland.	Low Potential to Occur. Eastern edge of study area include sage scrub habitat along I-15
<i>Crotalus ruber</i>	northern red-diamond rattlesnake	--/SSC	Heavy brush, boulders, can use a variety of habitats; prey density determining factor.	Not Likely to Occur. Scrub habitat occurs along I-15 but is disturbed, lacks boulders and has sparse vegetation.
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	--/--	Mesic habitats. woodlands, farms, grassland, chaparral.	Not Likely to Occur. Study area lacks mesic habitats other than minor amounts of irrigation runoff.
<i>Phrynosoma coronatum blainvillei</i>	coast horned lizard	--/SSC	Grassland, scrub, chaparral, and woodland.	Low Potential to Occur. Eastern edge of study area includes sage scrub habitat along I-15 that is disturbed.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
<i>Rana aurora draytonii</i>	California red-legged frog	FT/SSC	Ponds, lowland stream, riparian woodland, wetlands. Requires humid habitats.	Not Likely to Occur. Streams do not occur in study area. Ponds limited to a single man made pond with ornamental vegetation on banks.
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	--/SSC	Coastal and desert scrub, chaparral, dry washes. A generalist.	Low Potential to Occur. Species uncommon, scrub habitat occurs along eastern edge of study area along I-15.
<i>Scaphiopus hammondii</i>	western spadefoot	--/SSC	Grassland, sage scrub, or occasionally chaparral; standing water, puddles, vernal pools needed for reproduction.	Not Likely to Occur. Species requires standing pools that are not present in study area.
<i>Taricha torosa torosa</i>	coast range newt	--/SSC	Grassland, woodland associated with ponds, slow-moving streams.	Not Likely to Occur. Ponds and streams with water do not occur in study area.
<i>Thamnophis hammondii</i>	two-striped garter snake	--/SSC	Stream course with adjacent dense vegetation.	Not Likely to Occur. Streams with flow do not occur in study area.
Birds				
<i>Accipiter cooperi</i>	Cooper's hawk	--/WL	This raptor species requires mature forest, open woodlands, and river groves habitat.	Not Likely to Occur. Forest and woodlands do not occur in study area.
<i>Amphispiza belli belli</i>	Bell's sage sparrow	--/WL	Evenly spaced sage scrub.	Low Potential to Occur. Sage scrub occurs along the eastern edge of study area along I-15.
<i>Asio otus</i>	long-eared owl	--/SSC	Dense vegetation adjacent to open grassland or shrubland, and open forests.	Not Likely to Occur. Open grasslands with adjacent dense vegetation does not occur in study area.
<i>Aquila chrysaetos</i>	golden eagle	--/FP	Open country, prefers mountains or hills.	Not Likely to Occur. Study area is mostly developed with residential housing. Species generally avoids populated areas.
<i>Agelaius tricolor</i>	tricolored blackbird	--/SSC	Wetland with dense cattails, tall grasses, or thickets of willows.	Not Likely to Occur. The small patch of cattails is too small to accommodate the species.
<i>Aimophila ruficeps canescens</i>	southern California rufous crowned sparrow	--/WL	Hillsides, with grassland, sage scrub, or chaparral.	Low Potential to Occur. Sage scrub occurs along the eastern edge of study area adjacent to I-15.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
<i>Athene cunicularia</i>	burrowing owl	--/SSC	Grassland, fallow agriculture, and areas of sparse cover, preferably with burrows of fossorial mammals.	Low Potential to Occur. Open land limited to small lots intermixed in residential development subject to disturbance from humans and pets.
<i>Buteo regalis</i>	Ferruginous Hawk	--/WL	Large areas of open grassland or shrub with elevated nest sites.	Not Likely to Occur. Large open grassland area not present in study area.
<i>Buteo swainsoni</i>	Swainson's Hawk	--/ST	Open desert, sparse scrub with large trees.	Not Likely to Occur. Open desert not present. Large trees limited to ornamental vegetation.
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	FT/SSC	Coastal beaches, sand dune beaches, river mouths, estuaries.	Not Likely to Occur. Coastal areas and river mouths not present in study area.
<i>Coturnicops noveboracensis</i>	Yellow rail	--/--	Shallow marshes and wet meadows. Generally, an eastern U.S. species. Also known in northern California.	Not Likely to Occur. Marshes and meadows do not occur in study area.
<i>Elanus leucurus</i>	white-tailed kite	--/-- Fully protected	Grassland, agriculture with nearby woodland for nesting.	Not Likely to Occur. Patches of disturbed habitat to small lots intermixed in residential development subject to disturbance from humans and pets.
<i>Eremophila alpestris actia</i>	California horned lark	--/WL	Grassland, agriculture fields, and disturbed fields.	Low Potential to Occur. Disturbed habitat occurs on in small pockets of study area.
<i>Haliaeetus leucocephalus</i>	bald eagle	DL/SE	Large bodies of open water for foraging, Nearby trees for nesting and roosting.	Low Potential to Occur. Small pond occur in study area. Species known to forage in winter at Lake Elsinore.
<i>Icteria virens</i>	yellow breasted chat	--/SSC	Wide riparian woodland, dense willow thickets, with well-developed understory.	Not Likely to Occur. Riparian woodland and similar habitat does not occur in study area.
<i>Lanius ludovicianus</i>	loggerhead shrike	--/SSC	Open grassland or shrubland with trees, utility poles, fence post, or other perch sites.	Low Potential to Occur. Disturbed area present along with fence post and utility poles also present.
<i>Pandion haliaetus</i>	Osprey	--/--	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 Likely to Occur. Bodies of water do not occur in study area.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
<i>Plegadis chihi</i>	white-faced ibis	--/SSC	Shallow marshes, spoils banks, meadows, marshes.	Not Likely to Occur. Marshes and meadows not present in study area.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT/SSC	Coastal sage and other low scrub typically with California sage (<i>Artemisia californica</i>)	Not Likely to Occur. Sage scrub occurs on the small slope along I-15 of project but is dominated by California buckwheat and lacks California sage.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE/SE	Riparian areas with dense ground cover and stratified canopy, prefers willows.	Not Likely to Occur. Riparian habitat for species does not occur in study area.
Mammals				
<i>Chaetodipus fallax fallax</i>	San Diego pocket mouse	--/SC	Sage scrub and grassland, sandy soils.	Not Likely to Occur. Soils most loam and highly disturbed from development.
<i>Dipodomys merriami parvus</i>	San Bernardino kangaroo rat	FE/SSC	Sage scrub, sandy soils, alluvial fans, floodplains.	Not Likely to Occur. Soils most loam and highly disturbed from development.
<i>Dipodomys stephensi</i>	Stephen's kangaroo rat	FE/ST	Open areas with sparse perennial cover and loose soil.	Not Likely to Occur. Soils most loam and highly disturbed from development.
<i>Eumops perotis californicus</i>	western mastiff bat	--/SSC	Rocky areas, cliff faces, known to roost in buildings.	Not Likely to Occur. Rocky cliffs do not occur in study area. Building present area occupied.
<i>Lasiurus xanthinus</i>	western yellow bat	--/SSC	Desert grassland and scrub with an associated water feature.	Not Likely to Occur. Desert grassland and water features do not occur in study area.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	--/SSC	Primarily open scrub with short grasses.	Low Potential to Occur. Species locally common, may utilize scrub and disturbed habitat within study area
<i>Myotis yumanensis</i>	Yuma myotis	--/--	Juniper and riparian woodland, near open water. Roosts in caves, mines, bridges.	Not Likely to Occur. Juniper and riparian woodland do not occur.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	--/SSC	Desert scrub, roosts in cliffs, rocky crevices in small colonies.	Not Likely to Occur. Cliffs and rocky crevices not present.
<i>Neotoma lepida</i>	San Diego desert woodrat	--/SSC	Scrub and desert, rock outcrops, or areas of dense cover.	Not Likely to Occur. Scrub with rock outcrops does not occur in study area.
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	--/SSC	Grassland and sparse sage scrub.	Not Likely to occur. Scrub habitat limited to edge of I-15 highly disturbed.

Scientific Name	Common Name	Status	Habitat Associations	Potential to Occur
<i>Perognathus longimembris brevinasus</i>	Los Angeles pocket mouse	--/SSC	Fine sandy soils with sparse vegetation.	Not Likely to Occur. Soils mostly loam and highly disturbed from development.
<i>Taxidea taxus</i>	American badger	--/SSC	Upland grasslands, meadows, field.	Not Likely to Occur. Open field limited to patches along and within development.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	--/SSC	Grassland and chaparral ecotone, sage scrub.	Not Likely to Occur. Grassland and chaparral/sage scrub ecotone not present.

¹ Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SSC = State of California Species of Special Concern.

² County of San Diego Sensitive Animal List: Group 1 = Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met; Group 2 = Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action; these species tend to be prolific within their suitable habitat types.

Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity, (within 3 miles) of the Project Site and the diagnostic habitats strongly associated with the species do not occur on or in the immediate vicinity of the Site.

Low Potential to Occur - There is a historical record of the species in the vicinity of the Project Site and potentially suitable habitat on Site, but existing conditions, such as density of cover, prevalence of non-native species, evidence of disturbance, limited habitat area, isolation, substantially reduce the possibility that the species may occur. The Site is above or below the recognized elevation limits for this species.

Moderate Potential to Occur - The diagnostic habitats associated with the species occur on or in the immediate vicinity of the Project Site, but there is not a recorded occurrence of the species within the immediate vicinity (within 3 miles). Some species that contain extremely limited distributions may be considered moderate, even if there is a recorded occurrence in the immediate vicinity.

High Potential to Occur - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the Project Site (within 3 miles).

Species Present - The species was observed on the Project Site at the time of the survey or during a previous biological survey

Attachment G

IPaC Report

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Riverside County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📅 (760) 431-5901

2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
<p>San Bernardino Merriam's Kangaroo Rat <i>Dipodomys merriami parvus</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2060</p>	Endangered
<p>Stephens' Kangaroo Rat <i>Dipodomys stephensi</i> (incl. <i>D. cascus</i>) Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3495</p>	Threatened

Birds

NAME	STATUS
<p>Coastal California Gnatcatcher <i>Polioptila californica californica</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8178</p>	Threatened
<p>Least Bell's Vireo <i>Vireo bellii pusillus</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5945</p>	Endangered
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/6749</p>	Endangered

Western Snowy Plover *Charadrius nivosus nivosus* Threatened
There is **no** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/8035>

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Quino Checkerspot Butterfly <i>Euphydryas editha quino</i> (=E. e. wrighti) Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/5900	Endangered

Crustaceans

NAME	STATUS
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> Wherever found There is no critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Orcutt Grass <i>Orcuttia californica</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4923	Endangered

Munz's Onion *Allium munzii* Endangered

Wherever found

There is **no** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/2951>

San Diego Ambrosia *Ambrosia pumila* Endangered

Wherever found

There is **no** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/8287>

San Jacinto Valley Crownscale *Atriplex coronata* var. Endangered

notation

Wherever found

There is **no** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions or exclusions. See Federal Register publication for details.

<https://ecos.fws.gov/ecp/species/4353>

Spreading Navarretia *Navarretia fossalis* Threatened

Wherever found

There is **no** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1334>

Thread-leaved Brodiaea *Brodiaea filifolia* Threatened

Wherever found

There is **no** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6087>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\)](#) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A
BREEDING SEASON IS
INDICATED FOR A BIRD ON
YOUR LIST, THE BIRD MAY
BREED IN YOUR PROJECT AREA
SOMETIME WITHIN THE
TIMEFRAME SPECIFIED, WHICH

IS A VERY LIBERAL ESTIMATE
OF THE DATES INSIDE WHICH
THE BIRD BREEDS ACROSS ITS
ENTIRE RANGE. "BREEDS
ELSEWHERE" INDICATES THAT
THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT
AREA.)

Allen's Hummingbird *Selasphorus sasin*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9637>

Breeds Feb 1 to Jul 15

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Aug 31

Belding's Savannah Sparrow *Passerculus sandwichensis beldingi*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/8>

Breeds Apr 1 to Aug 15

Bullock's Oriole *Icterus bullockii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Mar 21 to Jul 25

California Thrasher *Toxostoma redivivum*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jan 1 to Jul 31

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Common Yellowthroat *Geothlypis trichas sinuosa*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/2084>

Breeds May 20 to Jul 31

Golden Eagle <i>Aquila chrysaetos</i>	Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	
https://ecos.fws.gov/ecp/species/1680	
Lawrence's Goldfinch <i>Carduelis lawrencei</i>	Breeds Mar 20 to Sep 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/9464	
Nuttall's Woodpecker <i>Picoides nuttallii</i>	Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	
https://ecos.fws.gov/ecp/species/9410	
Oak Titmouse <i>Baeolophus inornatus</i>	Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/9656	
Tricolored Blackbird <i>Agelaius tricolor</i>	Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/3910	
Western Grebe <i>Aechmophorus occidentalis</i>	Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	
https://ecos.fws.gov/ecp/species/6743	
Wrentit <i>Chamaea fasciata</i>	Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

