

# Diamond Regional Sewer Lift Station and Dual Force Mains Project

Initial Study / Environmental Checklist  
Mitigated Negative Declaration

April 2019

*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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## 1.0 INTRODUCTION

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970, as amended, and the CEQA Guidelines, as revised. This IS/MND evaluates the environmental effects of the Diamond Regional Sewer Lift Station and Dual Force Mains Project (project or proposed project). The project site includes municipal sewer system facilities owned and maintained by the Elsinore Valley Municipal Water District (EVMWD or District), and is located in areas of both public (EVMWD and the City of Lake Elsinore) and private land ownership. EVMWD is the lead agency for the proposed project, with the IS/MND including the following components:

- A Draft MND and the formal findings made by the District that the project would not result in significant effects on the environment, as identified in the IS Checklist.
- A detailed project description.
- The CEQA IS Checklist, which provides standards to evaluate the potential for significant environmental impacts from the proposed project, as adapted from Appendix G of the CEQA Guidelines. The project is evaluated in 19 environmental issue categories to determine whether the project's environmental impacts would be significant in any category. Brief discussions are provided that further substantiate the project's anticipated environmental impacts in each category.

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

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

## 2.0 DRAFT MITIGATED NEGATIVE DECLARATION

**Project Name:** Diamond Regional Sewer Lift Station and Dual Force Mains Project

**Project Location:** Generally South of East Lakeshore Drive, Between the Diamond Drive and Malaga Road intersection on the East, Village Parkway on the South, and Lake Elsinore on the West, in the City of Lake Elsinore, California

**Project Description:** The proposed project would replace the first phase of the existing B-Series Interceptor sewer system, to include the existing B1 Lift Station, the Summerly Interim Lift Station, and Back Basin Groundwater Treatment Plant Lift Station. The project would collect raw wastewater and then pump the sewage through a parallel 24-inch-diameter and 16-inch-diameter force mains to an existing junction structure near the corner of East Lakeshore Drive and Elm Street.

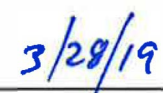
The construction of the Diamond Regional Sewer Lift Station would include approximately 3,400 linear feet of a parallel 24-inch-diameter and 16-inch-diameter force mains. The proposed alignment would connect at the north end of the proposed lift station, head east and then north along Diamond Circle into Peter Lehr Drive, cross the San Jacinto River, continue along Elm Street, and proceed to the North Reach connection point at Elm Street and East Lakeshore Drive.

Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving affected portions of streets. The pipeline trench is expected to be less than 10 feet wide and a minimum of 4 feet deep to the top of the pipe. In addition to trenching operations, microtunneling methods would be used to install the pipeline where the proposed alignment crosses the San Jacinto River. Jack-and-bore methods of pipe installation (also known as auger boring) may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore methods for this project would involve digging a shaft on each side (an entrance and exit shaft) with an excavator, and tunneling or boring under the channel or roadway from the entrance shaft to the exit shaft on the other side.

The proposed lift station would serve as a main wastewater lift station and would have the capability of pumping up to 19.9 million gallons per day (MGD). The anticipated initial average inflow would be 3.0 MGD with a peak hour inflow of 9.0 MGD. The project would consist of a new below-grade sewage lift station with a wet well, diesel generator, odor control system, electrical building, grinding (pre-treatment facility), flow metering vault, and all associated site yard piping and site grading.

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

  
\_\_\_\_\_  
Signature of Lead Agency Representative

  
\_\_\_\_\_  
Date

### **3.0 PROJECT DESCRIPTION**

#### **1. PROJECT**

Diamond Regional Sewer Lift Station and Dual Force Mains Project

#### **2. LEAD AGENCY & ADDRESS**

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

#### **3. CONTACT PERSON & PHONE**

Matthew Bates  
Engineering Manager  
Elsinore Valley Municipal Water District  
(951) 674-3146

#### **4. PROJECT LOCATION**

The proposed project is generally located east of Lake Elsinore and approximately 0.7 mile southwest of Interstate 15 (I-15), in western Riverside County, California (Figure 1, *Regional Location*). The project site is situated in the unsectioned La Laguna land grant on the Lake Elsinore, California U.S. Geological Survey (USGS) quadrangle map (Figure 2, *USGS Topography*). More specifically, the project site is located south of East Lakeshore Drive, along Elm Street in the north and adjacent to Diamond Circle in the southern portion of the proposed alignment (Figure 3, *Site Plan*). The impact site includes portions of Assessor's Parcel Numbers (APNs) 371-030-053, 371-030-052, 373-210-042, 373-210-048, 363-130-087, 373-210-030, 373-320-002, 373-320-002, 373-320-003, 373-320-005, 373-210-048 and City of Lake Elsinore (City) right-of-way for East Lakeshore Drive, Elm Street, Peter Lehr Drive, and Malaga Road.

#### **5. APPLICANT**

Elsinore Valley Municipal Water District

#### **6. GENERAL PLAN DESIGNATION**

Specific Plan (East Lake Specific Plan and Diamond Specific Plan) and General Commercial

#### **7. ZONING**

SP (Specific Plan – East Lake Specific Plan and Diamond Specific Plan) and C2 (General Commercial)

## **8. PROJECT DESCRIPTION**

### **Project Background**

EVMWD is a public non-profit agency that provides water, wastewater, and reclaimed water service to the City of Lake Elsinore, the City of Canyon Lake, portions of the City of Murrieta, and unincorporated portions of the County of Riverside. EVMWD's oldest facilities within its wastewater collection were constructed around 1910 and currently make up approximately 360 miles of sewer pipelines and three wastewater reclamation facilities. The population within EVMWD's service area is expected to increase from approximately 133,400 to approximately 221,100 in the next 20 years. This represents a 66 percent increase from existing (2016) conditions in the wastewater flows and the service requirements of its wastewater system. Recognizing this, EVMWD recently updated its Sewer System Master Plan. The Master Plan documents the existing level-of-service conditions and the future wastewater flow estimates, and makes recommendations for future collection system improvements.

One of the projects identified in the Sewer System Master Plan is the replacement of the existing B-Series Interceptor sewer system, including two lift stations (B1 and B2). Implementation of the proposed Diamond Regional Sewer Lift Station and Dual Force Mains Project (project) would accomplish replacement of the B1 lift station. The B2 lift station is planned to be replaced as part of a future project.

### **Existing Facilities**

The existing B-Series Interceptor Sewer is approximately seven miles long and conveys flows from the District's southern section and eastern sewer sheds to the Regional Water Reclamation Facility for treatment. There are two intermediate lift stations (B1 and B2) along its length, located where the upstream gravity sewer was constructed greater than 20 feet below grade. The 2016 Sewer System Master Plan recommended improvement of the existing interceptor and lift stations, as these facilities are at or near capacity.

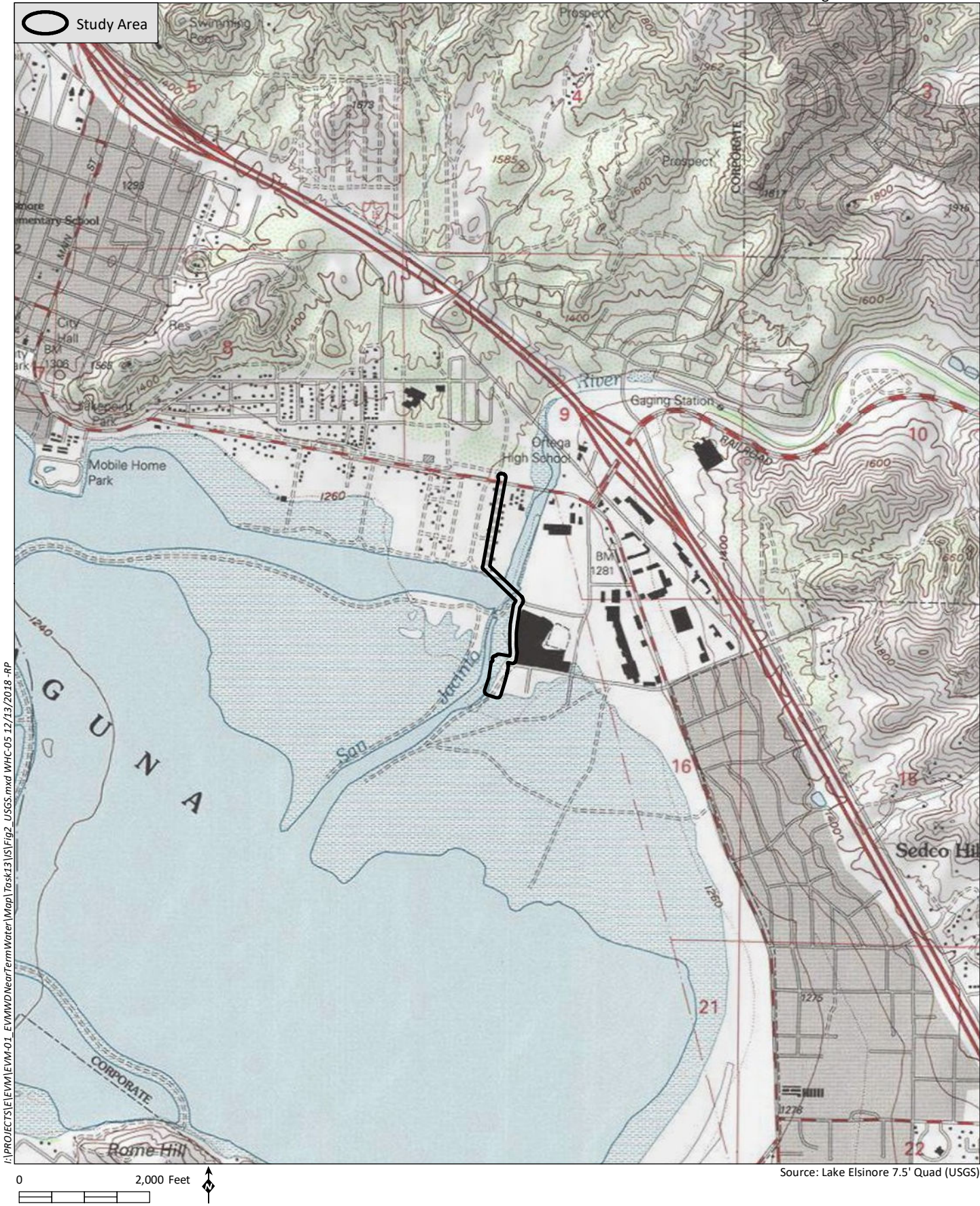
In addition, the Summerly Interim Lift Station was installed in 2008 near the intersection of Malaga Road and Mission Trail, and the Back Basin Groundwater Treatment Plant Lift Station was constructed in 2009 near the western terminus of Malaga Road (at the site of the proposed Diamond Regional Sewer Lift Station). The combined capacity of the B1, B2, Summerly Interim, and Back Basin Groundwater Treatment Plant lift stations is approximately 4.3 million gallons per day (MGD).

Based on a more detailed analysis of the B-Series Interceptor and lift stations, the proposed project was recommended. The existing interceptor would remain in operation and include relief connections at critical locations to the proposed Lakeshore Interceptor. The proposed Diamond Regional Sewer Lift Station would replace the existing B1, Summerly Interim, and Back Basin Groundwater Treatment Plant lift stations as part of the proposed project, and would eventually replace the existing B2 lift station as part of a future project.









Source: Lake Elsinore 7.5' Quad (USGS)







## **Project Description**

The proposed project is designed to meet the local service needs of proposed and existing residential developments in the vicinity of the Diamond Regional Sewer Lift Station. The proposed project would be designed to collect raw wastewater and then pump the sewage through a parallel 24-inch-diameter and 16-inch-diameter force mains to an existing junction structure near the corner of East Lakeshore Drive and Elm Street.

## **Pipeline**

The construction of the Diamond Regional Sewer Lift Station would include approximately 3,400 linear feet of a parallel 24-inch-diameter and 16-inch-diameter force mains. The proposed alignment would connect at the north end of the proposed lift station, head east and then north along Diamond Circle into Peter Lehr Drive, cross the San Jacinto River, continue along Elm Street, and proceed to the North Reach connection point at Elm Street and East Lakeshore Drive (refer to Figure 3, *Site Plan*).

Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving affected portions of streets. In addition to trenching operations, microtunneling methods would be used to install the pipeline where the proposed alignment crosses the San Jacinto River. Jack-and-bore methods of pipe installation may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore methods for this project would involve digging a shaft on each side (an entrance and exit shaft) with an excavator, and tunneling or boring under the channel or roadway from the entrance shaft to the exit shaft on the other side. If jack-and-bore methods are not used at East Lakeshore Drive, trenching within the roadway would occur in a manner that would allow one side of the road to remain open to traffic.

The pipeline trench is expected to be less than 10 feet wide and a minimum of 4 feet deep to the top of the pipe. The maximum depth to the top of the pipe would be approximately 9 feet deep in open cut construction areas, 35 feet deep in the microtunneling section under the San Jacinto River, and 19.5 feet deep in the potential jack-and-bore location under East Lakeshore Drive.