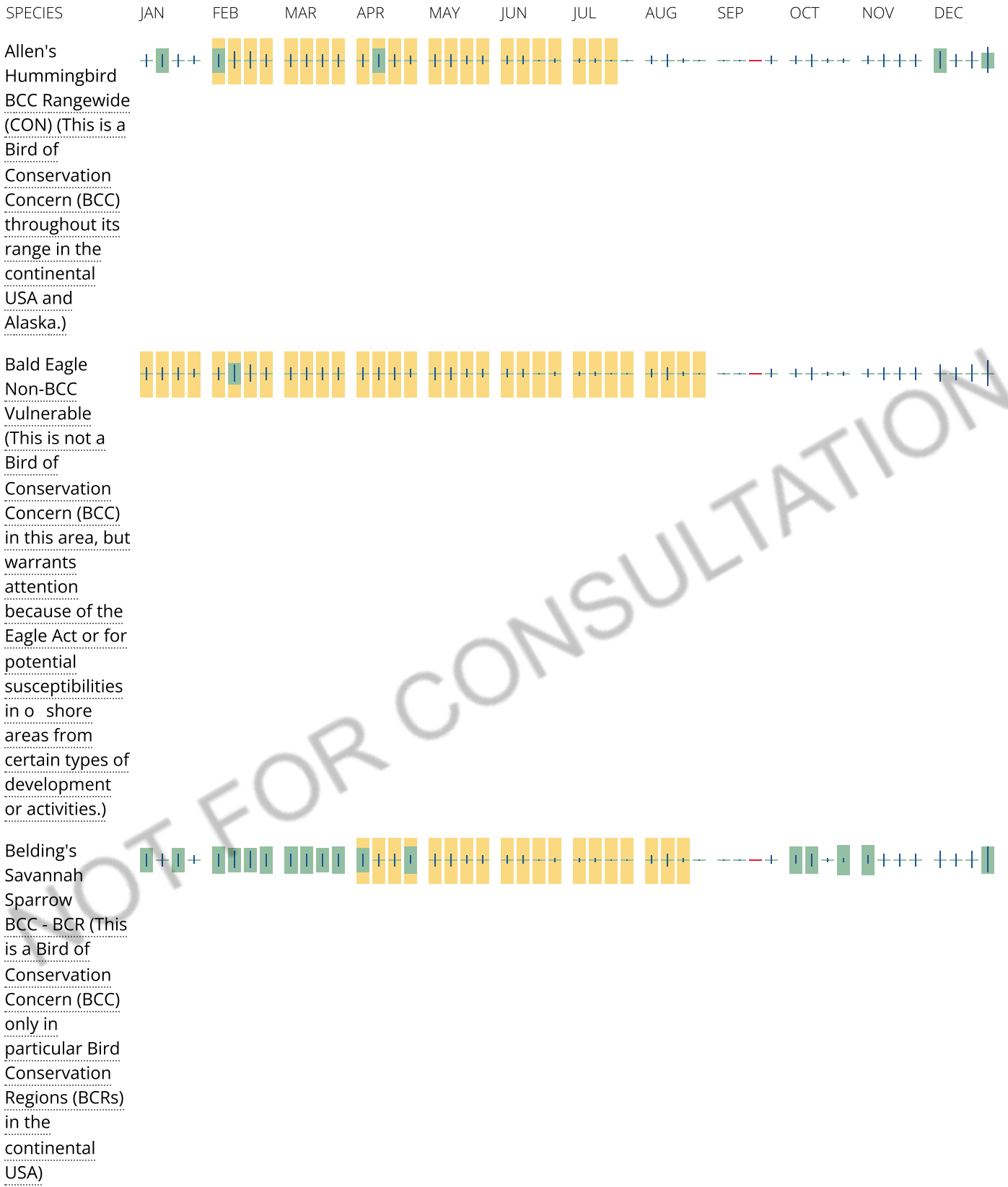
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

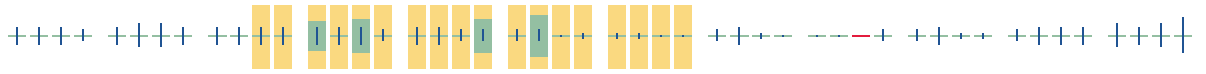
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas on the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort - no data

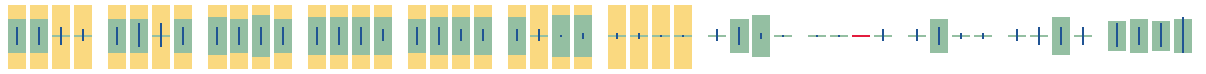


NOT FOR CONSULTATION

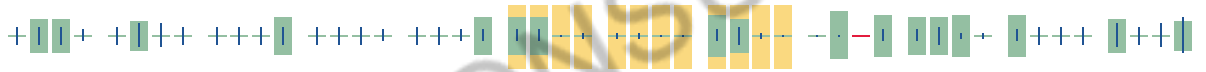
Bullock's Oriole
 BCC - BCR (This
 is a Bird of
 Conservation
 Concern (BCC)
 only in
 particular Bird
 Conservation
 Regions (BCRs)
 in the
 continental
 USA)



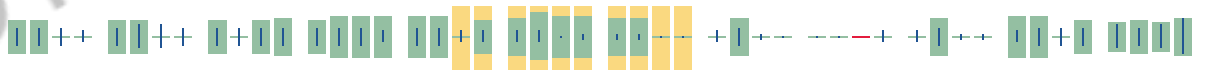
California
 Thrasher
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



Clark's Grebe
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

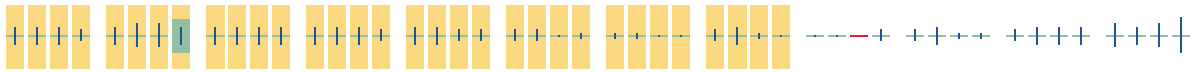


Common
 Yellowthroat
 BCC - BCR (This
 is a Bird of
 Conservation
 Concern (BCC)
 only in
 particular Bird
 Conservation
 Regions (BCRs)
 in the
 continental
 USA)

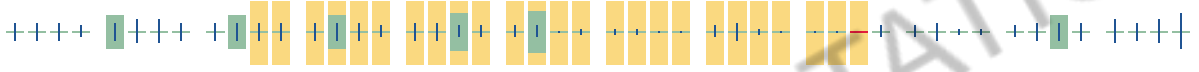


NOT FOR CONSULTATION

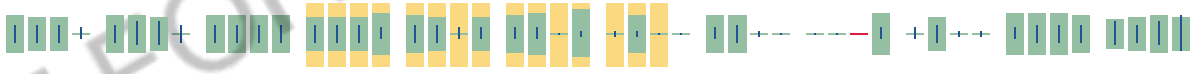
Golden Eagle
 Non-BCC
 Vulnerable
 (This is not a
 Bird of
 Conservation
 Concern (BCC)
 in this area, but
 warrants
 attention
 because of the
 Eagle Act or for
 potential
 susceptibilities
 in o shore
 areas from
 certain types of
 development
 or activities.)



Lawrence's
 Gold nch
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)



Nuttall's
 Woodpecker
 BCC - BCR (This
 is a Bird of
 Conservation
 Concern (BCC)
 only in
 particular Bird
 Conservation
 Regions (BCRs)
 in the
 continental
 USA)



NOT FOR CONSULTATION

Oak Titmouse
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

Tricolored
 Blackbird
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

Western Grebe
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

Wrentit
 BCC Rangewide
 (CON) (This is a
 Bird of
 Conservation
 Concern (BCC)
 throughout its
 range in the
 continental
 USA and
 Alaska.)

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the

locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to onshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER POND

[Palustrine](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or

submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercle worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

IS/MND Appendix C

Cultural Resources Survey

Sedco Hills Septic to Sewer Project

Cultural Resources Survey

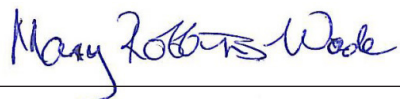
November 2022 | 01008.00007.001

Submitted to:

State Water Resources Control Board
Work Plan #

Prepared for:

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



Mary Robbins-Wade
Cultural Resources Group Manager

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

National Archaeological Database Information

Authors: Mary Robbins-Wade, M.A., RPA and Theodore G. Cooley, M.A., RPA with contributions by James Turner, M.A., RPA

Firm: HELIX Environmental Planning, Inc.

Client/Project: Elsinore Valley Municipal Water District / Sedco Hills Septic to Sewer Project

Report Date: November 2022

Report Title: Cultural Resources Survey for the Sedco Hills Septic to Sewer Project, Lake Elsinore, California

Submitted to: State Water Resources Control Board

Type of Study: Cultural Resources Survey

New Sites: None

Updated Sites: None

USGS Quad: Lake Elsinore 7.5' Quadrangle

Acreage: Approximately 380 acres

Key Words: Riverside County; Township 6 South, Range 4 West; Lake Elsinore; Wildomar, Sedco Hills; negative archaeological survey; Traditional Cultural Property, *Paayaxchi*

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AMSL	above mean sea level
APE	Area of Potential Effects
BP	before present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
EVMWD	Elsinore Valley Municipal Water District
HELIX	HELIX Environmental Planning, Inc.
MGD	million gallons per day
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
Pechanga	Pechanga Band of Indians
PRC	Public Resources Code
ROW	right-of-way
SCIC	South Coastal Information Center
SHPO	State Historic Preservation Officer
SLF	Sacred Lands File
Soboba	Soboba Band of Luiseño Indians
SR	State Route
SWRCB	State Water Resources Control Board
TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resources
THPO	Tribal Historic Preservation Officer
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by Elsinore Valley Municipal Water District (EVMWD) to provide cultural resources services for the Sedco Hills Septic to Sewer Project (project) in the City of Wildomar, Riverside County, California. The project is a proposed conversion of about 750 existing residential septic customers to sewer, which includes the installation of new pipelines. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project area. This report details the methods and results of the cultural resources study. EVMWD is seeking funding from the Drinking Water State Revolving Fund. As such, the project is subject to review by the State Water Resources Control Board (SWRCB). Thus, this cultural resources study addresses the requirements of both the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

The records search obtained from the Eastern Information Center (EIC) in August 2022 indicated that 26 previous cultural resources studies have been conducted within a half mile of the project area, eight of which overlap with the project area. The EIC has a record of 14 previously recorded cultural resources within a half-mile radius of the project; two of these are recorded within the project area, although they are outside any of the proposed pipeline alignments. The two resources that have been documented within the project area are both military buildings associated with Camp Haan that were moved from their original locations to their recorded ones and have since been removed or demolished. Historic resources recorded within the search radius include a total of five Camp Haan barracks buildings, a 1920s-1930s farm/ranch complex, the Skylark Airport, two sites consisting of irrigation system elements, and an isolated bottle finish. Prehistoric resources include one isolated ground stone fragment, a site with bedrock milling and a lithic scatter, and two sites recorded as artifact scatters. However, one of these two artifact scatter sites, CA-RIV-4042, is a significant resource for which the site record apparently was not updated following test excavations and monitoring.

The Native American Heritage Commission (NAHC) was contacted in August 2022 for a Sacred Lands File search. The response, received on September 12, 2022 was negative. HELIX sent letters on September 20, 2022 to the tribal contacts provided by the NAHC. To date, three responses have been received; all from Tribes deferring to other, more local Tribes, although the Rincon Band asked to receive a copy of the cultural resources report.

A field survey was conducted by HELIX with tribal cultural monitors from the Soboba Band of Luiseño Indians (Soboba) and the Pechanga Band of Indians (Pechanga) in August 2022. The field survey was negative. The cultural resources survey did not identify any archaeological resources within the project area; therefore, no impacts to archaeological historical resources/historic properties are anticipated from project implementation. However, the Lake Elsinore area, with the placename *Paayaxchi*, has been identified by Soboba and Pechanga as a highly significant cultural area. The lake and nearby *’Itengvu Wumowmu* (Lake Elsinore Hot Springs) are tied directly to events that occurred during the creation of the world, per the Luiseño creation account.

Although *Paayaxchi* has not been formally evaluated for NRHP eligibility as a TCP, it appears to meet the criteria for eligibility under Criteria A, B, C, and D. Based on this, the project has the potential to affect a TCP. Discussions with Pechanga and Soboba to assess potential project impacts are ongoing.

While no historic properties or historical resources (i.e., significant cultural resources) have been identified within the project area in terms of archaeology, as discussed throughout this report, the area is sensitive for cultural resources. Based on this, it is recommended that an archaeological and Native American monitoring program be implemented for all ground-disturbing activities, including brushing/grubbing, grading, trenching, excavation, etc. The monitoring program would include attendance by the archaeologist and Native American monitor(s) at a preconstruction meeting with the grading contractor and the presence of archaeological and Native American monitors during all ground-disturbing activities for the project. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with representatives of the Monitoring Tribes and with EVMWD and SWRCB staff to develop and implement appropriate avoidance, mitigation, or treatment measures.

1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) was contracted by the Elsinore Valley Municipal Water District (EVMWD) to provide cultural resources services for the Sedco Hills Septic to Sewer Project (project) in the City of Wildomar, Riverside County, California. The project is a proposed conversion of about 750 existing residential septic customers to sewer, which includes the installation of new pipelines. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the project area. 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 Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended.

1.1 PROJECT LOCATION

The project is located in the Sedco Hills community of the City of Wildomar in northwestern Riverside County (Figure 1, *Regional Location*). The project is located west of Interstate (I-) 15 and east of Lake Elsinore, within Sections 15, 16, and 22 of Township 6 South, Range 4 West, on the U.S. Geological Survey (USGS) 7.5' Lake Elsinore quadrangle (Figure 2, *USGS Topography*). The approximately 380-acre project site is bordered by Malaga Road on the north, I-15 to the east, Mission Trail on the west, and Lemon Street on the south (Figure 3, *Aerial Photograph*). The boundary between the City of Wildomar and the City of Lake Elsinore is located along the roadway centerline of Mission Trail and Malaga Road. The majority of the project would occur within the City of Wildomar; however, project activities on the west side of Mission Trail or the north side of Malaga Road would occur within the City of Lake Elsinore.

1.2 PROJECT DESCRIPTION

The project proposes to convert about 750 existing residential septic customers to sewer, which involves installing about 40,000 linear feet of sewer main and lateral pipelines within roadway rights-of-way (ROWs). The proposed project would involve the construction and operation of approximately 40,000 feet (7.6 miles) of 4-, 8-, and 12-inch-diameter underground sewer pipelines within existing ROW. The new sewer lines would connect to existing sewer mains underneath Mission Trail, Malaga Road, or Lemon Street.

Wastewater collected via the proposed sewer lines would be transported to the EVMWD Regional Water Reclamation Facility (WRF). The Sedco Hills neighborhood consists of mobile home units, which typically generate 150 gallons per day (GPD) of wastewater (EVMWD 2021). Therefore, the project is anticipated to generate approximately 130,000 GPD (or 0.13 million gallons per day [MGD]) of wastewater (EVMWD 2021).

The 2016 Sewer System Master Plan identified a potential capacity deficiency for the 21-inch diameter sewer line in Mission Trail. In 2022, EVMWD constructed a short pipe segment that redirected flows to bypass the Washington Avenue Sewer Lift Station and send tributary flows to the Santa Rosa Regional Resources Authority (EVMWD 2022). The bypass project removed approximately 125,000 gallons per day (GPD) of sewer flow that, prior to the bypass, flowed north through the 21-inch diameter Mission Trail sewer line to the Regional WRF. With the removal of 125,000 GPD from the existing 21-inch sewer line, sufficient capacity should exist to accommodate the 130,000 GPD of additional flow from the Project.

Should additional engineering hydraulic analysis determine that the bypass construction is not sufficient to resolve the capacity deficiency of the existing 21-inch diameter sewer main, EVMWD proposes installing a new 48-inch diameter sewer line in Mission Trail. The new line would connect to an existing 48-inch diameter sewer line in Malaga Road and extend south along Mission Trail to the B-2 sewer lift station just south of Sedco Boulevard. In total, the new sewer line would extend 3,200 linear feet and be located at a depth of approximately 40 feet.

Existing septic tanks serving the residents would be abandoned per Riverside County Health Department requirements. EVMWD anticipates that the proposed lateral pipelines would be located within a 24- to 36-inch-wide trench. Pipeline trench depth is anticipated generally to be approximately seven to 12 feet. The limits of disturbance would be limited to the affected road ROW.

EVMWD is seeking funding from the Drinking Water State Revolving Fund. As such, the project is subject to review by the State Water Resources Control Board (SWRCB). Thus, this cultural resources study addresses the requirements of both the NHPA and CEQA.

1.3 REGULATORY FRAMEWORK

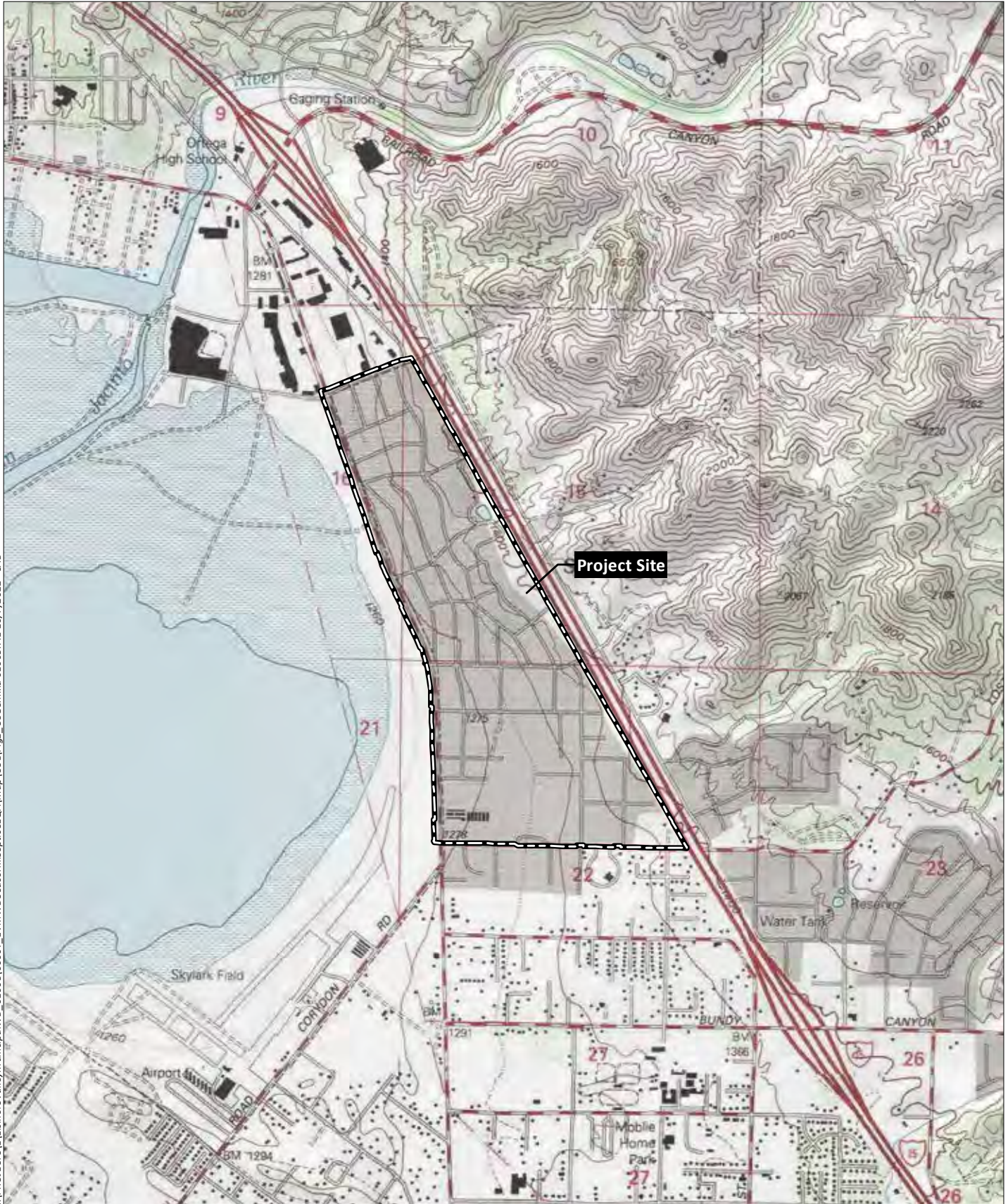
1.3.1 National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, “Protection of Historic Properties” (36 Code of Federal Regulations [CFR] Part 800), became effective August 5, 2004. In the case of this project, the SWRCB, as the funding agency, must abide by the requirements of Section 106 and consult with the State Historic Preservation Officer (SHPO).

Historic properties are properties that are included in the National Register of Historic Places (NRHP/National Register) or those that meet the criteria for inclusion in the NRHP, as outlined below. If the agency’s undertaking could affect historic properties, the agency determines the scope of appropriate identification efforts and then proceeds to identify historic properties in the Area of Potential Effects (APE). The agency reviews background information, consults with the SHPO or Tribal Historic Preservation Officer (THPO) and others, seeks information from knowledgeable parties, and conducts additional studies, as necessary. Districts, sites, buildings, structures, and objects listed in the National Register are considered; unlisted properties are evaluated against the National Park Service’s published criteria, in consultation with the SHPO/THPO and any Indian tribe or Native Hawaiian organization that may attach religious or cultural importance to them.




Section 106 review gives equal consideration to properties that have been included in the NRHP and those that have not been but meet NRHP criteria. Section 60.6 of 36 CFR Part 60 presents the criteria for the evaluation of cultural resources for nomination to the NRHP as follows:

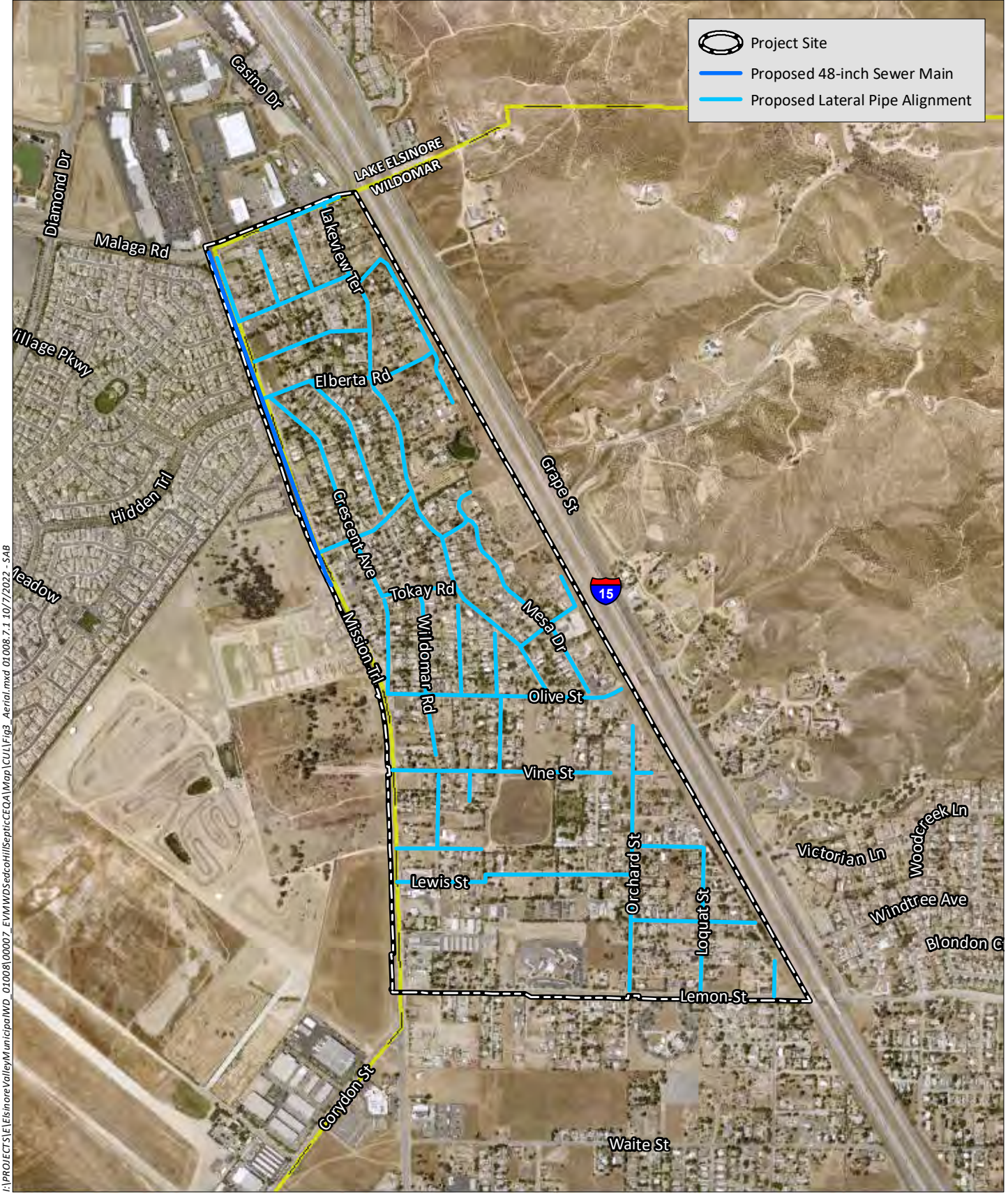
The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, and association, and



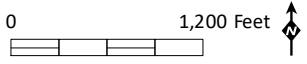
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Source: LAKE ELSINORE 7.5' Quad (USGS)

 Project Site
 Proposed 48-inch Sewer Main
 Proposed Lateral Pipe Alignment



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Source: Aerial (RCIT, 2020)

- a. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- b. That are associated with the lives of persons significant in our past; or
- c. That embody the distinctive characteristics of a type, period or method or construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. That have yielded, or may be likely to yield, information important in prehistory or history [36 CFR Part 60].

1.3.2 California Environmental Quality Act

Under the CEQA, any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] §5024.1, Title 14 California Code of Regulations [CCR] Section 4852), including the following:

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

Cultural resources eligible for the CRHR are considered significant resources (historical resources) and impacts to them are significant environmental effects under CEQA.

1.3.3 Integrity

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.

1.3.4 Native American Heritage Values

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 significance of the study site 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/Native American archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management performed under federal auspices. "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 TCPs, such as gathering areas, landmarks, and ethnographic locations in addition to archaeological districts. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance. A TCP may be considered eligible for the National Register based on "its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history; and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1998:1). Strictly speaking, TCPs are both tangible and intangible; they are anchored in space by cultural values related to community-based physically defined "property referents" (Parker and King 1998:3). On the other hand, TCPs are largely ideological, a characteristic that may present substantial problems in the process of delineating specific boundaries. Such a property's extent is based on community conceptions of how the surrounding physical landscape interacts with existing cultural values. By its nature, a TCP need only be important to community members and not the general outside population as a whole. In this way, a TCP boundary may be defined based on viewscape, encompassing topographic features, the extent of an archaeological district or use area, or a community's sense of its own geographic limits. Regardless of why a TCP is of importance to a group of people, outsider acceptance or rejection of this understanding is made inherently irrelevant by the relativistic nature of this concept.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American representatives during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. It further allows for tribal cultural places to be included in open space planning. California State Assembly Bill (AB) 52 revised PRC Section 21074 to include Tribal Cultural Resources (TCRs) as an area of CEQA environmental impact analysis. 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.

Per PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation, and that is traditionally and culturally affiliated with the geographic area of a proposed project, to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies. A TCR may be considered significant if it is (i) included in a local or state register of historical resources; (ii) determined by the lead agency to be significant pursuant to criteria set forth in PRC Section 5024.1; (iii) a geographically defined cultural landscape that meets one or more of these criteria; (iv) a historical resource described in PRC Section 21084.1 or a unique archaeological resource described in PRC Section 21083.2; or (v) a non-unique archaeological resource if it conforms with the above criteria.

1.4 PROJECT PERSONNEL

Mary Robbins-Wade, M.A., RPA served as principal investigator and is the primary author of this technical report. Theodore Cooley, M.A., RPA served as co-author of this technical report, and James Turner, M.A., RPA was a report contributor as well. Ms. Robbins-Wade, Mr. Cooley, and Mr. Turner meet the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. Mary Villalobos, B.A. conducted the field survey; Brian Robben of the Soboba Band of Luiseño Indians (Soboba) and Chris Yearyeon of the Pechanga Band of Indians (Pechanga) participated in the pedestrian survey as tribal cultural monitors. Resumes for key HELIX personnel are presented in Appendix A.

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The study area is situated in western Riverside County along what was once the southwestern shoreline of an earlier larger extent of Lake Elsinore, a natural lake formed in a basin created by faulting and from water deriving, principally, from the San Jacinto River. This lake basin is situated at the eastern base of the Santa Ana and Elsinore mountains. The origin area of the Murrieta Creek drainage is present adjacent to the southeast of the study area. The climate of western Riverside County is characterized as a semi-arid environment with low humidity and rainfall. Almost all rainfall occurs in the winter, but the region can also experience rare, intense summer thunderstorms. Wind is also a strong feature of this climatic regime, with dry winds in excess of 25 miles per hour in the late winter and early spring (National Oceanic and Atmospheric Administration [NOAA] 2020). The project site is sloped with steeper slopes to the north and east and gentle slopes throughout most of the project site, with an elevation of approximately 1,400 feet above mean sea level (AMSL) in the east, along I-15, to 1,290 AMSL in the southwest. Currently, the project vicinity is characterized predominantly by a mixture of open land, with adjacent urban development comprised mostly of residential development and associated middle school and transportation infrastructure, as well as a private airport and some commercial development.