## **Lift Station**

The proposed lift station would serve as a main wastewater lift station and would have the capability of pumping up to 19.9 MGD. The anticipated initial average inflow would be 3.0 MGD with a peak hour inflow of 9.0 MGD. The project would consist of a new below grade sewage lift station with a wet well, diesel generator, odor control system, electrical building, flow metering vault, and associated site yard piping and site grading. The proposed lift station would be constructed of an architectural style similar to that of the existing adjacent Back Basin Groundwater Treatment Plant and nearby baseball stadium.

All proposed facilities would be designed/constructed in conformance with pertinent engineering standards, including applicable elements of the EVMWD *Design Standards and Standard Drawings for the Design and Construction of Potable Water, Recycled Water, and Sewer Facilities* (Design Standards; EVMWD 2015), current versions of the International Code Council (ICC) *International Building Code* (IBC, formerly the Uniform Building Code), and the related California Building Standards Commission *California Building Code* (CBC).

## **Construction Equipment, Access, Staging and Schedule**

Design is in progress, and construction is anticipated to begin in early to mid-2020. Construction of the proposed project is anticipated to last 18 months with pipeline installation occurring concurrently with construction of the lift station.

The proposed project would not require night work and would be limited to the hours of 7:00 a.m. to 7:00 p.m. Depending on the time of year, construction lighting may be required in the time between sundown and 7:00 p.m. Construction equipment would include a crane, excavator, concrete saw, roller, loader, microtunneling boring machine, and other surface equipment. Project trenching would generally occur within paved roadways; therefore, grading and associated off-site disposal of spoils would be minimal. Current estimates include 1,000 cubic yards of export related to pipeline installation and 500 cubic yards related to the lift station. Concrete paving (approximately 1,500 square yards) would be required at the proposed lift station site. Asphalt repaving would also occur for trenched areas within East Lakeshore Drive, Elm Street, Peter Lehr Drive, Diamond Circle, and Malaga Road. The removal of trees is not anticipated during construction; however, if it is subsequently determined that removal of trees is required, applicable landscaping efforts would be implemented to provide appropriate replacement trees.

Access to the project site area would be provided by a number of larger existing roadways, including I-15, East Lakeshore Drive, and Mission Trail (refer to Figure 2). Temporary construction access to the project site itself would be provided by local roadways, including Diamond Drive and Malaga Road to the east. Project-related traffic would include one-time ingress/egress for construction equipment and vehicles, daily construction worker trips, and occasional material delivery and haul truck trips. Because portions of the project are proposed in public streets (East Lakeshore Drive, Elm Street, Peter Lehr Drive, and Malaga Road), appropriate traffic control measures would be implemented as necessary in pertinent areas such as private driveways to maintain access and ensure safety. Such measures would likely include standard efforts such as the use of cones, barriers, signs and flaggers where applicable. Construction-related equipment/material, staging, and storage would be located entirely within one or more previously disturbed/developed off-site location(s) to be determined by the project contractor (e.g., the existing parking lot immediately to the east of the proposed lift station site).

## **Operation of the Proposed Project**

Once the project is operational, it is anticipated that one to two workers would be on site for daily operations. In addition to worker-related trips, one truck trip would be anticipated to occur every other week for deliveries of hydrogen peroxide and sodium hypochlorite. Electric power requirements for operation of the facility are estimated to be approximately 966,000 kilowatt hours (kWh) per day (at year 2020 capacity).

## **9. SURROUNDING LAND USES & PROJECT SETTING**

Surrounding land uses include single-family residences along Elm Street. The alignment crosses a flood channel south of Elm Street. A minor league baseball stadium is located to the east of the project, south of Pete Lehr Drive, and the southernmost portion of the alignment prior to its

connection to the pump station site is adjacent to an overflow parking lot. The southern end of the pump station site is developed with the Back Basin Groundwater Treatment Plant. A relatively new single-family housing development is located to the south of the proposed lift station site.

## **10. OTHER REQUIRED AGENCY APPROVALS**

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

- Conformance with the Regional Water Quality Control Board (RWQCB) National Pollutant Discharge Elimination System (NPDES) Construction General Permit,
- RWQCB Groundwater Discharge Permit, and
- City Encroachment Permit and approval of the Project Traffic Control Plan.

## **11. CALIFORNIA NATIVE TRIBE CONSULTATION**

EVMWD has consulted with applicable Native American tribal representatives through written correspondence, based on a contact list provided by the Native American Heritage Commission (NAHC). Additionally, EVMWD staff and HELIX Environmental Planning, Inc. (HELIX) Director of Cultural Resources Mary Robbins-Wade met with representatives from Pechanga Band of Luiseño Mission Indians and Soboba Band of Luiseño Indians to discuss the project and potential effects to significant cultural resources.

## 12. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

## 13. DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "less than significant with mitigation incorporated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must only analyze the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

## 4.0 ENVIRONMENTAL CHECKLIST

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

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

## 4.1 Aesthetics

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. In nonurbanized 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 points). 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?* **Less-Than-Significant Impact.** Scenic vistas in the project area are primarily associated with Lake Elsinore and the Santa Ana Mountains. The Aesthetics Element of the City of Lake Elsinore General Plan identifies key public vantage points throughout the City and describes views to Lake Elsinore from those points (City 2011). Within the project vicinity, the area just outside the nearby baseball diamond is identified as a vantage point, and views include nearby dry, brown grasses, scattered trees, and limited views of distant housing developments and Lake Elsinore. The proposed project would result in short-term construction-related aesthetic impacts, including the presence of equipment and vehicles. While this would result in minor alterations to the local visual environment for viewers in the immediate site vicinity, project construction activities would be temporary, minor in nature/extent, and primarily mobile (refer to the Project Description). Following the completion of construction, the lift station would be the only visible component of the project, as the proposed force mains would be located below ground. Although the lift station would be visible to vehicle passengers along Malaga Road and Diamond Circle, it would not substantially obstruct existing scenic vistas, which include views of the Elsinore Mountains to the west. As such, impacts would be less than significant.
- b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a State-designated scenic highway?* **Less-Than-Significant Impact.** State scenic highways are designated by the California Department of Transportation (Caltrans). According to the Caltrans California Scenic Highway Mapping System, the only identified scenic highway in the project vicinity is I-15, which is located approximately 0.3 mile northeast of the project site at its closest point and is listed as an Eligible (i.e., not officially designated) State Scenic Highway (Caltrans 2017). The project site is generally not visible from I-15 due to intervening distance, topography, and development/landscaping, and would not entail any high-profile surface facilities visible

from the highway. There are no historic buildings or rock outcroppings located within or adjacent to the project site. While a number of non-native trees are present adjacent to the site, no associated impacts are anticipated from project implementation. If it is subsequently determined that removal of one or more trees is required to accommodate project construction, applicable landscaping efforts would be implemented to provide appropriate replacement trees (refer to the Project Description). Based on the described conditions, project-related impacts to scenic vistas or scenic resources associated with a state scenic highway would be less than significant.

- c. *In nonurbanized 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 points). 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.** During the approximately 18-month construction period, construction activities associated with the project, including the presence of construction vehicles, equipment, and staging area(s), would result in short-term visual effects to the project site and surrounding areas. Due to the short-term and generally minor nature of proposed activities, however, impacts related to existing visual character or quality of the site and surrounding areas would be less than significant.

As previously noted, the only visible operational component of the project would be the lift station, as the force mains would be located below ground. The proposed lift station would be constructed of an architectural style similar to that of the existing adjacent Back Basin Groundwater Treatment Plant and nearby baseball stadium. As such, the proposed lift station would not substantially degrade the existing visual character of the site and its surrounding, and impacts would be less than significant.

- d. *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?* **Less-Than-Significant Impact.** As noted in the Project Description, project construction may require the use of lighting from the time between sundown and 7:00 p.m., depending on the time of year construction is occurring. If construction lighting is required, its use would be temporary and restricted to these evening hours. It would therefore not be a substantial source of light and would not adversely affect views in the area. Little to no lighting would be required for operation of the proposed facilities. Additionally, the project would not include surface structures with the potential to generate substantial glare (e.g., higher profile glass or stainless steel facilities). As a result, impacts related to light or glare would be less than significant.



## 4.2 Agriculture and Forestry Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 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 as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency? **No Impact.*** There are no areas within or adjacent to the project site designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (California Department of Conservation [CDC] 2017a). The northern portion of the proposed alignment would be within an area mapped as Urban and Built-Up Land. The proposed lift station and the southern portion of the proposed alignment would be within an area mapped as Farmland of Local Importance, adjacent to developed land. Implementation of the proposed project would not convert farmland to a different land use, however, because the site is currently not used as farmland and is not planned to be used as farmland. No impacts to the noted Important Farmland categories would result from project implementation.
- b. *Conflict with existing zoning for agricultural use, or a Williamson Act Contract? **No Impact.*** There are no areas zoned for agriculture or designated Williamson Act Contract lands located

within or adjacent to the project site (CDC 2017b). As a result, no associated impacts would result from implementation of the proposed project.

- c. *Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?* **No Impact.** The project site is not designated or zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the project would not conflict with existing zoning for such lands, and no impact would occur.
- d. *Result in the loss of forest land or conversion of forest land to non-forest use?* **No Impact.** As previously stated, the project site is not located within or adjacent to areas designated or zoned as forest land. As a result, project implementation would not convert forest land to non-forest use, and no impact would occur.
- e. *Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?* **No Impact.** As described above for Responses 4.2a through 4.2d, there are no pertinent agricultural- or forestry-related uses or designations located within or adjacent to the project site. Accordingly, the proposed project would not involve changes that could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, and no associated impacts would occur.

#### 4.3 Air Quality

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under the applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<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"/>

- a. *Conflict with or obstruct implementation of the applicable air quality plan?* **No Impact.** The project is located within the South Coast Air Basin (Basin) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD develops and administers local regulations for stationary air pollutant sources within the Basin and develops plans and

programs to meet attainment requirements for both federal and State Ambient Air Quality Standards (AAQS). SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin (SCAQMD 2013). The AQMP is a series of plans adopted for the purpose of reaching short- and long-term goals for those pollutants that the Basin is designated as a “nonattainment” area because the Basin does not meet federal and/or state AAQS. To determine consistency between the project and the AQMP, the project must comply with applicable SCAQMD rules and regulations; comply with proposed or adopted control measures; and be consistent with the growth forecasts utilized in preparation of the AQMP, which are based on regional population, housing, and employment projections prepared by SCAG.

The project would not result in a significant air quality impact from operational activity, as described below. Moreover, as discussed under Section 4.13, *Population and Housing*, the proposed project does not include growth-generating components, but rather would accommodate existing and planned growth. As such, the project would be consistent with growth projections contained in the County’s General Plan and SCAG and AQMP forecasts. Based on these considerations and pursuant to SCAQMD guidelines, project-related emissions are accounted for in the AQMP, and no impact would occur.

- b. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under the applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? **Less-Than-Significant Impact.*** The SCAQMD establishes significance thresholds to assess the regional impact of project-related air pollutant emissions in the SCAQMD. Table 1, *SCAQMD Criteria Pollutant Significant Mass Emissions Significance Thresholds*, summarizes the SCAQMD’s mass emissions thresholds, which are presented for both long-term operational and short-term construction emissions. A project with emissions rates below these thresholds is considered to have a less-than-significant impact on air quality.

<b>Table 1</b> <b>SCAQMD CRITERIA POLLUTANT SIGNIFICANT MASS EMISSIONS</b> <b>SIGNIFICANCE THRESHOLDS</b>		
Criteria Pollutant	Emission Threshold (pounds per day)	
	Construction	Operation
Volatile Organic Compounds (VOCs)	75	55
Oxides of Nitrogen (NO <sub>x</sub> )	100	55
Carbon Monoxide (CO)	550	550
Particulate Matter (PM <sub>10</sub> )	150	150
Particulate Matter (PM <sub>2.5</sub> )	55	55
Oxides of Sulfur (SO <sub>x</sub> )	150	150

Source: SCAQMD 2015

## Regional Construction Impacts

The proposed project would result in construction emissions during pipeline trenching, pipeline installation and backfill, repaving, building construction, and demolition activities. These emissions would be limited and short term. Construction emissions include those associated with the transport of construction materials and equipment to the site, and emissions associated with equipment operation and soil movement at the site. Other construction-related emissions would occur from workers' vehicles traveling to and from the project site for construction activities. Criteria pollutant and ozone precursor emissions from project construction were assessed using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod is a computer model developed by SCAQMD with the input of several air quality management and pollution control districts to estimate criteria air pollutant emissions from various urban land uses. CalEEMod has the ability to calculate both mobile (i.e., vehicular) and area or stationary source emissions (SCAQMD 2013). Dust control by watering was assumed, consistent with the requirements of SCAQMD Rule 403. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A.

Maximum daily emissions during the peak work day are shown in Table 2, *Maximum Daily Construction Emissions*. Maximum emissions would occur when pipeline trenching, pipeline installation and backfill, and building construction activities occur simultaneously in construction year 2019. As shown in Table 2, criteria pollutant emissions would not exceed the respective screening thresholds. In addition, actual emissions could be less than those forecasted due to the conservative nature of the assumptions incorporated into the CalEEMod program regarding phasing. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval). Therefore, construction-related air quality impacts would be less than significant.