Geologically, the study area is underlain by young alluvial-valley deposits of Holocene and late Pleistocene age consisting of fluvial sediments deposited along valley floors. These deposits consist of unconsolidated sand, silt, and clay-bearing alluvium (Morton and Weber n.d.). Immediately adjacent to the study area to the west are young late Holocene age lacustrine sediments associated with prehistoric and early historic stands of Lake Elsinore. The nearby foothills of the mountains to the east and northeast of the study area and the adjacent Santa Ana and Elsinore mountains to the west consist mostly of granitic rocks dating to the Cretaceous Period, and metavolcanics and metasedimentary rocks

of the Bedford Canyon Formation, dating to the Jurassic Period (Morton and Weber Jr. n.d.; Rogers 1965).

Eight soil series are mapped for the study area: Greenfield, sandy loam 2 to 8 percent slopes, 8 to 15 percent slopes, and 15 to 25 percent slopes; Hanford coarse sandy loam, 8 to 15 percent slopes; Monserate sandy loam shallow, 15 to 25 percent slopes; Ramona sandy loam, 2 to 5 percent slopes and 5 to 8 percent slopes, Ramona very fine sandy loam, 0 to 8 percent slopes; Visalia fine sandy loam, 0 to 2 percent slopes; Cieneba sandy loam, eroded, 15 to 50 percent slopes; Waukena loamy fine sand, saline alkaline, and Terrace escarpments. The Greenfield soils predominate in the study area. The Greenfield, Hanford, Monserate, and Ramona series of soils are well drained and are alluvium derived from granite. The Visalia series of soils is characterized as somewhat poorly drained, and is alluvium derived from granite. The Waukena series of soils is moderately well drained and is alluvium derived from granite. The Cieneba series of soils consists of excessively drained, very shallow to shallow coarse sandy loams derived from granitic rocks weathered in place (Natural Resources Conservation Service 2022). The majority of the surface soils of the project site show signs of significant disturbance and alteration from their native state.

Biological surveys conducted by HELIX (2022) identified four habitat types within the study area: California buckwheat scrub-disturbed, open water, disturbed habitat, and developed land. Developed land is comprised of residential homes, commercial development and associated roads and predominates in the study area. California buckwheat scrub or Riversidean sage scrub is a xeric expression of coastal sage scrub. Within the study area, the California buckwheat scrub is dominated by California buckwheat (*Eriogonum fasciculatum*) with small amounts of brittlebush (*Encelia farinose*) and non-native foxtail chess (*Bromus madritensis* ssp. *Rubens*) and short pod mustard (*Hirschfeldia incana*). Open water habitat is comprised of areas of open water that lack surface vegetation. This habitat can be naturally occurring or artificial in origin. Open water is often bordered by varieties of riparian vegetation. Currently within the study area the open water is manmade and bordered by ornamental vegetation dominated by date palm (*Phoenix dactylifera*) and Mexican fan palm (*Washingtonia robusta*). Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species, such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat (HELIX 2022).

Prehistorically, the natural vegetation in the project vicinity likely consisted of riparian and/or freshwater marsh vegetation along the Lake Elsinore shoreline and the Murrieta Creek drainage and mostly coastal sage scrub and native grassland in adjacent hill areas, with chaparral in the upper elevations of the adjacent mountains. Riparian vegetation includes plants such as western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), and willow (*Salix* sp.). Plants common to freshwater marsh include reed grass (*Phragmites australis*), marsh mallow (*Kosteletzkya virginic*), soft rush (*Juncus effusus*), pickerelweed (*Pontederia cordata*), narrow-leaved cattail (*Typha angustifolia*), and button bush (*Cephalanthus occidental*). Native grassland plants include *Stipa*, *Elymus*, *Poa*, and *Muhlenbergia*. Plants of the coastal sage scrub community include California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), flat-top buckwheat (*Eriogonum fasciculatum*), broom baccharis (*Baccharis sarothroides*), wild onion (*Allium haematochiton*), laurel sumac (*Malosma laurina*), San Diego sunflower (*Bahiopsis laciniata*), golden-yarrow (*Eriophyllum confertiflorum*), sawtooth goldenbush (*Hazardia squarrosa*), yucca (*Yucca schidigera*, *Hesperoyucca whipplei*), prickly pear cactus (*Opuntia* sp.), and scrub oak (*Quercus dumosa*) (Hall 2007; Munz 1974). Major wildlife species found in this environment prehistorically were coyote (*Canis latrans*); mule deer

(*Odocoileus hemionus*); grizzly bear (*Ursus arctos*); mountain lion (*Puma concolor*); desert cottontail (*Sylvilagus audubonii*); jackrabbit (*Lepus californicus*); and various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Ostospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*) (Head 1972). Desert cottontails, jackrabbits, and rodents were very important to the prehistoric diet; deer were somewhat less significant for food, but were an important source of leather, bone, and antler. Many of the plant and animal species naturally occurring in the project vicinity are known to have been used by native populations for food, medicine, tools, ceremonial, and other uses (Bean and Saubel 1972; Bean and Shipek 1978; Christenson 1990; Hedges and Beresford 1986; Luomala 1978; Sparkman 1908). Lake Elsinore and the San Jacinto River would likely have made fresh water easily accessible to native populations living in the area.

2.2 CULTURAL SETTING

Groups of people now known as Luiseño Indians have inhabited the area in which the project lies for thousands of years. The people call themselves *Payómkawichum* (the People of the West) and comprise seven bands, including Pechanga and Soboba (Pechanga Band of Luiseño Indians 2022). The creation story of the Pechanga people explains that life was created at Temecula. “Life on earth began in this valley at *Éxva Teméeku*, the birthplace of the *Káamalam* (First Children). *Teméeku* was the place where the world as we know it came to be events that took place here determined how some people became plants and animals, how people dealt with sickness and death, why some things could be eaten yet others could not, and all the other details of life in native California” (Pechanga Band of Luiseño Indians 2022). Although archaeologists discuss various archaeological complexes across temporal periods, the *Payómkawichum* recognize a continuum from the first people created and living in this area to the present day.

The cultural setting information provided in this chapter is based on archaeological evidence. As addressed above, it is important to note that these interpretations by archaeologists and linguistic anthropologists may differ from the traditional knowledge of the Luiseño people.

2.2.1 Prehistoric Period

Michael Moratto (1984) has previously defined eight archaeological regions and 16 subregions for California. The location of the project in western Riverside County places it within the boundary of the San Diego subregion of the Southern Coast Region, but it is also located adjacent to the boundary with the Colorado River subregion of the Desert Region (Moratto 1984: 148, Figure 4.13). The following culture history outlines and briefly describes the known prehistoric cultural Traditions and chronology of archaeological sites in the vicinity of the project. The approximately 11,000 years of documented prehistory of the region has often been divided into three periods: Early Prehistoric Period (San Dieguito Tradition/complex), Archaic Period (Milling Stone Horizon, Encinitas Tradition, La Jolla and Pauma complexes), and Late Prehistoric Period (San Luis Rey complex).

2.2.1.1 Early Prehistoric Period

The Early Prehistoric Period represents the time of the entrance of the first known human inhabitants into California. In some areas of California, it is referred to as the Paleo-Indian period and is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age occurring during the Terminal Pleistocene and the Early Holocene, beginning circa 11,000 to 15,000 years ago (Erlandson et al. 2007). In the western United States, the most substantial evidence for the Paleo-Indian or Big-Game-Hunting

peoples derives from finds of large, fluted spear and projectile points (Fluted Point Tradition) at sites in places such as Clovis and Folsom in the Great Basin and the Desert Southwest (Moratto 1984:79–88). In California, most of the evidence for the Fluted Point Tradition derives principally from areas along the western margins of the Great Basin, including the eastern Sierras and the Mojave Desert, and in the southern Central Valley (Dillon 2002; Rondeau et al. 2007). Despite a few isolated occurrences of fluted points in the San Diego subregion (Dillion 2002; Fitzgerald and Rondeau 2012; Kline and Kline 2007; Rondeau et al. 2007) and Baja California (Des Lauriers 2008; Hyland and Gutierrez 1995), none have been found, to date, in the western Riverside or San Bernardino counties area of the subregion (Dillon 2002; Rondeau et al. 2007).

The earliest sites in the San Diego subregion, documented to be over 10,000 years old, belong not to the Fluted Point Tradition but to the San Dieguito Tradition (Warren et al. 2008; Warren and Ore 2011). The San Dieguito Tradition is defined by an artifact assemblage suggestive of a focus on hunting but lacking the distinctive fluted points associated with the Fluted Point Tradition. While the tradition has so far been documented principally in the coastal and near coastal areas in San Diego County (Carrico et al. 1993; Rogers 1966; True and Bouey 1990; Warren 1966; Warren and True 1961), as well as in the southeastern California deserts (Rogers 1939, 1966; Warren 1967), some evidence for it has been recently discovered in the eastern mountains of San Diego County (Pigniolo 2005) and at a site in a coastal area to the north in Los Angeles County (Sutton and Grenda 2012). The content of the earliest component of the C.W. Harris Site (CA-SDI-149), located along the San Dieguito River in San Diego County, approximately 43 miles to the south of the project area, formed the original basis upon which Warren and others (Rogers 1966; Warren 1966, 1967; Warren and True 1961) identified the “San Dieguito complex,” which Warren later reclassified as the San Dieguito Tradition (1968). This Tradition is characterized by an artifact inventory consisting almost entirely of hunting-associated flaked stone bifaces and scraping tools including elongated bifacial knives; leaf-shaped projectile points; domed scrapers; crescentics; and, in the desert, Silver Lake and Lake Mojave projectile points (Knell and Becker 2017; Rogers 1939; Vaughan 1982; Warren 1967). The abundance of hunting-associated tools and the paucity of ground stone tools in the San Dieguito assemblage has led to a characterization of the Tradition/complex, by some researchers, as having a primarily, but perhaps not exclusively, hunting subsistence orientation, that was distinct from the more gathering-oriented complexes of traits that were to follow in the Archaic Period (Warren 1968; Warren et al. 2008). Other researchers see the San Dieguito subsistence system as a developmental stage for the predominantly gathering-oriented Encinitas Tradition, denoted in the San Diego area as the “La Jolla/Pauma complex” in the subsequent Archaic Period (cf. Bull 1983, 1987; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991). As with the Fluted Point Tradition, however, despite occurrences in adjacent areas, no definite evidence of the San Dieguito Tradition has been documented, to date, in the western Riverside or San Bernardino counties area.

2.2.1.2 Archaic Period

In contrast to the traditions of the previous Early Prehistoric Period, during the subsequent Archaic Period, artifact assemblages of the Milling Stone Horizon/Encinitas Tradition occur at a range of coastal and adjacent inland sites and are relatively common in the study area region (Grenda 1997; Sutton and Gardner 2010). Warren has proposed that, during the Archaic Period in the south coastal region, the Encinitas Tradition began circa 8,500 years ago and extended essentially unchanged until circa 1,500 years ago, indicating that a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of

southern California, extending from the beginning of the Archaic Period for more than 7,000 years (Warren 1968).

While Warren originally characterized the Encinitas Tradition spanning the time of the Archaic Period as being a relatively stable time of sedentary settlement with subsistence based predominantly on gathering activities, and possibly associated with one people, it has also been noted by Warren and others that during the latter part of the Archaic Period, in the coastal region, beginning somewhere north of San Diego and extending to Santa Barbara, evidence of a cultural assemblage distinctive from this settlement and subsistence pattern could also be discerned (Warren 1968; Warren et al. 2008). This assemblage and time period have been variously designated as the Intermediate Horizon (Wallace 1955) or Campbell Tradition (Warren 1968) and has been delineated as following the Milling Stone Horizon/Encinitas Tradition during the period in some southern California coastal areas. The assemblage is distinguished from earlier Archaic Period assemblages by the presence of large projectile points and milling tools such as the mortar and pestle, indicating the occurrence of new subsistence practices. The time period of this assemblage is viewed as beginning circa 4,800 years ago and continuing to as late as 1,300 years ago (Warren 1968). While still a matter of some debate, in the southernmost coastal region, Warren and others (2008) have subsequently termed this time period, encompassing the extent of the Intermediate/Campbell cultural assemblage, as the Final Archaic Period.

In the western Riverside County area, early archaeological investigations conducted at several archaeological sites in Perris Valley for the Perris Reservoir project produced only a single radiocarbon date of circa 2200 years before present (BP) and a few diagnostic artifacts as the only evidence for a late Archaic Period occupation in the western Riverside County region (Bettinger 1974:159-162). Investigations at another site, CA-RIV-1806, in the mountains northwest of Temecula, also produced a radiocarbon date for the late Archaic Period of circa 2775 BP (McCarthy 1986:73). More recently, approximately two miles from the project area, large-scale archaeological investigations were conducted at the Lake Elsinore site (Grenda 1997:3). Archaeological investigations conducted at CA-RIV-2798, located along the old lake shoreline, indicated occupation as early as 8,500 years ago (Grenda 1997). Another recent archaeological investigation conducted in the San Jacinto Valley at site CA-RIV-6069 has produced an early Archaic Period assemblage and occupation as early as 9,400 years ago (Horne and McDougall 2008:91). Another relatively recent archaeological investigation conducted in the general vicinity of the project area has also produced evidence for prehistoric occupation in the western Riverside County area during the earliest part of the Archaic Period. The Eastside Reservoir (Diamond Valley Lake) Project, located approximately 15 miles northeast of the study area, involved construction, within the adjacent Domenigoni and Diamond valleys, of the Diamond Valley Lake reservoir and the associated Eastside Reservoir Project (Goldberg 2001; Robinson 2001). Based on the results from this project, the researchers developed a local chronology specific to the Domenigoni and Diamond valleys based on projectile point style changes and associated radiocarbon dates (Robinson 2001). The terminology in this chronology resembles that already presented above, with the period from 9,500 to 7,000 years ago designated as the Early Archaic period, the period from 7,000 to 4,000 years ago as the Middle Archaic, and the period from 4,000 to 1,500 years ago as the Late Archaic. In the Eastside Reservoir Project, only two components could be firmly dated to the Early Archaic, but sparse evidence of Early Archaic activity was noted in six other localities. One site did, however, produce two radiocarbon dates of 9190±50 and 9310±60 BP (McDougall 2001). For the Middle Archaic, firm evidence was documented in 14 locations, with other traces at four other sites. During the Late Archaic, a profusion of activity and occupation was evident, with 23 firmly dated site components and sparse evidence at eight other localities (Goldberg 2001:524).

Thus, prehistoric occupation during the Archaic Period in the study area vicinity is documented to have occurred possibly as early as 9,400 years ago, and remained present to the end of the period, approximately 1,500 years ago. While this temporal extent correlates with Warren's original proposed extent of the Encinitas Tradition, refinement of his characterization of the Tradition as being a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, and with an extent mostly restricted to the San Diego County area, may now, based on new information available, be subject to some revision (cf. Sutton and Gardner 2010).

2.2.1.3 Late Prehistoric Period

Some of the earliest archaeological investigations conducted in the western Riverside area produced considerable evidence of occupation in the area during the Late Prehistoric Period. One of the few early studies to occur in this area was conducted near Temecula in the early the 1950s at a site identified as the ethnohistoric village of *Temeku* (McCown 1955). The investigation produced a substantial, primarily Late Prehistoric Period, artifact assemblage. Another study consisted of investigations at several sites in the 1970s for the construction of the Perris Reservoir (O'Connell et al. 1974, eds). The results, which included several radiocarbon dates, indicated a predominance of occupation at the sites during the Late Prehistoric Period, after AD 1500 (Bettinger 1974:159-162).

The beginning of the Late Prehistoric Period in the southern coastal region, circa 1,500 years ago, is seen as marked by a number of rather abrupt changes. The magnitude of these changes and the short period of time within which they took place are reflected in significant alteration of previous subsistence practices and the adoption of significant new technologies. As discussed further below, some of this change may have been as a result of significant variations in the climatic conditions. Subsistence and technological changes that occurred include a shift from hunting using atlatl and dart to the bow and arrow; a de-emphasizing of shellfish gathering along some areas of the coast (possibly due to silting-in of the coastal lagoons); and an increase in the storage of crops, such as acorns and pinyon nuts. Other new traits introduced during the Late Prehistoric Period include the production of pottery and cremation of the dead, and, locally, in the western Riverside County area, a shift in settlement pattern is apparent (cf. Wilke 1974).

This shift in settlement is first noted during the early part of the period from 1,500 to 750 years ago and is evidenced, locally, in the results from the Eastside Reservoir Project by a rather sudden decline in occupation in the local area during the initial part of the period. This 750-year period was termed by the Eastside Reservoir researchers as the Saratoga Springs Period, following Warren's (1984) desert terminology. This period can also be seen to partially coincide with a warm and arid period known as the Medieval Warm Period, documented to have occurred between approximately 1,100 and 600 years ago (Jones et al. 1999; Kennett and Kennett 2000; Stine 1994). During this period, at least two episodes of severe drought have also been demonstrated, the first calibrated to between 1060 and 840 BP and the second between 740 and 650 BP (Goldberg 2001; Stine 1994). While sites dating to this period are not absent in western Riverside County (e.g., McCarthy 1987:34; Keller and McCarthy 1989), Goldberg (2001) hypothesized that the Medieval Warm Period could account for the decline in sites occurring in the Eastside Reservoir Project area during the Saratoga Springs Period (1500 to 750 BP), claiming that desert and inland areas of western Riverside County, such as where the Eastside Reservoir Project is located, would no longer be suitable to support residential bases. Goldberg (2001) further hypothesized that settlements would possibly be clustered at more suitable water sources during this time, such as at the coast, Lake Cahuilla, or Lake Elsinore (cf. Wilke 1974). While a decline was noted during the initial part of the Saratoga Springs Period, subsequently, during the latter part of the period, during the time of

the Medieval Warm Period, a reoccupation began to occur (Goldberg 2001:578). According to Goldberg, “When components dating to the Medieval Warm segment of the Saratoga Springs Period are segregated and combined with Medieval Warm components from the Late Prehistoric Period, it shows that the frequency of refuse deposits and artifact and toolstone caches during the Medieval Warm is slightly higher than during the Late Archaic and much higher than during the later portion of the Late Prehistoric Period” (2001:578).

In the Eastside Reservoir Project, the Late Prehistoric Period was defined as extending from the end of the Saratoga Springs Period (750 BP) to 410 BP. A subsequent Protohistoric Period was also defined as extending from 410 to 150 BP. The Late Prehistoric Period (750–410 BP) was characterized by the presence of Cottonwood points, although research indicated that Cottonwood points had actually begun to appear in the Eastside Reservoir Project study area as early as 950 BP. Ceramics and abundant obsidian began to appear around the time of the Cabrillo exploration in AD 1542, and so this date (i.e., circa 410 BP), until the establishment of the mission system in the late 1700s, was defined as the Protohistoric Period (Robinson 2001). It should also be noted that the end of the Saratoga Springs Period and the beginning of the Late Prehistoric Period, 750 BP, also coincides with the onset of the Little Ice Age, generally dated from 750 to 150 BP (Goldberg 2001; Sutton et al. 2007). During this period, the climate was cooler and moister, and the sites identified within the Eastside Reservoir Project study area reflected a substantial increase in number and diversity, longer occupation periods, and more sedentary land use. Similar intensification of land use also occurred during this time in neighboring San Gorgonio Pass (Bean et al. 1991), and Perris Valley (Wilke 1974).

2.2.2 Ethnohistory

The Lake Elsinore area is within the traditional territory of the Luiseño people and is important in their creation stories and other traditional ceremonies and songs. Another group, the Juaneño, were closely related to the Luiseño—so closely, in fact, that some researchers have seen little distinction between them (Bean and Shipek 1978; White 1963). However, Luiseño and Juaneño individuals consider themselves to be separate tribes, and Cameron (1987:319-321) has noted possible differences in the archaeological record between the two peoples. The names for these groups are based on their associations, post European contact, with either Mission San Juan Capistrano, Mission San Luis Rey, or Mission San Gabriel (Gabrielino). The Luiseño and Juaneño (*Acjachemen*), along with the Cahuilla, Gabrielino, and Cupeño, comprise the Cupan group of the Takic subfamily of the Uto-Aztecan linguistic stock (Bean and Vane 1979; Miller 1986; Shipley 1978).

The Luiseño followed a seasonal gathering cycle, with bands occupying a series of habitation areas within their territory (Bean and Shipek 1978; White 1963). The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas (Bean and Shipek 1978; Sparkman 1908; White 1963). True (1990) indicated that the predominant determining factor for placement of villages and campsites was locations where water was readily available, preferably on a year-round basis. While most of the major Luiseño villages known ethnographically were located closer to the coast along the Santa Margarita River Valley and the San Luis Rey River Valley (Bean and Shipek 1978; Kroeber 1925; White 1963), Kroeber does indicate general locations for three Luiseño villages in more inland areas. He places the village of *Panache* in proximity to Lake Elsinore and the confluence of the San Jacinto River and Temescal Creek, approximately two miles to the north of the project area, and the villages of *Temeku* and *Meha* in the vicinity of the confluence of the upper Santa Margarita River, Murrieta Creek, and Temecula Creek, approximately 15 miles to the southeast of the project area (Kroeber 1925: Plate 57;

McCown 1955:1). Lerch and Smith (1984:8), however, have indicated that both the Luiseño and Juaneño people have distinctive ties to Lake Elsinore:

The Juaneño name for Lake Elsinore was *Paayaxtci*, while the version in another Luiseño dialect (called Temescal by Harrington) was *Paahashnan*. The name for Elsinore Hot Springs was *'Atengvo*, a word which meant “hot springs” and which also applied to the locality of the city of Elsinore, especially the area along the outflow stream of the lake where a number of hot springs are located.

Elsinore Hot Springs has known religious significance to the Juaneños and all Luiseños, as it was the locality known as *Itengvu Wumowmu* in a song recounting the death of Wiyot, a legendary religious leader who the people followed in their migration from the north. 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).

2.2.3 Paayaxchi

The people of Pechanga and Soboba have indicated that they consider *Paayaxchi* (Lake Elsinore) to be a highly significant cultural area, drawing its significance from the creation account, not merely from the numerous archaeological resources around the lake. The lake and nearby *'Itengvu Wumowmu* (Lake Elsinore Hot Springs) are tied directly to events that occurred during the creation of the world. Although *Paayaxchi* has not been formally evaluated for NRHP eligibility as a TCP, it appears to meet the criteria for eligibility under Criteria A, B, C, and D. *Paayaxchi* is potentially eligible under Criterion A for its association with the “cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1998: 1). *Paayaxchi* could be considered eligible under Criterion B for its association with the cultural figure *Wuyoot* and under Criterion C for the presence of rock art. The resource is also potentially eligible under Criterion D for its potential to address important research themes and contribute to an understanding of traditional Luiseño lifeways.

2.2.4 Historical Background

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 this area, the Spanish missions did not have as direct and immediate an effect on the people as they did on the

Luiseño who lived along the coast. 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 Shipek 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.

2.2.4.1 Mexican Period

Mexico, including Alta California, gained its independence from Spain in 1821, but Spanish culture and influence remained as the missions continued to operate as they had in the past, and laws governing the distribution of land were also retained for a period of time.

Following secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals. The society made 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 numerous new ranchos, cattle ranching expanded and prevailed over agricultural activities. These ranches put new pressures on California's native populations, as grants were made for inland areas still occupied by the Native people, forcing them to acculturate or relocate farther into the backcountry. In rare instances, former mission neophytes were able to organize pueblos and attempt to live within the new confines of Mexican governance and culture.

The area south and west of the project area was encompassed by Rancho La Laguna, an approximately 14,000-acre rancho that was granted to Julian Manriquez by Governor Manuel Micheltoarena (Hoffman 1862). Little is known about Manriquez; in 1851, Manriquez sold the rancho to Abel Stearns (U.S. District Court 1851).

2.2.4.2 American Period

The Mexican period ended when Mexico ceded California to the United States after the Mexican-American War (1846–1848), which concluded with the Treaty of Guadalupe Hidalgo. A great influx of settlers to California and the San Diego and Riverside County region occurred during the American Period, resulting from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through passage of the Homestead Act in 1862, and later, the importance of the region as an agricultural area supported by roads, irrigation systems, and connecting railways. The increase in American and European populations quickly overwhelmed many of the Spanish and Mexican cultural traditions, and greatly increased the rate of population decline among Native American communities.

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. Riverside County was created from portions of San Bernardino and San Diego counties in 1893.

Abel Stearns, born in Massachusetts in 1798, moved to Mexico City in 1826 and later became a naturalized citizen (Brigandi 2011). In 1829, he moved to California and settled in Los Angeles, where he served as a middleman between trading ships and ranchos. In 1841, he married 14-year-old Arcadia Bandini, and the next year he purchased the Los Alamitos Rancho and shifted his focus to raising cattle. During this time, the area that would become Riverside County was dominated by cattle and orange groves (Brigandi 2011; Lech 2004). Stearns filed a claim for Rancho La Laguna to the Public Land Commission in 1851 and later patented the land in September 1872 (Willey 1886).

In 1858, Stearns sold Rancho La Laguna to Augustin Machado, who began construction of a seven-room adobe west of the lake (City of Lake Elsinore 2011). This adobe would later become the site of the Laguna Grande station of the Butterfield Overland Mail stage line, which operated from 1858 to 1861 (City of Lake Elsinore 2011; Helmich 2008). This mail route followed the so-called “oxbow route,” which skirted the Rocky Mountains by travelling south through Texas, New Mexico Territory, Fort Yuma, and Southern California, bypassing San Diego (Helmich 2008).

Franklin Heald purchased Rancho La Laguna from Machado and founded the town of Elsinore in 1883 (City of Lake Elsinore n.d., 2011). Taking the name from the City of Helsingør from Shakespeare’s *Hamlet*, the town would become a full-fledged city in 1888. The Atchison, Topeka, and Santa Fe Railroad was completed in the early 1880s, which allowed Elsinore to flourish (City of Lake Elsinore 2011).

West of the project area is the census-designated place of Lakeland Village. Due to its topography and isolation from other areas within Lake Elsinore, Lakeland Village has remained mostly undeveloped (City of Lake Elsinore 2011). The area is named for Lakeland Ranch, one of the state’s largest canning facilities, owned by C.H. Albers and used primarily to cultivate and can produce, such as olives, citrus, and almonds (City of Lake Elsinore 2011). Purchased in 1895, the 135 acres of land also was known as Alber’s Folly, as many believed that it was foolish to raise olives as a cash crop (Johnson 2014).

The 1920s saw Lake Elsinore acting as a playground for the rich and famous (City of Lake Elsinore n.d.). During this time, the town saw a large amount of development; several religious structures were built in the first half of the decade, and several attempts were made to revitalize the tourist industry in the latter half of the decade (City of Lake Elsinore 2011).

In the 1950s, the area experienced an extreme drought; for the first time in recorded history, Lake Elsinore went completely dry (City of Lake Elsinore n.d.). In 1954, Forest and Florence Perkins purchased approximately 190 acres of land along the floodplain south of the lake and built the Skylark Field Airport (Bitetti and Bitetti 2013). Over the next two decades, the airport, and the lake, was home to several skydiving competitions and reality shows (Bitetti and Bitetti 2013; City of Lake Elsinore n.d.). The lake was filled with water from the Colorado River in 1964 and experienced the worst flooding in recorded history in 1981 and 1983 due to El Niño conditions (City of Lake Elsinore n.d.).