<p align="center"><b>Table 2</b> <b>MAXIMUM DAILY CONSTRUCTION EMISSIONS</b></p>						
Phase	Pollutant Emissions (pounds per day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2019</b>						
Pipeline Trenching	1	10	9	<0.5	0.5	<0.5
Pipeline Installation and Backfill	1	6	7	<0.5	<0.5	<0.5
Building Construction	2	12	10	<0.5	1	1
<b>2020</b>						
Pipeline Trenching	1	9	9	<0.5	0.5	<0.5
Pipeline Installation and Backfill	1	6	7	<0.5	<0.5	<0.5
Repaving	1	6	7	<0.5	<0.5	<0.5
Building Construction	1	11	10	<0.5	1	1
Demolition	1	5	6	<0.5	<0.5	<0.5
<b>Maximum Daily Emissions<sup>1</sup></b>	<b>3</b>	<b>29</b>	<b>27</b>	<b>&lt;0.5</b>	<b>2</b>	<b>2</b>
SCAQMD Regional Thresholds	75	100	550	150	150	55
<b>Significant Impact?</b>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2015 (Thresholds)

CalEEMod outputs provided in Appendix A.

<sup>1</sup> Maximum emissions occur when pipeline trenching, pipeline installation and backfill, and building construction activities occur simultaneously in construction year 2019.

ROG = reactive organic gas; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; SO<sub>x</sub> = oxides of sulfur;

PM<sub>10</sub> = particulate matter less than 10 microns in diameter; PM<sub>2.5</sub> = particulate matter less than 2.5 microns in diameter

## Localized Construction Impacts

The localized effects from the on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look up tables and project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. For PM<sub>10</sub> and PM<sub>2.5</sub>, LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The SCAQMD provides LST mass rate look-up tables for projects that are 1 acre, 2 acres, or 5 acres. For projects that exceed 5 acres, the 5-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis.

When quantifying mass emissions for localized analysis, only emissions that occur on site are considered. Consistent with the SCAQMD's LST methodology guidelines, emissions related to off-site delivery/haul truck activity and employee trips are not considered in the evaluation of localized impacts. The LSTs for a one-acre site located in Source Receptor Area 25, Lake Elsinore, with receptors at a distance of 25 meters were used. The results of the LST analysis are provided in Table 3, *Localized Construction Emissions*. As shown in Table 3, localized

emissions for all criteria pollutants would be less than their respective SCAQMD LST significance thresholds. Thus, associated impacts would be less than significant.

<b>Table 3</b> <b>LOCALIZED CONSTRUCTION EMISSIONS</b>				
Phase	Pollutant Emissions (pounds per day)			
	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2019</b>				
Pipeline Construction	10	10	<0.5	<0.5
Pipeline Installation and Backfill	6	7	<0.5	<0.5
Building Construction	12	10	1	1
<b>2020</b>				
Pipeline Trenching	9	9	<0.5	<0.5
Pipeline Installation and Backfill	6	7	<0.5	<0.5
Repaving	6	6	<0.5	<0.5
Building Construction	11	10	1	1
Demolition	5	5	<0.5	<0.5
<b>Maximum Daily Emissions<sup>1</sup></b>	<b>28</b>	<b>26</b>	<b>1.5</b>	<b>1.5</b>
SCAQMD LSTs	162	750	4	3
<b>Significant Impact?</b>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2009 (Thresholds)

CalEEMod output data provided in Appendix A.

<sup>1</sup> Maximum emissions occur when pipeline trenching, pipeline installation and backfill, and building construction activities occur simultaneously in construction year 2019.

NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; PM<sub>10</sub> = particulate matter less than 10 microns in diameter; PM<sub>2.5</sub> = particulate matter less than 2.5 microns in diameter

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

### Operational Impacts

Emissions associated with operation of the pipeline and lift station would result from maintenance trips and occasional emergency generator use. Operational emissions would be relatively minimal.

The results of the CalEEMod calculations for project operations are shown in Table 4, *Maximum Daily Operational Emissions*. As shown in Table 4, maximum daily operational emissions generated by the project would be below the regional and LST screening level thresholds for criteria pollutants. Therefore, operational-related air quality impacts would be less than significant.

**Table 4**  
**MAXIMUM DAILY OPERATIONAL EMISSIONS**

Phase	Pollutant Emissions (pounds per day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Area	1	0	<0.5	0	0	0
Energy	0	0	0	0	0	0
Mobile	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Stationary	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Maximum Daily Emissions</b>	<b>1</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
SCAQMD Regional Thresholds	55	55	550	150	150	55
SCAQMD LSTs	N/A	162	750	N/A	1	1
<b>Significant Impact?</b>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: SCAQMD 2009 and 2015 (Thresholds)

CalEEMod outputs provided in Appendix A.

ROG = reactive organic gas; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; SO<sub>x</sub> = oxides of sulfur;

PM<sub>10</sub> = particulate matter less than 10 microns in diameter; PM<sub>2.5</sub> = particulate matter less than 2.5 microns in diameter

- c. *Expose sensitive receptors to substantial pollutant concentrations? **Less-Than-Significant Impact.*** Sensitive populations (i.e., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than the general population. Land uses considered sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. The closest sensitive receptors would be single-family residences located on Elm Street (immediately adjacent to the proposed pipeline construction work) and approximately 250 feet south of the proposed lift station. During the approximately 18-month project construction period, diesel exhaust particulate matter would be generated from construction equipment and vehicles. Diesel exhaust particulate matter is known by the State of California to include carcinogenic compounds, and long-term exposure to diesel exhaust emissions has the potential to result in adverse health effects. The risks associated with exposure to carcinogenic substances are typically evaluated based on a lifetime of chronic exposure, however, which is defined in the California Air Pollution Control Officers' Association Air Toxics "Hot Spots" Program Risk Assessment Guidelines as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Accordingly, due to the short-term nature of project construction and the fact that long-term operation would entail only minimal emissions generation as described, potential impacts related to exposure of sensitive receptors to substantial pollutant concentrations (including diesel exhaust emissions) would be less than significant.
- d. *Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? **Less-Than-Significant Impact.*** During the construction period, emission-related odors from construction equipment/vehicles (particularly diesel exhaust) may occur temporarily in the immediately surrounding area. Specifically, construction equipment and vehicles could intermittently emit diesel exhaust perceptible by nearby receptors along roadways (i.e., from transport vehicles) and near the project site during construction. These odors would not affect a substantial number of people, as construction activities (including vehicle trips) would be minor in duration and extent as previously described. Diesel-powered construction equipment and vehicles would also be required to comply with the State Airborne Toxics Control Measure (ATCM) standards for diesel particulate matter emissions,

including a five-minute idling limit. Based on the described conditions, exposure of local receptors to diesel exhaust emissions and odors would be minimized. Operationally, the lift station would include enclosed odor control facilities that would limit off-site odor impacts. As such, the project would not create odors that would affect a substantial number of people, and associated potential impacts would be less than significant.

#### 4.4 **BIOLOGICAL RESOURCES**

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<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, and 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"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input 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"/>

A Biological Resources Letter Report was prepared for the project by HELIX (HELIX 2019a; Appendix B) to summarize the existing biological resources within the site and provide an analysis of the proposed impacts in accordance with CEQA and applicable federal, state, and local policy, including consistency with the adopted Western Riverside MSHCP.

- a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?* ***Less-Than-Significant with Mitigation Incorporated.***



## Sensitive Species

A general biological survey, as well as reviews of USFWS species records, the CDFW California Natural Diversity Database, and the California Native Plant Society (CNPS) Electronic Inventory were conducted to determine the potential presence of sensitive species within the project site and surrounding area. Based on the reviews, 68 special-status plant species are known to occur in the general vicinity of the project site, 9 of which are listed at the federal and/or state level. Eight of the nine listed species are not expected to occur on the site. One of the nine listed species, San Diego ambrosia (*Ambrosia pumila*), has a low potential to occur but was not observed during the sensitive plant survey.

Smooth tarplant is the only sensitive plant species observed within the project impact area or determined to have a high potential to occur. The study area and adjacent area supports more than 2,800 individuals of smooth tarplant, 82 of which (approximately three percent) would be impacted by project construction. Another two smooth tarplant individuals within the impact footprint were impacted by road construction after the rare plant survey was conducted. Furthermore, the 82 smooth tarplant individuals to be impacted are located within a constructed and maintained drainage basin, and thus do not have long-term conservation value. Because 97 percent of the smooth tarplant within and adjacent to the study area would be avoided, the project would not have a substantial adverse effect on the species, and no mitigation is proposed for impacts to smooth tarplant.

Fifty-two listed or sensitive animal species are known to occur in the general vicinity of the project site, 12 of which are listed at the federal and/or state level. Only two listed species have low potential to occur on site: the western snowy plover (*Charadrius alexandrinus nivosus*), which is federally listed as threatened and is a state species of concern, and the bald eagle (*Haliaeetus leucocephalus*), which is state-listed as endangered. The protocol burrowing owl survey completed in 2017 was negative and the site is not occupied by the burrowing owl.

Three special status wildlife species, California horned lark, white-faced ibis, and San Diego black-tailed jackrabbit, were observed within 500 feet of the project impact area and could occur within the impact area. The Cooper's hawk was observed more than 500 feet from the impact area but has high potential to occur on site, and additional species listed in Attachment C of the Biological Resources Technical Report have low or moderate potential to occur on site. However, the project has been designed to impact non-sensitive habitats, while preserving the higher quality habitat within the inlet channel itself. The inlet channel and adjacent Public/Quasi Public conserved habitat lands within the study area as well as the nearby habitat along the shore of Lake Elsinore and the San Jacinto River channel to the north provide ample higher quality habitat for the special status wildlife species with potential to use the impact area. Therefore, the project would not have a substantial adverse effect on special status species.

## Nesting Birds

The study area contains some trees, shrubs, and other vegetation that provide potential nesting habitat for common birds, including birds and raptors protected under the Migratory

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

**BIO-1 Nesting Bird and Raptor Avoidance.** If initial grading and vegetation removal activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird breeding season for migratory birds and raptors (January 15 through September 15), the project applicant shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of the activities. If the qualified biologist determines that no active migratory bird or raptor nests occur within 300 feet of the impact site (500 feet for raptors), the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or until noise barriers have been installed that adequately protect the nest, as determined by the qualified biologist.

**BIO-2 Burrowing Owl Pre-construction Survey.** A pre-construction burrowing owl survey shall be conducted in accordance with the protocol described in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The initial take avoidance survey shall occur no less than 14 days prior to initiating ground-disturbing activities, with a final survey conducted within 24 hours prior to initiating ground-disturbing activities. If, after the initial take avoidance survey, no suitable burrowing owl habitat, including burrows, is present, the second survey 24 hours prior to ground disturbance shall not be required. The project shall avoid disturbing active burrowing owl burrows (active nests). Based on the required construction activities, the level of potential disturbance on active burrows, if found, is expected to be low. In accordance with CDFW protocol for low disturbance projects, initial setback distances for avoidance of active burrows shall be 200 meters from April 1 to October 15 and 50 meters from October 16 to March 31. Exceptions can be made to the avoidance distance for areas with natural (hills, trees) or artificial (buildings, walls) barriers in place. The final avoidance buffer shall be at the discretion of the biologist. If, after consideration of a reduced buffer, an adequate avoidance buffer cannot be provided between an occupied burrow and required ground-disturbing activities, then passive

relocation activities during the non-breeding season (September 1 through January 31) may be authorized in consultation with CDFW, which would include preparation, approval, and implementation of a Burrowing Owl Exclusion Plan in accordance with protocol described in the CDFW Staff Report on Burrowing Owl Mitigation. No impacts shall occur to active burrowing owl nests.

- b. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?* **Less-Than-Significant with Mitigation Incorporated.** The project study area supports nine vegetation communities or land cover types, three of which are considered sensitive natural communities, including: Riversidean sage scrub, non-native grassland, and tamarisk scrub-disturbed. Although tamarisk is an invasive species, the disturbed tamarisk scrub on site is considered sensitive because of its association with the inlet channel. Southern willow scrub is often considered a sensitive natural community, but the disturbed southern willow scrub within the study area is not sensitive because of its disturbed state and occurrence within an artificially constructed and regularly maintained drainage basin.

Although the project would result in temporary and permanent impacts to on-site vegetation, none of the above-mentioned sensitive natural communities would be directly impacted. Temporary impacts would be associated with the temporary construction staging area, which would be used for site access and stockpiling during construction. Permanent impacts would be associated with the lift station building and pavement. There would be no impacts to the inlet channel because the project would use microtunneling methods to drill horizontally and install the pipes completely underground, with no impacts on the ground surface for that section of pipeline. Potential impacts at East Lakeshore Drive may also be avoided if jack-and-bore methods are used to cross East Lakeshore Drive. Future maintenance would be accomplished using the same method.

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

**BIO-3 Construction Fencing.** Temporary construction fencing (with silt barriers as needed according to the storm water pollution prevention plan [SWPPP]) shall be installed at the limits of project impacts (including construction staging areas and access routes) adjacent to sensitive habitat to prevent sensitive habitat impacts and to prevent the spread of silt from the construction zone into adjacent habitats. Temporary fencing will be located on the western boundary of the impact area south of the inlet channel, and on the north and south side of the inlet channel (Figure 10). Fencing shall be installed in a manner that does not impact habitats to be avoided.

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

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

- c. *Have a substantial adverse effect on 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 with Mitigation Incorporated.***

Jurisdictional waters and wetlands include waters of the U.S. regulated by the USACE pursuant to Clean Water Act (CWA) Section 404; waters of the State regulated by the RWQCB pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; streambed and riparian habitat regulated by the CDFW pursuant to Sections 1600 *et seq.* of CFG Code; and/or Riparian/Riverine Areas defined in Section 6.1.2 of the MSHCP.

HELIX’s jurisdictional delineation confirmed that the study area supports non-wetland waters of the U.S./State. No wetland waters of the U.S. were observed within the study area. Waters of the U.S./State within the study area are associated with Lake Elsinore and the inlet channel. The limit of USACE jurisdiction along Lake Elsinore is the 1,255-foot AMSL elevation line, according to an Approved Jurisdictional Determination issued by USACE for Lake Elsinore in 2007. RWQCB jurisdiction under CWA Section 401 coincides with USACE jurisdiction. Waters of the U.S./State as defined by the 1,255-foot elevation line extend beyond the ordinary high water mark (OHWM) observed in the field, except for a short section of 2-foot-wide streambed west of Peter Lehr Drive. The constructed basin at the south end of the project site was determined not to be jurisdictional waters of the U.S./State because it is a constructed and periodically maintained water detention facility.

The CDFW jurisdiction within the study area consists of riparian and upland habitat associated with Lake Elsinore. The limit of CDFW jurisdiction along Lake Elsinore is the 1,265-foot AMSL elevation line, according to CDFW. The RWQCB takes jurisdiction of areas between the 1,255-foot and 1,265-foot elevation lines under the State Porter-Cologne Water Quality Control Act. The constructed basin at the south end of the project site was determined not to be CDFW- or RWQCB-jurisdictional because it is a constructed and periodically maintained water detention facility. CDFW jurisdiction includes an intermittent

swale north of Peter Lehr Drive. This feature was mapped as CDFW streambed based on signs of water flow but was not mapped as Water of the U.S./State because it lacked an OHWM.

The project's temporary and permanent impacts would be restricted to disturbed uplands and a manmade basin that occur outside of jurisdictional waters of the U.S. subject to USACE; therefore, the project would have no impact on federally protected wetlands as defined by CWA Section 404. Similarly, the project would have no impact on waters of the State subject to RWQCB jurisdiction pursuant to CWA Section 401.

The project would also avoid temporary and permanent impacts to streambed and riparian habitat subject to CDFW jurisdiction pursuant to CFG Code Sections 1600 et seq. The project has been modified to also avoid impacts to disturbed uplands below the 1,265-foot elevation limit and under the regulatory jurisdiction of CDFW. In addition, indirect impacts would be prevented through the implementation of mitigation measure BIO-3. No additional mitigation measures are proposed.

- 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.** The project site encompasses developed and undeveloped land within the Elsinore Area Plan of the MSHCP. The section of the Lake Elsinore inlet channel within the study area provides a connection from the San Jacinto River to the lake. The river channel is elevated and separated from the lake via a riprap slope. The project would not impact movement through this area because the proposed microtunneling pits would avoid impacts to the inlet channel. The project would also avoid impacts to wildlife movement along the secondary stream channel that connects from the San Jacinto River/inlet channel to the wetland restoration area on the southwest side of the Back Basin, by locating the pipeline along Diamond Circle, close to the baseball stadium parking lot. In addition, once constructed, the pipeline will be buried and have no permanent impacts on wildlife movement across the impact site. Finally, the lift station structures will not impact wildlife movement because they will be located adjacent to the parking lot and existing Back Basin Groundwater Treatment Plant.

Project construction will be restricted to 7:00 a.m. and 7:00 p.m. and would not be expected to result in adverse indirect impacts on off-site habitat adjacent to the site. Construction work limits will be contained within temporary construction fencing in accordance with mitigation measure BIO-3. In addition, there is no permanent lighting associated with the pipeline. Therefore, potential impacts on wildlife movement and nursery sites within the study area 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 local policies or ordinances protecting biological resources and no impact would occur, as detailed below.

There are no City ordinances that protect biological resources on the site. The project is exempt from payment of the Stephens' kangaroo rat fee, as well as the MSHCP. As further

discussed in Response 4.4f, however, the project would be consistent with the MSHCP. Furthermore, the project would not impact Stephens' kangaroo rat habitat. No impacts 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 project occurs within the boundaries of the adopted MSHCP, within Criteria Cells 4743 and 4846 of the Elsinore Area Plan. Although EVMWD is not subject to the MSHCP, the project would be consistent with the MSHCP. For the complete MSHCP consistency analysis, see the Biological Resources Letter Report included as Appendix B. No impacts related to the MSHCP would occur.

#### 4.5 CULTURAL RESOURCES

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of CEQA?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

- a. *Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of CEQA?* **No Impact.** The project's Cultural Resources Survey Report assessed the potential for the presence of historical resources in and around the project site through a records search at the Eastern Information Center (EIC), a review of historical photographs, and a pedestrian survey. The investigation concluded that 10 recorded resources located within a one-mile radius of the project site are historic in age. Two of these recorded historical resources are located within one-quarter mile of the project site. They include a bridge spanning the San Jacinto River, located 820 feet northeast of the project site, and a trash scatter which also includes a concrete foundation, located 300 feet to the northeast of the project site. No historical resources are located within or immediately adjacent to the project site; therefore, the project would not cause a substantial adverse change in the significance of a historical resource. No impacts would occur.

- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of CEQA? **Less-Than-Significant with Mitigation Incorporated.*** The project's Cultural Resources Survey Report assessed the potential for the presence of archaeological resources in and around the project site through a records search at the EIC, Native American outreach, and a pedestrian survey. The investigation indicated that despite the lack of recorded cultural resources within and immediately adjacent to the project site, numerous resources have been recorded within one-quarter mile of the project site. In addition, the general project area is highly sensitive for cultural resources due to the presence of Lake Elsinore, which is considered a significant ethnohistoric resource associated with the Luiseño people. It is therefore recommended that a cultural resource monitoring program be implemented for the project, as described below in mitigation measures CR-1 through CR-9. With the inclusion of mitigation measures CR-1 through CR-9, impacts would be less than significant.

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

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

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

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

**CR-4 Cultural Resources Sensitivity Training.** Prior to grading, excavation and/or other ground-disturbing activities on the project site, the project archaeologist and the Monitoring Tribe(s) shall conduct cultural resources sensitivity training for all

construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. EVMWD's construction manager shall ensure that construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance.

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

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

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

**CR-7 Inadvertent Discovery of Resources.** If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, EVMWD and the project archaeologist with the Monitoring Tribes shall assess the significance of such resources and shall meet and confer regarding the mitigation for such resources. The determination as to the significance or the mitigation for such resources will be based on the provisions of CEQA and shall take into account the religious beliefs, customs, and practices of the Monitoring Tribes.

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

**CR-9 Final Archaeological Report.** The project archaeologist shall prepare a final archaeological report within 60 days of completion of the project. The report shall



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

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

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

#### 4.6 Energy

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<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.** Energy used for construction would primarily consist of

fuels in the form of diesel and gasoline. Fuel consumed by construction equipment would be the primary energy resource expended over the course of construction and would include the transportation of construction materials and construction worker commutes. Heavy-duty construction equipment associated with construction activities, as well as haul trucks involved in the removal of construction and demolition materials, would consume petroleum-based fuel. Construction workers would travel to and from the project site throughout the duration of construction, presumably in gasoline-powered vehicles. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. The petroleum consumed during project construction would be typical of similar construction projects and would not require the use of new petroleum resources beyond what are typically consumed in California. Based on these considerations, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources.

During operations, the lift station would use electricity for pumping wastewater. Additional minor sources of energy use include a diesel-powered emergency generator that would be used for backup power during electric power failures, and maintenance worker vehicle trips. The use of electricity would be restricted to necessary lift station operations and the lift station would eventually replace two existing lift stations, which would offset some of the energy usage. The project would therefore not use energy in a wasteful, inefficient, or unnecessary manner. Implementation of the project would not result in a substantial increase in demand of local or regional energy supplies compared to existing conditions, 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.** The project would be built and operated in accordance with existing, applicable regulations. Construction equipment and lift station operation equipment would be maintained to allow for continuous energy-efficient operations. Accordingly, the project would not conflict with existing energy standards or regulations, and no impacts would occur.

#### 4.7 Geology and Soils

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	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 California Geological Survey Special Publication 42)?; or, (ii) strong seismic ground shaking?; or, (iii) seismic-related ground failure, including liquefaction?; or, (iv) landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative 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 California Geological Survey Special Publication 42)? **Less-Than-Significant Impact.*** The proposed project is located within 0.5 mile of the Glen Ivy North Fault within the Elsinore Fault Zone (California Geological Survey [CGS] 2010). Other nearby faults include the Wildomar and Willard Faults. A large magnitude earthquake along local segments of these faults could potentially result in local ground rupture effects which could damage the proposed lift station and/or sever the proposed pipeline. While the probability of such an occurrence is considered low, the associated potential impacts are significant due to the location of the proposed facilities and the active nature and seismicity potential of the Elsinore Fault Zone.

The potential impacts related to the proximity of the proposed project to local and regional fault zones would be addressed through conformance with associated regulatory and industry standards, including applicable elements of the IBC, CBC, and the Lake Elsinore Municipal Code, as well as with the seismic design parameter recommendations of the Geotechnical Report prepared for the project (Kleinfelder, Inc. 2006).

- ii) *Strong seismic ground shaking? **Less-Than-Significant Impact.*** As noted above, the proposed project is located near the Elsinore Fault Zone, which is a seismically active region subject to potential ground acceleration (ground shaking) effects from earthquake events along associated faults. While the project site and proposed facilities could potentially be subject to moderate or severe ground shaking effects from

earthquakes along the noted (or other regional) fault structures, they would be designed and constructed in conformance with applicable elements of the IBC, CBC, and the Lake Elsinore Municipal Code, as well as the seismic design parameter recommendations of the Geotechnical Report prepared for the project (Kleinfelder, Inc. 2006). Specifically, these standards typically involve incorporating seismic factors into facility design, through efforts such as remedial grading (e.g., removal and/or reconditioning unsuitable soils), appropriate slope design and drainage, and use of properly engineered fill. Conformance with pertinent regulatory and industry standards as noted, as well as implementation of design measures detailed in the Geotechnical Report, would reduce the potential effects of seismic ground shaking on proposed facilities to less-than-significant levels.

- iii) *Seismic-related ground failure, including liquefaction? **Less-Than-Significant Impact.*** Liquefaction and related effects such as dynamic settlement can be caused by seismic ground shaking. Loose (cohesionless), saturated, and granular (low clay/silt content) soils with relative densities of less than approximately 70 percent are the most susceptible to these effects. Liquefaction results in a rapid pore-water pressure increase and a corresponding loss of shear strength, with affected soils behaving as a viscous liquid. Surface and subsurface manifestations from these events can include loss of support for structures, excessive (dynamic) settlement, the occurrence of sand boils (i.e., sand and water ejected at the surface), and other effects such as lateral spreading (horizontal displacement on sloped surfaces as a result of underlying liquefaction).

Due to the seismicity and presence of shallow groundwater in the project area, the potential for liquefaction of the underlying soils at the project site is considered high (Kleinfelder, Inc. 2006). The effects of liquefaction can be reduced through standard design and construction techniques similar to those described above under the discussion of seismic ground shaking. As previously noted, the proposed project would be designed and constructed in conformance with associated regulatory and industry standards, including applicable elements of the IBC, CBC, and Lake Elsinore Municipal Code. In addition, the project would conform with the Geotechnical Report prepared for the project, which provides recommendations for foundation design and remedial grading to minimize the potential effects of liquefaction induced settlement (Kleinfelder, Inc. 2006). Based on these considerations, potential impacts associated with liquefaction and related hazards from implementation of the proposed project would be less than significant.

- iv) *Landslides? **Less-Than-Significant Impact.*** The occurrence of landslides and other types of slope failures (e.g., rock falls and mudflows) is influenced by a number of factors, including slope grade, geologic and soil characteristics, moisture levels and vegetation cover. Landslides can be triggered by a variety of potentially destabilizing conditions or events, such as gravity, fires, precipitation, grading and seismic activity.

The project site and surrounding areas are relatively flat, with elevations ranging from 1,252 to 1,268 feet AMSL; therefore, the occurrence of landslides is not likely. The proposed project would be designed and constructed in conformance with associated regulatory and industry standards as previously described, including applicable

elements of the IBC, CBC, the City Seismic Hazard Mitigation Ordinance, and recommendations of the Geotechnical Report prepared for the project (Kleinfelder, Inc. 2006). Based on these considerations and general site conditions, potential impacts related to landslide hazards from implementation of the proposed project would be less than significant.