2.2.4.3 Project Vicinity

The project area is located within the original boundaries of Sedco Hills, which derives its name from the South Elsinore Development Company, a land company that developed the area in the past. The South Elsinore Development Company purchased and subdivided the area in the early 1920s; in 1952, Sedco residents succeeded in changing the name of the community from Sedco to Sedco Hills (Lake Elsinore

Valley Sun-Tribune, 29 Jul:29). The area was developed slowly, and during the winter of 1952-1953, the United State Army “invaded” Sedco Hills; an engineering unit of the Alaska Helicopter Corps mapped Lake Elsinore from the air. Little else is recorded regarding the South Elsinore Development Company, though the area experienced an increase in development in the subsequent decades.

3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX staff requested a record search of the California Historical Resources Information System (CHRIS) from the Eastern Information Center (EIC) on August 3, 2022, which was received on September 3, 2022. The records search covered a half-mile radius around the project area and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources and the state Office of Historic Preservation (OHP) historic properties directories was also conducted. The records search summary and map are included as Appendix B (confidential appendices, bound separately).

3.1.1 Previous Surveys

The records search results identified 26 previous cultural resource studies within the record search limits, eight of which overlap with the project area. Reports within the records search radius and within the project area are summarized in Appendix C. Studies that overlap the project area are generally Phase 1 surveys for a variety of project types, including specific plans, water projects, a transmission line, and telecom facilities.

3.1.2 Previously Recorded Resources

The EIC has a record of 14 previously recorded cultural resources within a half-mile radius of the project; two of these are recorded within the project area, although they are outside any of the proposed pipeline alignments (Table 1, *Previously Recorded Resources within One Half-Mile of the Project Area*). The resources that have been documented within the project area are both military buildings associated with Camp Haan that were moved from their original locations to their recorded ones. Site record updates from 2009 noted that four former Camp Haan barracks buildings documented in 1981 had all been either demolished or removed, including the two within the current project area: P-33-007163 and P-33-007164 (Ecorp Consulting, Inc. 2009a, 2009b). Historic resources recorded within the search radius include a total of five Camp Haan barracks buildings, a 1920s-1930s farm/ranch complex, the Skylark Airport, two sites consisting of irrigation system elements, and an isolated bottle finish. Prehistoric resources include one isolated ground stone fragment, a site with bedrock milling and a lithic scatter, and two sites recorded as artifact scatters. However, one of these two artifact scatter sites, CA-RIV-4042, is actually a significant resource for which the site record apparently was not updated following test excavations and monitoring. Cores, debitage, and a variety of flaked stone tools were recovered during testing, including projectile points, bifaces, scrapers, choppers, hammerstones, and other tool types. Faunal remains consisted of mostly small, fragmented pieces of mammal bone, with two pieces of bird bone and two fragments of turtle carapace also recovered, which is located approximately one half-mile from the project area.

Table 1
PREVIOUSLY RECORDED RESOURCES WITHIN ONE HALF-MILE OF THE PROJECT AREA

Primary Number (P-33-#)	Trinomial (CA-RIV-#)	Age	Description	Recorder, Date
004037	4037	Prehistoric	Bedrock milling and lithic scatter	Drover and Smith, 1990
004042	4042	Prehistoric	Artifact scatter	Hampson and Schmidt, 1990
007157	--	Historic	Camp Haan Barracks building	Borchard, 1981; Cotterman and Ballester, 2009
007161	--	Historic	Camp Haan Barracks building	Borchard, 1981; Cotterman and Ballester, 2009
007162	--	Historic	Camp Haan Barracks building	Borchard, 1981; Cotterman and Ballester, 2009
007163*	--	Historic	Camp Haan Barracks building	Borchard, 1981; Cotterman and Ballester, 2009
007164*	--	Historic	Camp Hahn Barracks building	Borchard, 1981; Cotterman and Ballester, 2009
008914	--	Prehistoric	Isolated ground stone fragment	LeCount, 1991
014803	7879	Historic	Skylark Airport	Brunzell and Goodwin, 2005
014804	--	Historic	Irrigation system weir	Goodwin, 2005
014891	--	Historic	Ranch/Farm	Hunt, O'Neil, and Clifford, 2005; Cotterman and Ballester, 2009
015945	--	Historic	Isolated bottle finish	Underbrink, 2005; Schultz, 2005
019926	--	Historic	Irrigation pump, motor, and pipes	Cotterman and Ballester, 2009
028890	--	Prehistoric	Artifact scatter	Maxon, 2019

* Within project area

3.2 OTHER ARCHIVAL RESEARCH

Various archival sources were also consulted, including historic topographic maps and aerial photos. The purpose of this research was to identify historic structures and land use in the area. Historic topographic maps and aerial imagery examined included historic aerial photographs from 1938, 1967, 1974, 1978, 1980 (NETR Online 2022) and several historic USGS topographic maps, including the 1901 Elsinore and 1901 and 1904 Southern California (1:125,000 scale) topographic maps and the 1953 and 1973 Elsinore and 1982 Lake Elsinore (1:24,000 scale) topographic maps (USGS Online Historical Topographic Map Explorer 2022).

On the 1901, 1:125,000, Elsinore quadrangle, shows a scattered grid of streets with a few associated buildings, mostly in the southern part of the study area. Also shown on this map along the western edge of the study area is the “Southern California R.R.” On the 1953 Elsinore, 1:24,000 map, in an area labeled “Sedco Hills”, are what appear to be some residential streets and buildings, mostly concentrated in the northern two-thirds of the study area. Lemon Street, along the southern edge of the study area, becomes a street labeled Lost Road on the 1953 map, an early road that is shown on both the 1901 and 1953 topographic maps, extending into the mountains to the north and east of the study area. The railroad is not shown on maps after the 1901 map, and the route appears on the 1953 map, instead, to have become highway State Route (SR) 71. SR 71 coincides with the street, Mission Trail, along the western edge of the study area. The 1973 Elsinore and 1982 Lake Elsinore, 1:24,000 topographic maps, indicate that Sedco Hills has become an established residential community with a more extensive grid of streets and a number of buildings in the study area.

The 1938 aerial photograph indicates the study area still contains mostly rural agricultural activity, with the grid roads shown on the 1901 topographic map being farming roads along section and quarter section lines, with the associated buildings likely farming-associated. The 1967 aerial photograph shows the Sedco residential development in the northern two thirds of the study area depicted on the 1953 topographic map. The 1978 and 1980 aerials and 1973 and 1982 topographic maps indicate a continued expansion of residential development in the northern part of the study area with several areas of rural agricultural activity still present in southern part of the study area.

Archival research including the review of these historic aerial photographs and topographic maps indicates early twentieth century rural farming activity as well as mid-twentieth century residential development within the study area. It is possible, therefore, that some structures, or remnants of these structures, associated with these early activities, may still be present within the study area.

3.3 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on August 3, 2022 for a Sacred Lands File search and list of Native American contacts for the project area. The response received on September 12, 2022 was negative. HELIX sent letters on September 20, 2022 to the 26 Native American representatives and interested parties identified by the NAHC. To date, three responses have been received. Both the Quechan Indian Tribe and the Agua Caliente Band of Cahuilla Indians indicated that they have no comments on the project and defer to local tribes (Table 2, *Native American Contact Program Responses*).

The Rincon Band of Luiseño Indians (Rincon; Band) indicated in a letter sent via email on October 18, 2022 that the project location is within the territory of the Luiseño people and within the Band’s specific Area of Historic Interest (AHI). As such, Rincon is traditionally and culturally affiliated to the project area. “Embedded in the Luiseño territory are Rincon’s history, culture and identity. The Rincon Band has no knowledge of cultural resources within the project area. However, that does not mean that none exist.” Rincon asked that a copy of the records search and the cultural resources report be provided to the Rincon Band. Additionally, they recommended “working closely with the Pechanga Band of Indians as they are located closer to the project and may have pertinent information.”

When additional responses are received, they will be forwarded to EVMWD and SWRCB. Native American correspondence is included as Appendix D (confidential appendices, bound separately). Discussions with Pechanga and Soboba regarding the cultural significance and sensitivity of the project

area are in progress. EVMWD will undertake consultation with interested Tribes under AB 52, and the SWRCB will undertake Section 106 consultation with interested Tribes as well.

Table 2
NATIVE AMERICAN CONTACT PROGRAM RESPONSES

Contact/Tribe	Response
Quechan Indian Tribe	Responded via email on September 28, 2022; “we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects”
Agua Caliente Band of Cahuilla Indians	Responded via email on September 29, 2022; “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.”
Rincon Band of Luiseño Indians	Responded in a letter sent via email on October 18, 2022; the project is within the territory and Area of Historic Interest of the Rincon Band. The Band is not aware of cultural resources within the project area, but that does not mean there are none. Rincon requested a copy of the report and recommended working closely with Pechanga.

4.0 SURVEY

4.1 SURVEY METHODS

A pedestrian survey of the proposed project pipeline alignments was conducted on August 29, 2022 by HELIX staff archaeologist Mary Villalobos and tribal cultural monitors Brian Robben (Soboba) and Chris Yearyeen (Pechanga). The project area was walked in transects along one side of each alignment, including a 50-foot buffer, and then along the other side of the alignment, in long sections of the paved and unpaved streets. A few representative photographs of the project area are included below.



Plate 1. Malaga Road (northern project boundary), looking east; photo #2.

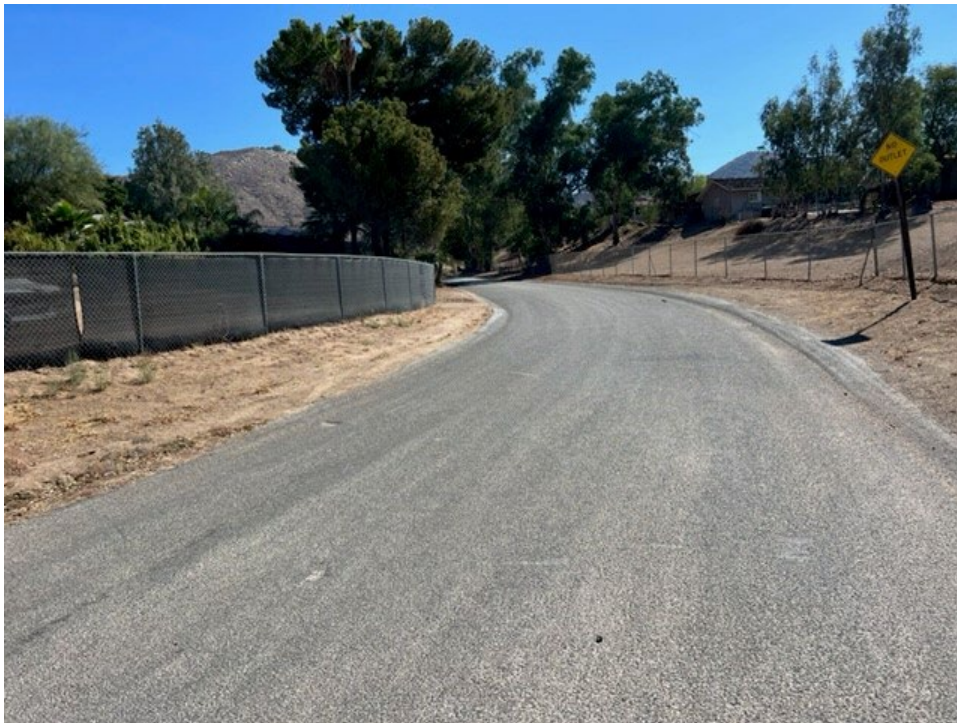


Plate 2. Elberta Street, looking east; photo #7.



Plate 3. Vine Street, looking west; photo #27

4.2 SURVEY RESULTS

Much of the area was highly disturbed and consisted of residential houses, with gates and fences, along the alignment. Some open fields were present, which had been graded and plowed, but these were generally fenced and inaccessible. Vegetation included mustard grass, pepper trees, and other non-native shrubs and trees within the open fields, as well as in residential areas. Modern trash littered all areas. The soil consisted of light to medium brown sandy silt, with gravel in the residential properties. Visibility ranged from 40 percent to 90 percent along the alignments.

No cultural material was observed.

5.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

A study was undertaken to identify cultural resources within the proposed Sedco Hills Septic to Sewer Project area and to determine the effects of the project on historical resources per CEQA and historic properties per Section 106. The cultural resources survey did not identify any archaeological resources within the project area; therefore, no impacts to archaeological historical resources/historic properties are anticipated from project implementation. However, as addressed in section 2.2.6, *Paayaxchi*, the Lake Elsinore area, with the placename *Paayaxchi*, has been identified by Soboba and Pechanga as a highly significant cultural area. The lake and nearby *Itengvu Wumowmu* (Lake Elsinore Hot Springs) are tied directly to events that occurred during the creation of the world, per the Luiseño creation account.

Although *Paayaxchi* has not been formally evaluated for NRHP eligibility as a TCP, it appears to meet the criteria for eligibility under Criteria A, B, C, and D. *Paayaxchi* is potentially eligible under Criterion A for

its association with the “cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1998: 1). *Paayaxchi* could be considered eligible under Criterion B for its association with the cultural figure *Wuyoot* and under Criterion C for the presence of rock art. The resource is also potentially eligible under Criterion D for its potential to address important research themes and contribute to an understanding of traditional Luiseño lifeways. Based on this, the project has the potential to affect a TCP. Discussions with Pechanga and Soboba to assess potential project impacts are ongoing.

5.1 MANAGEMENT RECOMMENDATIONS

Based on the results of the current study, no archaeological historical resources/historic properties will be affected by the Sedco Hills Septic to Sewer Project. Discussions with Pechanga and Soboba regarding potential effects to an apparent TCP are ongoing.

While no historic properties have been identified within the project area, as discussed throughout this report, the area is sensitive for cultural resources. Based on this, it is recommended that an archaeological and Native American monitoring program be implemented for all ground-disturbing activities, including brushing/grubbing, grading, trenching, excavation, etc. The monitoring program, described in detail below, would include attendance by the archaeologist and Native American monitor(s) at a preconstruction meeting with the grading contractor and the presence of archaeological and Native American monitors during all ground-disturbing activities for the project. Both archaeological and Native American monitors would have the authority to temporarily halt or redirect grading and other ground-disturbing activity in the event that cultural resources are encountered. If significant cultural material is encountered, the project archaeologist will coordinate with representatives of the Monitoring Tribes and with EVMWD and SWRCB staff to develop and implement appropriate avoidance, mitigation, or treatment measures. Monitoring can be reduced in segments that are determined to have been cut or excavated to below potentially cultural levels.