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

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

Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, the project SWPPP and related 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 Impact.** Refer to Response 4.7a above, regarding potential impacts related to landslides, lateral spreading, and liquefaction. The potential for subsidence and collapse are related to groundwater (or other fluid) withdrawal and the presence of less stable materials, such as alluvium and topsoil. Although shallow groundwater and potentially unstable materials may be encountered during project construction activities, conformance with applicable regulatory standards (as described under Response 4.7a) as well as with the recommendations of the Geotechnical Report prepared for the project (Kleinfelder, Inc. 2006), would result in less-than-significant impacts related to subsidence and collapse.

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

- d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?* **Less-Than-Significant Impact.** Expansive (or shrink-swell) behavior in surface or near-surface materials is attributable to the water holding capacity of clay materials. Such behavior can adversely affect structural integrity (including underground pipelines) through shifting of support materials during the shrink-swell process. The project site is underlain primarily by sandy soils with low water holding capacity and related low expansion potential. If expansive soils are present/encountered during project implementation, however, associated potential impacts would be addressed through conformance with regulatory/ industry standards, including applicable elements of the IBC, CBC and related City requirements. Specifically, this may include efforts such as removal of expansive soils and replacement with engineered fill. Conformance with the described regulatory standards would reduce potential impacts related to expansive soils from project implementation to less-than-significant levels.
- e. *Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?* **No Impact.** The proposed project does not include the implementation of septic tanks or alternative wastewater disposal systems, and no associated impacts would occur.

- f. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?* **Less-Than-Significant with Mitigation Incorporated.** According to the Riverside County GIS website, the majority of the project site is within an area of high paleontological sensitivity (County 2018). The project's ground disturbing construction activities could affect a paleontological resource or geologic feature, in which case impacts would be potentially significant. As such, mitigation measure GEO-1 is required, and would reduce impacts to a less-than-significant level.

**GEO-1 Paleontological Discovery.** In the unlikely event that potentially significant paleontological materials (e.g., fossils) are encountered during construction of the project, work shall be halted in the vicinity of the paleontological discovery until a qualified paleontologist can visit the site of discovery, assess the significance of the paleontological resource, and provide proper management recommendations. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted. The treatment and disposition of paleontological materials that might be discovered during excavation shall be in accordance with applicable laws and regulations.

#### 4.8 Greenhouse Gas Emissions

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?* **Less-Than-Significant Impact.** Global climate change refers to changes in average climatic conditions, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone, and certain hydro-fluorocarbons. These gases, known as greenhouse gases (GHGs), allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere. GHGs are emitted by both natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contributing to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative, as direct impacts cannot be evaluated due to the fact that the impacts themselves are global rather than localized impacts.

California Health and Safety Code Section 38505(g) defines GHGs to include the following compounds: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, ozone, chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). As individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO<sub>2</sub>e) units for comparison. The CO<sub>2</sub>e is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure.<sup>1</sup> The most common GHGs related to the project are those primarily related to energy usage: CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. The California Air Resources Board, SCAQMD, and various cities and agencies have proposed, or adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. 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) CO<sub>2</sub>e per year.

### **Construction Impacts**

Project construction would generate GHG emissions associated with construction equipment and construction worker vehicle trip exhaust. CO<sub>2</sub> from gasoline and diesel fuel combustion would be the main GHG emission during the construction period. Total GHG emissions from project construction are presented in Table 5, *Total Estimated Construction GHG Emissions*. As shown in Table 5, the proposed construction activities would contribute a total of 866 MT of CO<sub>2</sub>e. Amortized over 30 years, the proposed construction activities would contribute approximately 29 MT CO<sub>2</sub>e per year.

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<sup>1</sup> The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere, and is expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. For instance, CH<sub>4</sub> has a global warming potential of 21, meaning that 1 gram of CH<sub>4</sub> traps the same amount of heat as 21 grams of CO<sub>2</sub>. N<sub>2</sub>O has a global warming potential of 310.



<b>Table 5</b> <b>TOTAL ESTIMATED CONSTRUCTION GHG EMISSIONS<sup>1</sup></b>	
<b>Phase</b>	<b>Emissions (MT CO<sub>2</sub>e)</b>
<b>2019</b>	
Pipeline Trenching	147
Pipeline Installation and Backfill	68
Building Construction	125
<b>2020</b>	
Pipeline Trenching	212
Pipeline Installation and Backfill	108
Repaving	7
Building Construction	194
Demolition	4
<b>Total Construction Emissions</b>	<b>866</b>
<b><i>Amortized Construction Emissions</i></b>	<b><i>29</i></b>

<sup>1</sup> Construction emissions assume construction would begin in 2019. If construction is delayed, the emissions presented herein would represent conservative estimates, as fuel efficiency for construction equipment and vehicles is likely to improve based on the implementation of more stringent state and federal standards.

MT = metric ton; CO<sub>2</sub>e = carbon dioxide equivalent

## Operational Impacts

Operational GHG emissions were estimated by phase. Phase 1 would include the operation of three pumps, Phase 2 would include the operation of four pumps, and Phase 3 would include the operation of five pumps. The main source of GHG emissions during project operation would be energy use (electricity) to power the pumps. Additional minor sources of operational GHG emissions include a diesel-powered emergency generator that would be used for backup power during electric power failures, and maintenance worker vehicle trips. Table 6, *Total Estimated Operational GHG Emissions*, presents the total GHG emissions by operational phase. At full buildout (Phase 3), with the amortized construction emissions, the project would result in annual GHG emissions of 854 MT CO<sub>2</sub>e. This would be below the 3,000 MT CO<sub>2</sub>e per year screening threshold, and impacts would be less than significant.

<b>Table 6</b> <b>TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS</b>	
<b>Phase</b>	<b>Emissions (MT/year CO<sub>2</sub>e)</b>
<b>Phase 1</b>	
Area	<0.5
Energy	309
Mobile	<0.5
Stationary	<0.5
Phase 1 Operational Subtotal	310
Amortized Construction	29
<b>TOTAL PHASE 1 OPERATIONAL</b>	<b>339</b>
<b>Phase 2</b>	
Area	<0.5
Energy	567
Mobile	<0.5
Stationary	<0.5
Phase 2 Operational Subtotal	567
Amortized Construction	29
<b>TOTAL PHASE 2 OPERATIONAL</b>	<b>596</b>
<b>Phase 3</b>	
Area	<0.5
Energy	824
Mobile	<0.5
Stationary	<0.5
Phase 3 Operational Subtotal	825
Amortized Construction	29
<b>TOTAL PHASE 3 OPERATIONAL</b>	<b>854</b>

Note: CalEEMod outputs provided in Appendix A.

MT = metric ton; CO<sub>2</sub>e = carbon dioxide equivalent

- b. *Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? **Less-Than-Significant Impact.*** As discussed above, the proposed project would result in GHG emissions below the SCAQMD proposed Tier 3 screening threshold of 3,000 MT CO<sub>2</sub>e per year. The proposed project would not result in emissions that would adversely affect state-wide attainment of GHG emission reduction goals as described in Assembly Bill (AB) 32, Executive Order S-21-09, and Senate Bill (SB) 32. Project emissions would therefore have a less than cumulatively considerable contribution to global climate change impacts, and the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Impacts would be less than significant.

## 4.9 Hazards and Hazardous Materials

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input 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.** The proposed project would not involve the routine long-term (operational) transport, use, or disposal of hazardous materials, with no associated hazards or impacts to result. During the project construction period, hazardous substances such as fuels and lubricants would be used and/or stored onsite and in off-site staging/storage locations. The project would be subject to applicable City and NPDES storm water standards, including requirements related to proper handling, storage and use of construction-related hazardous materials (refer to Response 4.10a for additional discussion). Based on the described conditions, including implementation of appropriate BMPs to provide conformance with the NPDES Construction General Permit, potential impacts associated with construction-related hazardous materials would be less than significant.
- b. *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?* **Less-Than-Significant Impact.** As described in Response 4.9a, no impacts related to hazardous materials would occur during project operation, and potential impacts from release of construction-related hazardous materials would be addressed through

required conformance with NPDES and City storm water standards. As a result, impacts involving the release of hazardous materials into the environment 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?* **No Impact.** No existing or proposed school facilities are located within a one-quarter mile radius of the project site. The nearest schools are Sean Hayman Elementary School, located approximately 1.6 miles to the southeast, and Elsinore Middle School, located approximately 2.4 miles to the northwest. Therefore, no impact associated with hazardous materials would occur to schools.
- d. *Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?* **Less-Than-Significant with Mitigation Incorporated.** Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the State Water Resources Control Board (SWRCB) GeoTracker database (SWRCB 2015) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2018) were searched for hazardous materials sites in the project site and vicinity. The results of these searches indicated that no listed hazardous material sites are located within or adjacent to the project site, with the following listings located in the general site vicinity:
- Two adjacent leaking underground storage tank (LUST) listings are associated with the Mobil gas station and the Arco gas station, located approximately 0.3 mile east of the nearest point of the project site at the intersection of Diamond Drive and Casino Drive. Both cases are currently open and remediation activities are ongoing.
  - One listing is associated with lead contamination from a former manufactured gas plant, approximately 1.5 miles northwest of the project site at the intersection of North Spring Street and West Pottery Street. Cleanup activities have been completed as of June 2003.

While it is not anticipated that contaminated soil would be encountered during construction activities associated with the project, in the event that contaminated soils are encountered during construction, the following mitigation measure would be implemented to ensure that impacts would be less than significant:

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

The contractor(s) shall:

- Monitor soil for the presence of discolored or odorous soil during excavation and construction activities. If impacted soil is encountered, the site shall be evaluated by a qualified hazardous material professional and handled in accordance with applicable environmental laws and regulations. During

excavation and construction activities, environmental monitoring for the presence of contamination and impacted groundwater shall be conducted. Health and safety measures shall be followed to minimize the risk of human exposure to contaminants during excavation and construction activities. Additionally, impacted soil shall be exported to an approved off-site disposal or recycling facility. However, if impacted soil is encountered and planned to be used as backfill, such a scenario must be evaluated by a local regulatory agency such as the RWQCB. The stockpiling and reuse of impacted soil would likely be subject to Waste Discharge Requirements mandated by the RWQCB. If construction of the project requires export of excavated soil, the construction contractor shall be required to screen the soil or potential contaminants prior to removal from the site. Contractors and worker shall be made aware of the presence or likely presence of hazardous material along the proposed alignment.

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

e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?* **No Impact.** The nearest public-use airport, the Perris Valley Airport, is a privately-owned airport open to public use and located approximately 8.5 miles north of the project site. The proposed project site is not within two miles of a public airport, and no impacts related to airport hazards of noise would occur.

f. *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?* **Less-Than-Significant Impact.** As noted in the Project Description, project construction would occur within Malaga Road, Diamond Circle, Peter Lehr Drive, Elm Street, and possibly East Lakeshore Drive. Traffic control measures would be implemented in applicable locations, such as private driveways, to maintain access and ensure public safety. In addition, if trenching is to occur within East Lakeshore Drive, it would be done in a manner that would allow one side of the road to be open to traffic at all times. Based on the described conditions, as well as the small scale and short duration of

proposed construction, project implementation would not substantially impair or interfere with emergency access or evacuation, and associated potential impacts would be less than significant.

- g. *Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?* **Less-Than-Significant Impact.** The project site is mapped as a Non-Very High Fire Hazard Severity Zone (Non-VHFHSZ) within a Local Responsibility Area (CAL FIRE 2009). The Non-VHFHSZ designation is determined through assessment of flame and ember intrusion from adjacent wildlands and from flammable vegetation in the urban area. In addition to the project site's location outside of a VHFHSZ, the majority of the proposed project would involve subsurface facilities that are generally not susceptible to wildfire hazards. The above ground portion of the lift station would be constructed of masonry and metal and would generally not be susceptible to wildfire hazards as well. Implementation of the project would not result in exposure of people or structures to significant risk of loss, injury or death involving wildland fire. Accordingly, no associated impacts would result from project implementation.

The construction phase of the project could potentially increase the risk of wildland fires on a short-term basis, if, for example, equipment-related fires were accidentally started at the site. The probability for such fires to occur is low, however, and construction equipment would be outfitted with spark arrestors and other fire protection features such as on-board fire extinguishers. As a result, potential impacts associated with short-term wildland fire hazards from project construction would be less than significant.

#### 4.10 Hydrology and Water Quality

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on or off site?; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or, (iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	■	<input type="checkbox"/>

- a. *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or ground water quality?* **Less-Than-Significant Impact.** Potential water quality impacts from the proposed project would be limited primarily to construction-related concerns, including erosion/sedimentation and the use and storage of hazardous substances such as vehicle fuels and lubricants. Long-term project operations would generally be limited to routine inspection and maintenance of proposed facilities, and would not involve activities or materials that could result in significant water quality impacts. As described above in Response 4.7b, potential construction-related erosion/sedimentation impacts would be avoided or reduced below a level of significance through conformance with the existing NPDES Construction General Permit and related City requirements. Specifically, this would entail implementing a SWPPP and related BMPs in conformance with applicable regulatory requirements.

The noted SWPPP would also address project-related use and storage of construction-related hazardous materials, through the use of appropriate BMPs in accordance with applicable regulatory standards. While detailed BMPs would be determined as part of the NPDES/SWPPP process based on site-specific parameters, they may include the following types of standard industry measures: (1) restricting paving operations during wet weather and use of sediment control devices downstream of paving activities; (2) proper containment and disposal of paving wastes and slurry (e.g., use of properly designed and contained washout areas); (3) minimizing the amount of hazardous material storage and restricting storage/use locations to areas at least 50 feet from storm drains and surface waters; (4) using raised (e.g., on pallets), covered and/or enclosed storage facilities for all hazardous materials; (5) maintaining accurate and up-to-date written inventories and labels for all stored hazardous materials; (6) using berms, ditches and/or impervious liners (or other applicable methods) in material storage and vehicle/equipment maintenance and fueling areas to provide a containment volume of 1.5 times the volume of stored/used materials and prevent discharge in the event of a spill; (7) placing warning signs in areas of hazardous material use or storage and along drainages and storm drains (or other appropriate locations) to avoid inadvertent hazardous material disposal; (8) providing training for applicable employees in the proper use, handling and disposal of hazardous materials, as well as appropriate action to take in the event of a spill; (9) storing absorbent and clean-up materials in appropriate on-site locations where they are readily accessible; (10) properly locating, containing and maintaining portable trash and wastewater facilities; (11) posting regulatory agency telephone numbers and a summary guide of clean-up procedures in a conspicuous location such as at or near the job site trailer; (12) regularly (at least weekly) monitoring and maintaining hazardous material

use/storage facilities and operations to ensure proper working order; and (13) implementing a CSMP and a REAP (if applicable) pursuant to regulatory guidelines.

Based on the described use of appropriate BMPs as part of a SWPPP and in conformance with applicable NPDES and City requirements, potential impacts related to water quality from proposed project construction would be less than significant.

Project implementation would not result in direct or indirect impacts to groundwater quality through activities such as underground storage of hazardous materials or discharge of contaminated runoff that could percolate into local aquifers. For construction-related dewatering, the project would be required to obtain a NPDES groundwater extraction and waste discharge permit and conform to requirements therein. Requirements under such permits are generally applicable to all groundwater discharge regardless of volume, with certain exceptions as noted in the permit text. Specific requirements for permit conformance may include: (1) implementing an appropriate sampling and analysis/monitoring program; (2) providing at least 30 days notification to the appropriate local agency prior to discharging to a municipal storm drain system; (3) conforming with applicable water quality standards, including (but not limited to) the Water Quality Control Plan for the Santa Ana Basin (RWQCB 2016), CWA, and State Porter-Cologne Water Quality Control Act; and (4) submitting applicable monitoring reports. Conformance with applicable requirements under the NPDES groundwater permit would ensure that associated regulatory standards are met, and would reduce potential construction-related water quality impacts from groundwater extraction/disposal (if required) below a level of significance.

- b. *Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? **Less-Than-Significant Impact.*** The proposed project would not require the use of, or otherwise substantially interfere with, groundwater supplies. While dewatering would be required if groundwater is encountered during construction of some subsurface components of the proposed project, the volume of extracted groundwater would be negligible. The project would not substantially decrease groundwater supplies or interfere with groundwater recharge such that the project would impede sustainable groundwater management. Impacts would be less than significant.
- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
  - i) *Result in substantial erosion or siltation on or off site? **Less-Than-Significant Impact.*** Implementation of the proposed project would include construction activities to install subsurface pipeline facilities and a lift station. The proposed lift station would occupy a relatively small footprint and would not introduce a large enough area of impermeable surface to substantially alter the existing drainage pattern of the surrounding area. Disturbed areas associated with pipeline installation would be returned to the original grade and repaved or revegetated, as appropriate. In the portions of the proposed pipeline alignment that would cross the San Jacinto River, microtunneling procedures would be used to minimize surface disturbance.



As a result, potential impacts associated with drainage alteration, including related erosion/sedimentation effects, would be less than significant (additional discussion of potential erosion hazards is provided above in Response 4.7b).

- ii) *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site? **Less-Than-Significant Impact.*** As noted above in Response 4.10c.i, no significant impacts related to drainage alteration would result from the proposed project. While the proposed pipeline alignment would intersect the drainage on the east side of Lake Elsinore, the pipeline would be inserted beneath the drainage using microtunneling procedures, and implementation of the project would therefore not interfere with existing drainage patterns. Based on these conditions, potential impacts associated with drainage alteration, including related effects to runoff rates/amounts and flooding hazards, would be less than significant.
  - iii) *Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? **Less-Than-Significant Impact.*** Based on the discussions provided above in Responses 4.10a, 4.10c.i, and 4.10c.ii, the proposed project would not increase the rate or amount of surface runoff, with no associated effects to the capacity of existing or planned storm water drainage systems. Additionally, as outlined in Responses 4.7b and 4.10a, potential project-related water quality impacts would be avoided or reduced below a level of significance through required conformance with applicable NPDES and City regulatory standards. As a result, potential impacts related to drainage system capacity and the generation of polluted runoff from project implementation would be less than significant.
  - iv) *Impede or redirect flood flows? **Less-Than-Significant Impact.*** The project site is located adjacent to Lake Elsinore, which has levees with a top elevation constructed at 1,265 feet AMSL. Though highly unlikely, a significant storm event could cause the levees to fail and could cause flooding to occur at the project site; however, the majority of the proposed facilities are located below ground and would not impede or redirect flood flows. The above ground portion of the lift station would be exposed, but due to its relatively small size, would not substantially impede or redirect flood flows. Impacts would be less than significant.
- d. *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? **Less-Than-Significant Impact.*** The project site is located adjacent to Lake Elsinore, which has levees with a top elevation constructed at 1,265 feet AMSL. Though highly unlikely, a significant storm event could cause the levees to fail and could cause flooding to occur at the project site. Similarly, a seiche has the potential to occur; however, the majority of the proposed facilities are located below ground and would not release pollutants. The above ground portion of the lift station is approximately 1.5 miles from Lake Elsinore's main body of water and approximately 1,000 feet from the San Jacinto River, which dramatically reduces the likelihood of inundation by seiche. Nevertheless, in the event of inundation by flood or seiche, the proposed lift station would not generate a substantial amount of pollutants due to the limited pollutants on site and the designed containment of

potential pollutants. Based on the site location (approximately 50 miles inland), no impacts related to inundation by tsunami would result from project implementation. 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.** Refer to Responses 4.10a through 4.10d. The project would comply with all storm water quality standards during construction and operation, and appropriate BMPs would be implemented to address potential water quality impacts and reduce them to less than significant.

#### 4.11 Land Use and Planning

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	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 a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Physically divide an established community?* **No Impact.** The proposed project is limited to the construction of a lift station located at the terminus of Malaga Road in an undeveloped lot and subsurface wastewater pipelines. Pipelines would be constructed using the microtunneling method where the proposed alignment crosses the San Jacinto River on the east side of Lake Elsinore; therefore, the pipeline installation in this area would not disturb the drainage. Jack-and-bore methods may be used to construct under East Lakeshore Drive, which would avoid impacts to the roadway. If not, trenching within the roadway would be done in a manner that would allow for one side of the road to remain open to traffic at all times. In areas where pipeline would be installed via trenching, the surface would be returned to original grade and repaved or revegetated, as appropriate. Project implementation would not affect the physical arrangement of an established community and no associated impacts would result.
- b. *Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?* **No Impact.** Based on the nature and location of the proposed facilities and on-site land use/zoning designations (refer to the Project Description and Response 4.11a), project implementation would not conflict with applicable land use plans, policies or land use/zoning designation standards, and no associated impacts would result from project implementation.

The project occurs within the boundaries of the adopted MSHCP, within Criteria Cells 4743 and 4846 of the Elsinore Area Plan. Although EVMWD is not subject to the MSHCP, the project would be consistent with the MSHCP. For the complete MSHCP consistency

analysis, see the Biological Resources Letter Report included as Appendix B. The project would not conflict with an applicable habitat conservation plan, and no impacts would occur.

#### 4.12 Mineral Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<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?* **No Impact.** The area within and surrounding the project site is mapped as an Urban Area by the California Geological Survey, and no Mineral Resource Zones are mapped in proximity to the project site (Miller and Busch 2008). Therefore, the proposed project would have no impact related to the loss of availability of mineral resources.
- b. *Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?* **No Impact.** Refer to Response 4.12a, above.

#### 4.13 Noise

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

A Noise Impact Analysis was prepared for the project by HELIX (HELIX 2019c; Appendix D) to summarize the existing noise environment of the project area and analyze noise impacts related to construction and operation of the proposed project.

Noise can be defined as unwanted sound. Sound (and therefore noise) consists of energy waves that people receive and interpret, while noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Sound intensity or acoustic energy is measured in decibels (dB) that are A-weighted to correct for the relative frequency response of the human ear (dBA). Decibels are measured on a logarithmic scale, with a 3-dBA change in sound generally considered the minimum level that is “barely perceptible” to humans, and a 5-dBA change generally considered “readily perceptible.”

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels. The predominant rating scales for human communities are the Noise Equivalent ( $L_{EQ}$ ), and the Community Noise Equivalent Level (CNEL), both of which are based on dBA. The  $L_{EQ}$  is the total sound energy of time-varying noise over a sample period. The CNEL is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. CNEL is utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. Machinery data is presented in terms of  $L_{MAX}$ , which is the highest 1-second Root Mean Square [RMS] value of dBA recorded during the data measurement period.

Noise-related standards in the City of Lake Elsinore are contained in the City Noise Ordinance (Chapter 17.176 of the Lake Elsinore Municipal Code). Proposed activities that would generate perceptible noise levels are limited to construction operations (lift station construction, pipeline trenching, etc.), and operational activities associated with the lift station. The Noise Ordinance generally restricts average noise levels at single-family residential properties to 50 dBA between the hours of 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m. The Noise Ordinance also restricts noise levels at limited commercial properties to 60 dBA between 7:00 a.m. and 10:00 p.m. and 55 dBA between 10:00 p.m. and 7:00 a.m.

In addition, the Noise Ordinance provides a number of requirements related to construction noise as follows:

- Operating or permitting the operation of any device is prohibited if it creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way (ROW).
- Construction equipment operations between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.

- Requirement for mobile or stationary internal combustion engine powered equipment or machinery to be equipped with suitable exhaust and air intake silencers in proper working order.

Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the following schedule:

<b>NOISE RESTRICTIONS AT AFFECTED RESIDENTIAL PROPERTIES</b>			
	<b>Type I Areas Single-Family Residential</b>	<b>Type II Areas Multi-Family Residential</b>	<b>Type III Areas Semi-Residential/ Commercial</b>
Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and Legal Holidays, 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA
Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment:			
Daily, except Sundays and Legal Holidays, 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA

- 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 with Mitigation Incorporated.***

### **Operational Noise**

The proposed lift station would generate noise from operation of the system pumps, cooling and ventilation systems, power transformer, and back-up generator. Most of the noise-generating equipment would be located inside the pump station, and the noise would be attenuated below significant levels. Although specific site plan details are not available at this stage of the planning process, it is assumed that the generator may have exterior exposure where noise would not be attenuated. It is also assumed that the generator would be equipped with a Residential Grade engine exhaust silencer. Based on these specifications, operation of a generator would result in noise levels between 75 and 80 dBA at 50 feet. This is the approximate distance to the nearest property line, which has a commercial land use designation with a daytime noise limit of 60 dBA and a nighttime noise limit of 55 dBA. The project's operational noise would therefore be in excess of the applicable standard, and impacts would be potentially significant. Mitigation measure NOI-1 would be required to reduce noise to below a level of significance.

**NOI-1 Pump Station Generator Attenuation.** A generator associated with operation of the pump station shall comply with the commercial nighttime standards of 55 dBA at the nearest property line to the east. To adequately reduce noise levels, acoustical shielding or other equipment noise reduction measures shall be incorporated into project design. Prior to building plan approval, planning for the pump station noise sources shall be required to show noise compliance with the 55 dBA  $L_{EQ}$  limit at the eastern property line and a 50 dBA  $L_{EQ}$  with the pump station power supplied by the backup generator in full time operation. A final operational test shall be required with the pumps in operation and the station power supplied by the generator to ensure noise levels are below the required standards.

## **Construction Noise**

The loudest activity associated with pipeline construction would be from a concrete saw removing existing pavement, and from the use of an excavator for trenching and for digging the microtunneling or jack-and-bore pits. Most portions of the pipeline construction would be considered short-term construction and would not occur at any one location for a period lasting 10 or more days. Although the trench would be open along the alignment longer than 10 days, the actual work on the pipeline adjacent to any individual residence would not exceed a cumulative 10-day period. Trench excavation is assumed to take about one day for each given 100-foot segment.