In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed disturbance, archaeological survey of these areas will be required.

5.2 RECOMMENDED MITIGATION MEASURES

The following mitigation measures are recommended to reduce impacts to cultural resources to below a significant level.

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.

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, the Eastern Information Center, and the Monitoring Tribe(s).

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Appendix A

Resumes of Key Personnel

Summary of Qualifications

Ms. Robbins-Wade has 41 years of 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 under the California Environmental Quality Act (CEQA), as well as numerous archaeological studies under various federal jurisdictions, addressing Section 106 compliance and National Environmental Policy Act (NEPA) issues. She has excellent relationships with local Native American communities and the Native American Heritage Commission (NAHC), as well as has supported a number of local agency clients with Native American consultation under State Bill 18 and assistance with notification and Native American outreach for Assembly Bill 52 consultation. Ms. Robbins-Wade is a Registered Professional Archaeologist (RPA) and meets the U.S. Secretary of the Interior's Professional Qualifications for prehistoric and historic archaeology.

Selected Project Experience

12 Oaks Winery Resort. Project Manager/ Principal Investigator for a cultural resources survey of approximately 650 acres for a proposed project in the County of Riverside. Oversaw background research, field survey, site record updates, Native American coordination, and report preparation. Met with Pechanga Cultural Resources staff to discuss Native American concerns. Worked with applicant and Pechanga to design the project to avoid impacts to cultural resources. Work performed for Standard Portfolio Temecula, LLC.

28th Street between Island Avenue and Clay Avenue Utilities Undergrounding Archaeological Monitoring. Project Manager/Principal Investigator for a utilities undergrounding project in a historic neighborhood of East San Diego. Responsible for project management; coordination of archaeological and Native American monitors; coordination with forensic anthropologist, Native American representative/Most Likely Descendent, and City staff regarding treatment of possible human remains; oversaw identification of artifacts and cultural features, report preparation, and resource documentation. Work performed for the City of San Diego.

Archaeological Testing F11 Project. Project Manager for a cultural resources study for a proposed mixed-use commercial and residential tower in downtown San Diego. Initial work included an archaeological records search and a historic study, including assessment of the potential for historic archaeological resources. Subsequent work included development and implementation of an archaeological testing plan, as well as construction monitoring and the assessment of historic archaeological resources encountered. Work performed for the Richman Group of Companies.

Education

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

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

Registrations/ Certifications

Caltrans,
Professionally
Qualified Staff-
Equivalent Principal
Investigator for
prehistoric
archaeology,
, Bureau of Land
Management
Statewide Cultural
Resource Use Permit
(California), permit
#CA-18-35,
, Register of
Professional
Archaeologists
#10294, 1991
County of San Diego,
Approved CEQA
Consultant for
Archaeological
Resources, 2007
, Orange County
Approved
Archaeologist 2016

Mary Robbins-Wade, RPA

Cultural Resources Group Manager

Blended Reverse Osmosis (RO) Line Project. Project Manager/ Principal Investigator for cultural resources monitoring during construction of a 24-inch recycled water pipeline in the City of Escondido. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

Buena Sanitation District Green Oak Sewer Replacement Project. Project Manager/Principal Investigator for a cultural resources testing program in conjunction with a proposed sewer replacement project for the City of Vista. Oversaw background research, fieldwork, site record update, Native American coordination, and report preparation. Work performed for Harris & Associates, Inc., with the City of Vista as the lead agency.

Cactus II Feeder Transmission Pipeline IS/MND. Cultural Resources Task Lead for this project in the City of Moreno Valley. Eastern Municipal Water District proposed to construct approximately five miles of new 30-inch to 42 inch-diameter pipeline; the project would address existing system deficiencies within the City and provide supply for developing areas. Oversaw background research, field survey, and report preparation. Responsible for Native American outreach for cultural resources survey. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

Dale 2199C Pressure Zone Looping Pipeline Project. Cultural Resources Task Lead for this project in Moreno Valley. Eastern Municipal Water District proposed construction of a new pipeline to connect two existing pipelines in the District's 2199C Pressure Zone. The pipeline would consist of an 18-inch-diameter pipeline between Kitching Street and Alta Vista Drive that would connect to an existing 12-inch-diameter pipeline in the northern end of Kitching Street and to an existing 18-inch-diameter pipeline at the eastern end of Alta Vista Drive. The project will improve reliability and boost the Dale Pressure Zone's baseline pressure and fire flow availabilities. Four potential alignments were under consideration; three of these bisect undeveloped land to varying degrees, while the other is entirely situated within developed roadways. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Work performed under an as-needed contract for Eastern Municipal Water District.

Downtown Riverside Metrolink Station Track & Platform Project. Cultural Resources Task Lead for this project involving changes to and expansion of the Downtown Riverside Metrolink Station. Overseeing records search and background information, archaeological survey, and report preparation. Responsible for coordination with Native American Heritage Commission, Riverside County Transportation Commission (RCTC), and Federal Transportation Authority (FTA) on Native American outreach. Work performed for Riverside County Transportation Commission as a subconsultant to HNTB Corporation.

Emergency Storage Pond Project. Project Manager/Principal Investigator for a cultural resources testing program in conjunction with the Escondido Recycled Water Distribution System - Phase 1. Two cultural resources sites that could not be avoided through project design were evaluated to assess site significance and significance of project impacts. Work included documentation of bedrock milling

Mary Robbins-Wade, RPA

Cultural Resources Group Manager

features, mapping of features and surface artifacts, excavation of a series of shovel test pits at each site, cataloging and analysis of cultural material recovered, and report preparation. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Work performed for the City of Escondido.

Escondido Brine Line Project. Project Manager/Principal Investigator for cultural resources monitoring during construction of approximately 2.3 miles of a 15-inch brine return pipeline in the City of Escondido. The project, which is part of the City's Agricultural Recycled Water and Potable Reuse Program, enables discharge of brine recovered from a reverse osmosis facility that is treating recycled water; it is one part of the larger proposed expansion of Escondido's recycled water distribution to serve eastern and northern agricultural land. The project is located in an area that is sensitive to both the Kumeyaay and Luiseño people, requiring close coordination with Native American monitors from both groups. Oversaw monitoring program, including Worker Environmental Awareness Training; responsible for Native American outreach/coordination, coordination with City staff and construction crews, and general project management. Work performed for the City of Escondido.

Hacienda del Mar EIR. Senior Archaeologist for a proposed commercial development project for a senior care facility in Del Mar. Assisted in the preparation of associated permit applications and an EIR. Oversaw background research, updated records search and Sacred Lands File search, monitoring of geotechnical testing, coordination with City staff on cultural resources issues, and preparation of updated report. Prior to coming to HELIX, served as Cultural Resources Task Lead for the cultural resources survey for the project, conducted as a subcontractor to HELIX. Work performed for Milan Capital Management, with the City of San Diego as the lead agency.

Lilac Hills Ranch. 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. Oversaw background research, field survey, testing, recording of archaeological sites and historic structures, and report preparation. Responsible for development of the research design and data recovery program, preparation of the preservation plan, and Native American outreach and coordination. 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 cultural resource. The project changed over time, so additional survey areas were included, and a variety of off-site improvement alternatives were addressed. Work performed for Accretive Investments, Inc. with County of San Diego as the lead agency.

Moulton Niguel Water District Regional Lift Force Main Replacement. Cultural Resources Task Lead/Principal Investigator for the replacement of a regional lift station force main operated by Moulton Niguel Water District (MNWD). The project comprises an approximately 9,200 linear foot alignment within Laguna Niguel Regional Park in Orange County, in an area that is quite sensitive in terms of cultural resources. HELIX is supporting Tetra Tech throughout the preliminary design, environmental review (CEQA), and final design, including permitting with applicable state and federal regulatory agencies. The cultural resources survey will inform project design, in order to avoid or minimize potential impacts to cultural resources. Oversaw background research and constraints analysis, Native American

Mary Robbins-Wade, RPA

Cultural Resources Group Manager

coordination, cultural resources survey, coordination with MNWD and Tetra Tech, and report preparation. Work performed for MNWD, as a subconsultant to Tetra Tech.

Murrieta Hot Springs Road Improvements Project. Principal Investigator/Cultural Resources Task Lead for cultural resources survey in support of an Initial Study/Mitigated Negative Declaration (IS/MND) for the widening of Murrieta Hot Springs Road in the City of Murrieta. The project would widen or restripe Murrieta Hot Springs Road between Winchester Road and Margarita Road from a 4-lane roadway to a six-lane roadway to improve traffic flow, as well as provide bike lanes in both directions along this segment. A new raised median, light poles, signage, stormwater catch basins, retaining walls, and sidewalks would also be provided on both sides of the roadway, where appropriate. The project area is in a location that is culturally sensitive to the Native American community. The cultural resources study included tribal outreach and coordination to address this cultural sensitivity.

Park Circle - Cultural Resources. Project Manager/Principal Investigator of a cultural resources survey and testing program for a proposed 65-acre residential development in the Valley Center area of San Diego County. The project is located along Moosa Creek, in an area that is culturally sensitive to the Luiseño people. Oversaw background research, historic study, field survey, testing, recording archaeological sites and historic structures, and report preparation. Responsible for Native American outreach and coordination. The cultural resources study included survey of the project area, testing of several archaeological sites, and outreach and coordination with the Native American community, as well as a historic study that addressed a mid-20th century dairy barn and a late 19th century vernacular farmhouse. Work performed for Touchstone Communities.

Peacock Hill Cultural Resources. Project Manager/Principal Investigator of a cultural resources study update for a residential development in Lakeside. Oversaw updated research, fieldwork, lab work, analysis by forensic anthropologists, report preparation, and Native American coordination. In the course of outreach and coordination with the Native American (Kumeyaay) community, possible human remains were identified, prompting additional fieldwork, as well as coordination with the Native American community and forensic anthropologists. Work performed for Peacock Hill, Inc.

Sky Canyon Sewer Environmental Consulting. Cultural Resources Task Lead for this project adjacent to the City of Murrieta in southwestern Riverside County. Eastern Municipal Water District (District) proposed to implement the Sky Canyon Sewer Main Extension Project to construct approximately 6,700 linear feet of new gravity-fed 36-inch-diameter sewer main to provide additional sewer capacity for planned development. The proposed 36-inch-diameter sewer main would extend the existing 36-inch-diameter French Valley Sewer at Winchester Road further downstream to Murrieta Hot Springs Road. Oversaw background research and field survey. Responsible for Native American outreach for cultural resources survey and co-authored technical report. Assisted District with Native American outreach and consultation under AB 52. Work performed under an as-needed contract for Eastern Municipal Water District.

Summary of Qualifications

Mr. Cooley has over 45 years of experience in archaeological resource management. He has directed test and data recovery investigations, monitoring programs, and archaeological site surveys of large and small tracts, and has prepared reports for various cultural resource management projects. He is well-versed in National Historic Preservation Act, National Environmental Policy Act (NEPA), and California Environmental Quality Act (CEQA) regulations and processes. Mr. Cooley's experience also includes Native American consultation for monitoring of archaeological field projects, including some with human remains and reburial-related compliance issues.

Selected Project Experience

8016 Broadway Self Storage Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Lemon Grove Self-Storage project located in the City of Lemon Grove, San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Summit Environmental Group, Inc.

Briggs Road Walton Development Project (Assessor's Parcel Number 461-170-001) (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the Briggs Road Residential project located in Riverside County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

Brown Field and Montgomery Field Airport Master Plans (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory and pedestrian survey programs at the Brown Field Municipal Airport and the Montgomery-Gibbs Executive Airport, in the City of San Diego, in support of updating of the Airport Master Plan and its Programmatic Environmental Impact Report. Involvement included participation in the analysis of the results from the survey programs and co-authorship of the technical reports. Work performed as a subconsultant to C&S Companies, with the City of San Diego as the lead agency.

Cubic Redevelopment Environmental Consulting (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a 20-acre redevelopment project, located in the community of Kearny Mesa, City of San Diego. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for Cubic Redevelopment Environmental Consulting, with the City of San Diego as lead agency.

Education

Master of Arts,
Anthropology,
California State
University, Los
Angeles, 1982

Bachelor of Arts,
Anthropology,
California State
College, Long Beach,
1970

Registrations/ Certifications

Register of Professional
Archaeologists #10621,
2019

City of San Diego,
Certified Principal
Investigator for
Monitoring Projects

County of Riverside,
Certified Cultural
Resources Consultant
Principal Investigator

County of Orange,
Certified Cultural
Resources Consultant
Principal Investigator

County of San Diego,
Approved Consultant
for Archaeological
Resources

Los Angeles, Ventura,
San Luis Obispo, and
Santa Barbara
Approved Consultant

Theodore G. Cooley, RPA

Senior Archaeologist

French Valley 303 Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the French Valley 303 Site residential development project, located in the French Valley area of unincorporated Riverside County. Involvement included participation in the analysis of the results from the monitoring program and co-authorship of the technical report. Work performed for Pulte Home Co., LLC.

Hiser Property Project (2019 - Present). Senior Archaeologist for a due diligence study prepared to summarize potential cultural resources constraints to the 9.2-acre Hiser Property development project, located in the Mission Gorge area of the City of Santee, San Diego County. The study consisted of background research including a record search and limited archival study, a field survey, and a review of the Sacred Lands File from the Native American Heritage Commission (NAHC). Involvement included participation in the analysis of the results and preparation of a summary letter report of the potential cultural resources-related constraints to the planned development. Work performed for KB Home.

Ponto Hotel Technical Studies (2019 - Present). Senior Archaeologist for a cultural resources assessment study for the Ponto Hotel development project in the City of Carlsbad, San Diego County, California. Involvement included participation in the analysis of the results from the assessment program and preparation of the technical report. Work performed for Kam Sang Company, with the City of Carlsbad as the lead agency.

R.M. Levy Water Treatment Plant Sewer Replacement (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory and assessment program in support of a water treatment plant, sewer pipeline, replacement project, located in the community of Lakeside, San Diego County. Involvement included participation in the analysis of the results from the survey program and preparation of the technical report. Work performed for HELIX Water District.