A concrete saw would be in use to remove existing asphalt within the paved ROW. A concrete saw would generate noise levels of 82.6 dBA  $L_{EQ}$  at 50 feet. Impacts from a concrete saw would be potentially significant without mitigation.

Noise from an excavator has an  $L_{MAX}$  level of 85 dBA at 50-feet with the hourly operations for an excavator unit assumed to be only about 40 percent (U.S. Department of Transportation [USDOT] 2008). For a single day of the mobile trench/pit excavation adjacent to a single location (such as an adjacent residential property line), the expected noise levels would be up to approximately 78 dBA  $L_{EQ}$ . Some variations would occur due to the exact location of the trench or pit in the roadway. This would be in excess of the allowable short-term noise limit for single family residences and the mitigation/preservation area across from the pump station if developed as a park by the time of construction. Impacts would be potentially significant without mitigation. Mitigation measure NOI-2 would be required to reduce noise levels from pipeline construction at nearby residences and the potential future park. Pipeline construction would be in compliance with the commercial limits. No other portion of the trench or pipelaying construction would be in excess of the noise limits.

**NOI-2 Pipeline Excavation Barriers.** Short-term excavation activity lasting less than 10 days shall be limited to noise levels of 75 dBA at single-family residences, 80 dBA at multi-family residences, and 85 dBA at commercial zones. Trenching activity requiring the use of a concrete saw within 100 feet shall require the use of a temporary movable 6-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.

Excavation requiring the use of an excavator within 60 feet of single-family residences shall require the use of a temporary movable 12-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.

All barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least 3/4-inch thick or have a surface density of at least 3.5 pounds per square-foot. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation.

The microtunneling and jack-and-bore pit excavation would require fewer than 10 days of construction. Microtunneling drilling operations following pit excavation would exceed the 10-day limit considered for short-term construction. Jack-and-bore drilling operations following pit excavation would not exceed the 10-day limit considered for short-term construction. Drilling operations are expected to install approximately 80 to 100 feet of pipe per day (note that two parallel pipes are required).

The potential drilling excavation sites would be approximately 50 feet from the nearest noise sensitive land uses (NSLUs) or potential NSLUs at the northern end of Elm Street, if jack-and-bore methods are used at East Lakeshore Drive. The typical noise level of an engine used for the jack-and-bore power head is modeled at between 75 and 80 dBA at a distance of 50 feet. This unit would operate in the pit, which would provide attenuation due to the break in the line-of-sight between the equipment and receivers. This would reduce noise by at least 5 dBA. Noise levels at nearby multi-family residences or commercial facilities are modeled at up to 80 dBA at a distance of 50 feet. This would be at or below the 80 dBA limit for short-term construction at multi-family residences, and impacts would be less than significant.

The engine used for the microtunneling procedure would be located above-ground and would therefore generate unattenuated noise; however, the engine and associated equipment would be located in the cul-de-sac area of Peter Lehr Drive, approximately 700 feet from the nearest NSLU, which is the single-family residence located at the southern end of Elm Street. At this distance the noise from the microtunneling engine would not exceed the 60 dBA limit for single-family residences for construction occurring for greater than 10 days. Therefore, impacts would be less than significant.

Construction of the pump station would require the use of some heavy equipment throughout the site for the full term of construction. This construction would be considered long-term, with a construction period exceeding 10 days or more. Construction activities can be roughly divided into several phases, with these phases potentially exhibiting some overlap depending on specific locations and timing. These include foundation and pump well excavation, foundation and pump well pour, building construction, utilities installation, pump and support equipment installation, finish grading and paving.



The loudest construction work would be during the initial site excavation. Work would be conducted with an excavator, loader, and dump trucks. Combined, these pieces of equipment would generate noise levels of up to 85 dBA at the adjacent commercially zoned parking lot for the baseball stadium. For the short-term excavation work this would not be considered a significant impact.

Traffic noise would be generated from haul trucks and construction worker vehicles. However, at the low speeds posted on the residential streets the noise impacts from the small number of construction vehicles is significantly less than the normal construction noise limits.

- b. *Generation of excessive groundborne vibration or groundborne noise levels?* **Less-Than-Significant Impact.** An on-site source of vibration during project construction would be a vibratory roller, which would be used for soil compaction following backfill activities where trenching would occur. A vibratory roller creates approximately 0.210 in/sec peak particle velocity (PPV) at a distance of 25 feet. At a distance of 150 feet (the City's threshold distance), a vibratory roller would create a PPV of 0.03 inches per second. This would be below the "strongly perceptible" vibration annoyance potential criteria for human receptors, as specified by Caltrans (2013), of 0.1 inches per second peak particle velocity.

The operational vibration sources for the site would include electric motors, pump drive shafts, and the planned backup power generator. None of these sources have the potential to induce structural vibration into the ground that would be perceptible to a human at over 25 feet from the source. Impacts related to vibration 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 public-use airport, the Perris Valley Airport, is a privately-owned airport open to public use and located approximately 8.5 miles north of the project site. The proposed project site is not within two miles of a public airport, and no related impacts would occur.

The nearest private airstrip, the Skylark Field Airport, is located approximately 1.2 miles south of the project site at its closest point. The majority of the aircraft based at this airport are single-engine airplanes and gliders (AirNav.com 2017). Excessive noise levels associated with the airport are not anticipated, and related impacts would be less than significant.

#### 4.14 Population and Housing

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?* **Less-Than-Significant Impact.** The proposed project involves the expansion of the existing sewer system to maintain local wastewater service. The project is designed to meet the local service needs of existing and planned residential developments in the vicinity of the Diamond Regional Sewer Lift Station. Because the project would help accommodate existing and planned growth, it would not induce growth, and impacts would be less than significant.
- b. *Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?* **No Impact.** Implementation of the proposed project would not require the removal of existing people or housing or the associated construction of replacement housing, and no associated impacts would result.

#### 4.15 Public Services

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- 1) *Fire Protection? **No Impact.*** The construction and operation of the proposed project would not result in increases in the need for fire protection services. During construction, fire protection may be required, but these would be short-term demands and would not require permanent increases in the level of public service offered or affect response times associated with fire protection services. Because of the low probability and short-term nature of potential fire protection needs during construction, the proposed project would result in less-than-significant impacts associated with fire protection services.
- 2) *Police Protection? **No Impact.*** Similar to the low probability and short-term nature of fire protection needs described above, there are no significant impacts related to police protection or service anticipated with implementation of the proposed project.
- 3) *Schools? **No Impact.*** The proposed project would not result in new housing or population growth that would generate increased demand for school services. Accordingly, project implementation would not result in the need for construction of additional school facilities and no associated impacts would occur.
- 4) *Parks? **No Impact.*** Implementation of the proposed project would not affect existing park facilities or increase the demand for additional recreational facilities. As a result, no impacts related to parks would result from the proposed project.
- 5) *Other Public Facilities? **No Impact.*** No impacts to other public facilities are anticipated to occur with project implementation, for similar reasons as noted in the above public services responses.

#### 4.16 Recreation

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	<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. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated? **No Impact.*** The proposed project involves construction of a lift station and pipeline. Implementation of the proposed project would not generate an increase in demand for existing public/private parks or other recreational facilities that would result in or

increase physical deterioration of these facilities. As a result, no associated impacts would result from project implementation.

- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?* **No Impact.** Implementation of the proposed project would not include recreational facilities or require the construction or expansion of recreational facilities. No associated impacts would result.

#### 4.17 Transportation/Traffic

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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.** Project construction activities would generate a temporary contribution of additional vehicle trips to the local circulation system. Specifically, project construction traffic would be associated with one-time ingress/egress for applicable construction equipment (e.g., backhoes/trenchers), daily trips for construction workers and support vehicles (pickups, and water/haul trucks), and material/equipment deliveries. The anticipated maximum number of vehicle trips to occur in a single day is 40. Due to the linear layout of the project, not all of these trips would occur in the same area or along the same roadways. In addition, most construction days would not involve the maximum number of vehicles. As such, the project's construction traffic would not substantially impact the performance of the circulation system or associated plans, ordinances, or policies.

The proposed project would not result in substantial long-term traffic generation, with operational traffic to be limited to minimal trips related to periodic facility inspection and maintenance. Based on the described considerations, traffic-related impacts during the construction and operation of the proposed project would be less than significant, and the project would not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

The proposed project would not substantially affect existing public transit, bicycle, or pedestrian facilities. Sidewalks present along East Lakeshore Drive extend east from Elm Street; therefore, the project alignment does not intersect the sidewalk, and construction at East Lakeshore Drive, whether by jack-and-bore or trenching, would not impact the sidewalk or limit its accessibility. Bus stops located along East Lakeshore Drive are located over 200 feet from the proposed alignment and would not be impacted. It is anticipated that the short segments of sidewalk present along Elm Street would remain open to pedestrian access. Trenched areas would be fenced off so as to allow for continued safety of the sidewalks. A trailhead located along Diamond Circle and extending west may be temporarily closed when trenching occurs in the roadway. The closure would be of short duration and the trail access would be restored to pre-existing conditions following completion of construction at the portion of the alignment. As such, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, and impacts would be less than significant.

- b. *Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?* **No Impact.** Refer to Response 4.17a, above. CEQA Guidelines Section 15064.3 subdivision (b) sets forth specific criteria for determining the significance of transportation impacts. Subdivision (b)(1) pertains to land use projects and describes factors that may indicate whether the amount of a land use project's vehicle miles traveled may be significant or not. Because project-related traffic would be limited predominantly to a relatively small number of trips during the 18-month construction period, the project would not conflict with an applicable congestion management program and no impacts related to congestion management would result.
- c. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?* **No Impact.** The proposed project would not include the construction of hazards (e.g., sharp curves or dangerous intersections), and would not result in incompatible uses with the surrounding developed area. Accordingly, no impacts regarding design features or incompatible uses would occur.
- d. *Result in inadequate emergency access?* **Less-Than-Significant Impact.** Portions of the pipeline construction activities would occur within East Lakeshore Drive (if jack-and-bore methods are not used), Elm Street, Peter Lehr Drive, Diamond Circle, and Malaga Road. Traffic control measures would be implemented in applicable locations, such as private driveways, to maintain access and ensure public safety. Operation of the lift station and below-ground pipeline would not interfere with emergency access. Impacts would, therefore, be less than significant.

#### 4.18 Tribal Cultural Resources

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in Subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

A Sacred Lands File (SLF) search was requested from the NAHC on February 15, 2017. The response, received on February 17, 2017 indicated that a records search of the SLF was completed with negative results. Letters were sent on March 9, 2017 to the contacts listed by the NAHC. Written responses have been received from three Tribes. The Agua Caliente Band of Cahuilla Indians responded on March 17, 2017, indicating that the project site is outside their Traditional Use Area, and they defer to other Tribes closer to the project area. The Rincon Band of Luiseño Indians responded on March 14, 2017 that, while the project area is in the Aboriginal Territory of the Luiseño people, it is outside Rincon's Historic Boundary; they deferred to either Pechanga or The Soboba Band of Luiseño Mission Indians (Soboba). Soboba responded on April 13, 2017, indicating that the project area is within the Tribe's Tribal Traditional Use Area; the area is in proximity to known cultural sites, is a shared use area, and is of cultural sensitivity to the people of Soboba. Therefore, Soboba requested to initiate consultation regarding the project and further requested that a Native American Monitor from the Soboba Cultural Resource Department be present to monitor ground-disturbing activities. The District entered into consultation with Soboba and with Pechanga pursuant to AB 52; both Tribes affirmed that they would like to be included in the

consultation process and requested to be kept informed of project developments and planned activities. Therefore, although no tribal cultural resources have been identified on site, the cultural sensitivity of the area allows for the potential of tribal cultural resources to be encountered on site during the project's ground-disturbing activities. Impacts would be potentially significant, and mitigation measures CR-1 through CR-9 would be required. With implementation of the mitigation measures, impacts would be less than significant.

- b. *Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Subdivision (c) of the Public Resources Code Section 5024.1? **Less-Than-Significant with Mitigation Incorporated.** Refer to Response 4.18a.*

#### 4.19 Utilities and Service Systems

Issue	Potentially Significant	Less Than Significant with Mit. Incorpor.	Less Than Significant	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
c. Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input 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.** The proposed project would consist predominantly of short-term construction activities, with no generation of additional population. The nature and scope of the proposed project would therefore not require or result in the relocation or*

construction of new utility facilities. Project activities related to storm water drainage facilities would be limited to the replacement of such structures along roadways that may be impacted during construction. As a result, impacts related to storm water drainage facilities would be less than significant.