Salt Bay District Specific Plan EIR (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program in support of the 46.6-acre Salt Bay Design District Specific Plan mixed-use wholesale/retail shopping and light industrial development project, in the cities of San Diego and Chula Vista. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for M. & A. Gabae, with the City of San Diego as lead agency.

San Jacinto Property Project (2019 - Present). Senior Archaeologist for a Phase I pedestrian survey and cultural resource inventory program of the 214 residential project located in Riverside County. Involvement included participation in the analysis

Theodore G. Cooley, RPA

Senior Archaeologist

of the results from the survey program and co-authorship of the technical report. Work performed for the Walton International Group, LLC.

San Elijo Joint Powers Authority Roadway and Trail Addendum and Permitting (2019 - Present). Senior Archaeologist for Phase I cultural resource inventory, pedestrian survey, and resource testing at the San Elijo Water Reclamation Facility adjacent to San Elijo lagoon, in San Diego County, in support of the preparation by the San Elijo Joint Powers Authority of a Roadway and Trail Addendum for upgrades to the facility requiring verification of Nationwide Permit authorization from the U.S. Army Corps of Engineers (USACE). Involvement included participation in the analysis of the results from the survey and testing program and co-authorship of the technical report. Work performed as a subconsultant to Kimley-Horn & Associates, with the San Elijo Joint Powers Authority as lead agency.

Sycamore & Watson Project (2019 - Present). Senior Archaeologist for an archaeological construction monitoring program for the Sycamore & Watson residential development project, located in City of Vista, San Diego County. Involvement included participation in the analysis of the results from the monitoring program and preparation of the technical report. Work performed for Meritage Homes.

Sycamore Canyon/Goodan Ranch Public Access Plan IS/MND (2019 - 2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Parks Department of a Public Access Plan for the Sycamore Canyon/Goodan Ranch Preserve located in coastal foothills of unincorporated west-central San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

Sycuan/Sloane Canyon Trail IS/MND (2019). Senior Archaeologist for Phase I pedestrian survey and cultural resource inventory in support of the preparation by the County of San Diego County Department of a Parks and Recreation for the Sycuan/Sloane Canyon Trail project located in the coastal foothills of unincorporated southwestern San Diego County. Involvement included participation in the analysis of the results from the survey program and co-authorship of the technical report. Work performed for the County of San Diego.

The Enclave at Delpy's Corner Project (2019 - Present). Senior Archaeologist for a cultural resources monitoring and data recovery program in support of a proposed 124-unit townhome development project, in the City of Vista, San Diego County. Involvement included participation in the analysis of the prehistoric lithic artifacts and preparation of technical report sections containing the results of these analyses. Work performed for CalAtlantic Homes.

Summary of Qualifications

Ms. Villalobos serves as a field archaeologist on a number of cultural resource projects in southern California, including surveys, testing programs, and monitoring. She has also served as a laboratory assistant for major universities, museums, and archaeological centers. She has expertise in cultural resource surveying, cataloging site excavation data, and monitoring. Ms. Villalobos' experience includes international work for a key archaeological project in Peru focused on a temple excavation.

Selected Project Experience

1125 S. Cleveland Street -Cultural & Native American Monitoring (2016).

Archaeological monitor for a housing project in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Hallmark Communities. Lead agency was City of Oceanside.

12 Oaks Winery Resort (2015 - 2018). Field Archaeologist for survey of an approximately 600-acre project near Temecula in Riverside County, CA. Responsibilities included identification of cultural material during field survey. Work performed for Standard Portfolio Temecula, LLC, with County of Riverside as the lead agency.

28th Street between Island Avenue and Clay Avenue Archaeological Monitoring (2016 - 2018). Archaeological Monitor for a utilities undergrounding project in a historic neighborhood of East San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego.

4th & J Project (2017). Archaeological monitor for a residential project in a historic neighborhood in the City of San Diego, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Legacy Partners, lead agency is City of San Diego.

Oceanside As-Needed Environmental Consulting Services (2015 - 2016). Archaeological Monitor for construction of a new facility at the Mission Basin Desalting Facility near the San Luis Rey River, in the City of Oceanside, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Oceanside.

Education

Bachelor of Arts,
Anthropology,
concentration in
Archaeology,
University of
California San Diego,
CA, 2013

Registrations/ Certifications

Technical Safety
Institute, HAZWOPER
40 Hour, Issue No.
F183292: Hazardous
Waste Operations
and Emergency
Response, 2018

Mary Villalobos

Staff Archaeologist

City of San Diego As-Needed Permitting Assistance for O & M Activities and Emergencies (2016 - 2016). Archaeological monitor for the removal of sediment at culvert outlets at Hotel Circle, in the City of San Diego, CA, to help alleviate flooding in the area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of San Diego

Storage Buildings Construction Monitoring, San Marcos Campus (2017). Archaeological monitor for the construction of storage facilities on the campus of Palomar College in the City of San Marcos, California. Cultural resources are located near the project area. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for Palomar College.

Cemetery Area Water Pipeline Replacement (2015 - 2016). Archaeological Monitor for a water pipeline replacement project in eastern Escondido, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Escondido.

Da Vinci (2018). Archaeological monitor during potholing to find existing utilities for the construction of a telecommunication tower. Responsible for field monitoring, coordination with construction crew, identification of artifacts and cultural features, and daily monitoring notes. Work performed for Terracon. Lead agency is Verizon.

DePratti, Inc. Telespan Lake Wohlford (2017). Field archaeologist for a testing program to determine the northern extent of an important archaeological site near Lake Wohlford in the community of Bear Valley in the County of San Diego, California. Responsibilities included excavation of test units, identification of cultural material, and preparation of field notes. Work performed for DePratti, Inc. Lead agency is County of San Diego.

El Camino Real Road Widening-Archaeological Monitoring (2016). Archaeological Monitor for a road widening project in an area with archaeological and cultural sensitivity in the City of Carlsbad, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for the City of Carlsbad.

Magnolia Trails (2016). Archaeological Monitor for a residential development in the City of El Cajon, CA. Responsible for field monitoring, coordination with construction crew and Native American monitors, identification of artifacts and cultural features, and daily field notes. Work performed for KB Home. Lead agency was City of El Cajon.

Appendix C

List of Reports within Records Search Radius

The following section contains content that was obtained from a third party and may not achieve the same level of Americans with Disabilities Act (ADA) and Section 508 accessibility as other parts of this document.

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-03333	NADB-R - 1083949; Other - DACW09-90-D-0004; Voided - MF-3571	1991	HAMPSON, R. PAUL	CULTURAL RESOURCES SURVEY AND TEST EXCAVATION, LAKE ELSINORE, CALIFORNIA	GREENWOOD AND ASSOCIATES, AND INFOTEC RESEARCH, INC.	33-002798, 33-004042, 33-004043, 33-004044, 33-004045
RI-03545	NADB-R - 1084241; Voided - MF-3809	1992	LECOUNT, LISA and CARMEN A. WEBER	CULTURAL RESOURCES SURVEY FOR THE EAST LAKE SPECIFIC PLAN	CHAMBERS GROUP, INC.	33-004646, 33-004647, 33-004648
RI-04877	NADB-R - 1086239	2003	PEAK & ASSOCIATES, INC.	CULTURAL RESOURCES ASSESSMENT OF THE PROPOSED TEMECULA VALLEY REGIONAL WATER RECLAMATION FACILITY EFFLUENT PIPELINE, RIVERSIDE COUNTY, CALIFORNIA	PEAK & ASSOCIATES, INC.	33-010986
RI-07782	Submitter - SWCA Project o. 10897/SWCA Cultural Resources Report No. 2007-182	2007	Underbrink, Susan	CULTURAL RESOURCES SURVEY REPORT FOR STAGES 2 AND 3 (TRACT 31920) SUMMERLY PROJECT, LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA	SWCA Environmental Consultants, Mission Viejo, CA	33-004647, 33-008916, 33-015943, 33-015944, 33-015945, 33-015946, 33-015947
RI-09021		2013	Robert Cunningham, Wendy Jones, Evelyn N. Chandler, and Roger Mason	Cultural Resources Investigation Results of the Marshalling Yard Survey, Access Road Survey, and Supplemental 115kV Transmission Line Survey in Support of the Alberhill Substation, Riverside County, California	ECORP CONSULTING, INC.	33-003308, 33-012067, 33-015743, 33-019925, 33-021068, 33-021069, 33-021162
RI-10077		2018	Jennifer Roland	Phase I Investigation for the Verizon Wireless Jaro Tower Installation Project, Wildomar, Riverside, California	NWB Enviornmental Services, LLC	
RI-10365		2017	Curt Duke, Matthew Stever, and Benjamin Scherzer	Cultural and Paleontological Resources Assessment East Lake Specific Plan Amendment No. 11 Lake Elsinore, Riverside County, Californi	Duke CRM	
RI-10530		2009	Laura S. White and Robert S. White	Phase I Cultural Resources Assessment of the Elsinore Valley Municipal Water District Wildomar Recycled Water System Phase 1 - Off-Site Facilities Project, Riverside County	Arcaheological Associates	

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RI-00840	NADB-R - 1080893; Voided - MF-0761	1980	Christopher E. Drover	An Archaeological Assessment of Proposed Wastewater Treatment Facilities at the Southeast end of Lake Elsinore and Railroad Canyon, Riverside County, California	Albert A. Webb Associates, Riverside, California	
RI-02999	NADB-R - 1083542; Voided - MF-3222	1990	DROVER, CHRISTOPHER E.	ENVIRONMENTAL IMPACT EVALUATION: AN ARCHAEOLOGICAL ASSESSMENT OF THE CITY CENTER PROJECT ELSINORE, CALIFORNIA	AUTHOR	33-003504, 33-003505, 33-004037
RI-03486	NADB-R - 1084156; Voided - MF-3743	1992	WHITE, ROBERT S.	AN ARCHAEOLOGICAL ASSESSMENT OF A 7.22-ACRE PARCEL, AS SHOWN ON PM 26991	ARCHAEOLOGICAL ASSOCIATES, LTD.	
RI-04661	NADB-R - 1086019; Submitter - 1163	2003	HOGAN, MICHAEL, BAI TANG, JOSH SMALLWOOD, and JOHN J. EDDY	HISTORIC/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: BUNDY CANYON RESTAURANT PROJECT, 33950 ANGELS LANE, WILDOMAR, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	
RI-04876	NADB-R - 1086238; Other - TC# 14455-01	2004	TETRA TECH, INC.	A PHASE I ARCHAEOLOGICAL SURVEY OF APPROXIMATELY 6.17-ACRES FOR THE MISSION TRAILS PROJECT LOCATED AT 32795-32788 CORYDON ROAD, LAKE ELSinORE, RIVERSIDE COUNTY, CALIFORNIA	TETRA TECH, INC.	
RI-05319	NADB-R - 1086682; Submitter - CML430	2004	GOODWIN, RIORDAN	CULTURAL RESOURCES ASSESSMENT, DAIGLE SUBDIVISION 31532, CITY OF LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA	LSA ASSOCIATES, INC.	
RI-05355	NADB-R - 1086718	2006	SWCA ENVIRONMENTAL CONSULTANTS	CULTURAL RESOURCES SURVEY FOR THE MISSION TRAILS DEVELOPMENT PROJECT, RIVERSIDE COUNTY, CA	SMCA ENVIRONMENTAL	33-014891
RI-05683	NADB-R - 1087046; Submitter - CA-7281A	2005	Erika Thal	Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/Number: CA-7281A/ Wildomar	EarthTouch, Inc., Layton, UT	
RI-05918	NADB-R - 1087281	2002	WLODARSKI, ROBERT J.	A PHASE I ARCHAEOLOGICAL STUDY FOR FIVE POTENTIAL WELL SITE LOCATIONS, LAKE ELSINORE, RIVERSIDE COUNTY, CA	HEART	
RI-06905	Other - Contract No. 06715.06, 06788.06	2006	Jordan, Stacey C.	Archaeological Survey Report for the Southern California Edison Company, DSP- DOROF 12Kv Circuit Project, Riverside County, California (WO# 6077-5395; AI# 6- 5301 and 6-5302)	Mooney Jones & Stokes, San Diego, CA	

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RI-06906	Other - Contract No. 06788.06	2006	Jordan, Stacey C.	Archeological Survey Report for the Southern California Edison Company, DSP-Cereal 12Kv Circuit Project, Riverside County (WO#6577-5326, AI#6-5303)	Mooney, Jones & Stokes	
RI-07471		2007	Keller, Jean A.	A Phase I Cultural Resources Assessment of APN 366-210-052 thru 054, +- 3.72 Acres of Land in the City of Lake Elsinore, Riverside County, California, USGS Lake Elsinore, California Quadrangle, 7.5' Series	Author	
RI-07663		2006	Smith, B.	A PHASE I ARCHAEOLOGICAL ASSESSMENT FOR THE WILDOMAR ANIMAL SHELTER PROJECT	BRIAN F. SMITH AND ASSOCIATES	
RI-09441		2012	David Brunzell	Cultural Resources Assessment, Elsinore Valley Municipal Water District, Waite Street Reservoir and Pipeline Project, Wildomar, Riverside County, California	BCR Consulting	
RI-09911		2005	Wayne H. Bonner and Marnie Aislin-Kay	Cultural Resource Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE05295A (SC295 First Presgbyterian Church), 33122 Grape Street, Wildomar, Riverside County, California	Michael Brandman Associates	
RI-10164		2017	Sonia Sifuentes and Tria Belcourt	Phase 1 Cultural Resources Assessment: Cottages at Mission Trail Project City of Lake Elsinore, Riverside County, California.	Material Culture Consulting, INC.	
RI-10279	Other - DUKE CRM PROJECT NUMBER: C-0211	2017	CURT DUKE, MATTHEW STEVER, and BENJAMIN SCHERZER	CULTURAL AND PALEONTOLOGICAL RESOURCES ASSESSMENT MISSION TRAIL APARTMENTS PROJECT LAKE ELSINORE, RIVERSIDE COUNTY, CALIFORNIA	DUKE CULTURAL RESOURCES MANAGEMENT, LLC	
RI-10398		2018	Andrew J. Garrison and Brain F. Smith	A Cultural Resource Assessment for the St. Frances of Rome Project	Brian F. Smith & Associates	