- b. *Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?* **No Impact.** Water requirements associated with the proposed project would be limited to short-term (construction-related) uses such as dust suppression, backfill moisture conditioning, and employee consumption. Based on the minor nature of such uses, it is anticipated that project water requirements would be met through existing entitlements and no associated impacts would result.
- 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?* **No Impact.** As discussed in Response 4.19a, the proposed project would consist predominantly of short-term construction activities, with no generation of additional population. Accordingly, project-related wastewater generation would be limited to that associated with the small number of employees during the 18-month construction period, and would not exceed wastewater treatment requirements of the RWQCB. As a result, no associated impacts related to wastewater treatment requirement would occur.
- d. *Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?* **Less-Than-Significant Impact.** Waste generation and disposal requirements associated with the proposed project would be limited to minor quantities derived from construction activities (e.g., material packaging) and employees (e.g., food-related trash). Based on the minor nature of project-related waste generation, as well as the fact that sufficient landfill capacity exists or is planned in the region, associated potential impacts from project implementation would be less than significant.
- e. *Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?* **Less-Than-Significant Impact.** Refer to Response 4.19d, above. Project construction is not anticipated to generate substantial volumes of solid waste. Solid waste debris would be disposed of at a permitted landfill. Moreover, AB 939, also known as the Integrated Waste Management Act, and AB 341 mandate the reduction of solid waste disposal in landfills by requiring a minimum of 50 percent diversion rate. Accordingly, at least half of the potential construction waste would be diverted from a landfill. The remaining quantity is reasonably anticipated to be within the permitted capacity of the permitted landfills serving the project area. Impacts would be less than significant.



## 4.20 Wildfire

Issue	Potentially Significant	Less Than Significant with Mit. Incomp.	Less Than Significant	No Impact
Would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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.** Refer to Response 4.9f. Potential impacts to emergency response 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 wildfire?* **Less-Than-Significant Impact.** Aside from temporary construction and maintenance workers, there would be no occupants on site. 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?* **No Impact.** The proposed project is located within and adjacent to Planning Areas 1, 7, and 8 of the East Lake Specific Plan area, which is generally undeveloped but is planned for development in the near future. Implementation of the proposed project would include construction activities to install subsurface pipeline facilities and a lift station, which would not require infrastructure beyond what is already planned for the area. The proposed project would not require the installation or maintenance of infrastructure that could exacerbate fire risk or result in temporary or ongoing impacts to the environment; no impacts would occur.
- d. *Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?* **Less-Than-Significant Impact.** After construction of the proposed project, the surface would be returned to existing conditions, with the exception of the lift station location. As noted in Response 4.10c.i, no significant impacts related to drainage alteration would result from the

proposed project. The relatively small project area would be stabilized through efforts such as paving/repaving and revegetation/landscaping, and there are no residences down slope of the project. Therefore, implementation of the proposed project would not expose people or structures to significant risks from runoff, post-fire slope instability, or drainage changes.

#### 4.21 Mandatory Findings of Significance

Issue	Potentially Significant	Less Than Significant with Mit. Incorp.	Less Than Significant	No Impact
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? **Less-Than-Significant with Mitigation Incorporated.*** As described in Response 4.4a, construction of the proposed project could occur during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds and violation of the MBTA and CFG Code. Direct impacts could occur as a result of removal of vegetation or soil supporting an active nest. Indirect impacts could occur as a result of construction noise impacting nearby trees or rocky beach areas, where active nests may be present. Implementation of mitigation measure BIO-1 would reduce potentially significant impacts on nesting birds and raptors to less-than-significant levels. In addition, although protocol burrowing owl surveys were negative, the study area supports potential burrowing owl habitat, and therefore a pre-construction survey (mitigation measure BIO-2) would help the project avoid impacts to burrowing owls.

Indirect impacts to nearby sensitive vegetation communities could occur if storm water runoff is not controlled at the construction site, and sediment, toxics, and/or other materials are inadvertently carried into sensitive habitat within the inlet channel or the restored

streambed west of the impact area. Further, if the construction work areas are not properly fenced, inadvertent encroachment into adjacent sensitive habitat could occur. Compliance with existing regulations for water quality, storm water management, and implementation of mitigation measure BIO-3 would reduce potentially significant impacts to sensitive natural communities to less than significant levels.

The project would not reduce the habitat of a fish or wildlife species, as no natural habitat would be removed, nor would the project cause a wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

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

- b. *Does the project have impacts that are individually limited, but cumulatively considerable (“cumulatively considerable” means the project’s incremental effects are considerable when compared to the past, present, and future effects of other projects)?* **Less-Than-Significant Impact.** Cumulative impacts are defined as two or more individual project effects that, when considered together or in concert with other projects, combine to result in a significant impact (CEQA Guidelines Section 15355). The project site is located within and adjacent to Planning Areas 1, 7, and 8 of the East Lake Specific Plan area, which is generally undeveloped but is planned for development in the near future. The East Lake Specific Plan identifies development targets over two phases. Phase 1 development is planned to be completed by July 1, 2022, and Phase 2 development is planned to be completed by 2040. Given these planned development targets, it is possible that construction and operation of the proposed project could overlap with the construction and operation of Phase 1 projects planned for Planning Areas 1, 7, and 8. Development of these three planning areas includes a golf course, a 90-room hotel, a 1,979-dwelling-unit residential neighborhood, and a 325 dwelling-unit mixed-use residential neighborhood.

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

- c. *Does the project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly?* ***Less-Than-Significant Impact***. With adherence to regulatory codes, ordinances, regulations, standards, and guidelines, in conjunction with the discussed mitigation measures, construction and operation of the proposed project would not present a substantial adverse effect on human beings either directly or indirectly. In addition, all resource topics associated with the project have been analyzed in accordance with State CEQA Guidelines and found to pose no impact, less-than-significant impact, or less-than-significant impact with mitigation. Further environmental analysis is not required. Impact would be less than significant.

## **5.0 PREPARERS**

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## 7.0 ACRONYMS AND ABBREVIATIONS

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
AMSL	above mean sea level
AQMP	Air Quality Management Plan
ARMR	Archaeological Resource Management Report
ATCM	Airborne Toxics Control Measure
Basin	South Coast Air Basin
BMPs	best management practices
CalEEMod	California Emissions Estimator Model
Cal-OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CBC	California Building Code
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFC	chlorofluorocarbons
CFG Code	California Fish and Game Code
CGS	California Geological Survey
CH <sub>4</sub>	methane
City	City of Lake Elsinore
CNEL	community noise equivalent level
CNPS	California Native Plant Species
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
County	County of Riverside
CRMP	Cultural Resources Monitoring Plan
CSMP	Construction Site Monitoring Program
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
EIC	Eastern Information Center
EIR	Environmental Impact Report
EVMWD	Elsinore Valley Municipal Water District
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map



GHG	greenhouse gas
GIS	Geographic Information Services
HELIX	HELIX Environmental Planning, Inc.
HFC	hydrofluorocarbons
I-15	Interstate 15
IBC	International Building Code
ICC	International Code Council
IS/MND	Initial Study/Mitigated Negative Declaration
kWh	kilowatt hour
L <sub>EQ</sub>	noise equivalent
LST	Localized Significance Threshold
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MSHCP	Multiple Species Habitat Conservation Plan
MT	metric ton
N <sub>2</sub> O	nitrous oxide
NAHC	Native American Heritage Commission
NO <sub>2</sub>	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NSLU	noise sensitive land use
OHWM	ordinary high water mark
OSHA	Occupational Safety and Health Administration
PFCs	perfluorocarbons
PM <sub>10</sub>	particulate matter less than 10 microns in diameter
PM <sub>2.5</sub>	particulate matter less than 2.5 microns in diameter
PPV	peak particle velocity
REAP	Rain Event Action Plan
RMS	root mean square
ROW	right-of-way
RPA	Register of Professional Archaeologists
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAQ	South Coast Association of Governments
SCAQMD	South Coast Air Quality Management District
SF <sub>6</sub>	sulfur hexafluoride

SLF	Sacred Lands File
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VHFHSZ	Very High Fire Hazard Severity Zone

## Appendix A

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### Air Quality CalEEMod Modeling

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

## Diamond Regional Sewer Lift Station Construction

### Riverside-South Coast County, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase - Estimated construction schedule.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Trips and VMT - 1,700 CY yards of export at 16 CY per load.

Demolition -

Grading -

Vehicle Trips -

Area Coating - Construction emissions only.

Construction Off-road Equipment Mitigation -

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	15600	0
tblAreaCoating	Area_Nonresidential_Interior	46800	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstructionPhase	NumDays	0.00	390.00
tblConstructionPhase	NumDays	0.00	10.00
tblConstructionPhase	NumDays	0.00	370.00
tblConstructionPhase	NumDays	0.00	15.00
tblGrading	MaterialExported	0.00	1,700.00
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	213.00	106.00

## 2.0 Emissions Summary

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## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**2.1 Overall Construction****Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2556	2.1422	2.0111	3.8700e-003	0.0271	0.1129	0.1399	7.2200e-003	0.1078	0.1150	0.0000	338.6042	338.6042	0.0736	0.0000	340.4440
2020	0.3677	3.1035	3.1364	6.0500e-003	0.0428	0.1570	0.1998	0.0114	0.1498	0.1612	0.0000	522.3346	522.3346	0.1133	0.0000	525.1681
Maximum	0.3677	3.1035	3.1364	6.0500e-003	0.0428	0.1570	0.1998	0.0114	0.1498	0.1612	0.0000	522.3346	522.3346	0.1133	0.0000	525.1681

**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					
2019	0.2556	2.1422	2.0111	3.8700e-003	0.0270	0.1129	0.1399	7.2200e-003	0.1078	0.1150	0.0000	338.6039	338.6039	0.0736	0.0000	340.4436
2020	0.3677	3.1035	3.1364	6.0500e-003	0.0426	0.1570	0.1996	0.0114	0.1498	0.1612	0.0000	522.3340	522.3340	0.1133	0.0000	525.1675
Maximum	0.3677	3.1035	3.1364	6.0500e-003	0.0426	0.1570	0.1996	0.0114	0.1498	0.1612	0.0000	522.3340	522.3340	0.1133	0.0000	525.1675

	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	0.39	0.00	0.08	0.21	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	1.0166	1.0166
2	9-3-2019	12-2-2019	1.0403	1.0403
3	12-3-2019	3-2-2020	0.9830	0.9830
4	3-3-2020	6-2-2020	0.9667	0.9667
5	6-3-2020	9-2-2020	0.9668	0.9668
6	9-3-2020	9-30-2020	0.2942	0.2942
		Highest	1.0403	1.0403

## 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	0.1127	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
<b>Total</b>	<b>0.1127</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1127	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
<b>Total</b>	<b>0.1127</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Pipeline Trenching	Trenching	6/3/2019	11/6/2020	5	375	
2	Building Construction	Building Construction	6/3/2019	11/27/2020	5	390	
3	Pipeline Installation and Backfill	Grading	6/17/2019	11/13/2020	5	370	
4	Repaving	Paving	11/16/2020	12/4/2020	5	15	
5	Demolition	Demolition	11/30/2020	12/11/2020	5	10	

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

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Pipeline Trenching	Bore/Drill Rigs	1	8.00	221	0.50
Pipeline Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Trenching	Excavators	1	8.00	158	0.38
Pipeline Installation and Backfill	Concrete/Industrial Saws	0	8.00	81	0.73
Pipeline Installation and Backfill	Excavators	1	8.00	158	0.38
Pipeline Installation and Backfill	Rubber Tired Dozers	0	1.00	247	0.40
Pipeline Installation and Backfill	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline Installation and Backfill	Welders	1	8.00	46	0.45
Repaving	Cement and Mortar Mixers	0	6.00	9	0.56
Repaving	Pavers	1	7.00	130	0.42
Repaving	Paving Equipment	1	7.00	132	0.36
Repaving	Rollers	1	7.00	80	0.38
Repaving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation and Backfill	3	8.00	0.00	106.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Repaving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	2	5.00	0.00	3.00	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

**3.2 Pipeline Trenching - 2019****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	0.0762	0.7571	0.6865	1.5800e-003		0.0352	0.0352		0.0338	0.0338	0.0000	140.0329	140.0329	0.0343	0.0000	140.8893
<b>Total</b>	<b>0.0762</b>	<b>0.7571</b>	<b>0.6865</b>	<b>1.5800e-003</b>		<b>0.0352</b>	<b>0.0352</b>		<b>0.0338</b>	<b>0.0338</b>	<b>0.0000</b>	<b>140.0329</b>	<b>140.0329</b>	<b>0.0343</b>	<b>0.0000</b>	<b>140.8893</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.2 Pipeline Trenching - 2019****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	3.0200e-003	2.2000e-003	0.0231	6.0000e-005	6.6800e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	5.7736	5.7736	1.6000e-004	0.0000	5.7776
<b>Total</b>	<b>3.0200e-003</b>	<b>2.2000e-003</b>	<b>0.0231</b>	<b>6.0000e-005</b>	<b>6.6800e-003</b>	<b>4.0000e-005</b>	<b>6.7200e-003</b>	<b>1.7700e-003</b>	<b>4.0000e-005</b>	<b>1.8100e-003</b>	<b>0.0000</b>	<b>5.7736</b>	<b>5.7736</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.7776</b>

**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	0.0762	0.7571	0.6865	1.5800e-003		0.0352	0.0352		0.0338	0.0338	0.0000	140.0328	140.0328	0.0343	0.0000	140.8891
<b>Total</b>	<b>0.0762</b>	<b>0.7571</b>	<b>0.6865</b>	<b>1.5800e-003</b>		<b>0.0352</b>	<b>0.0352</b>		<b>0.0338</b>	<b>0.0338</b>	<b>0.0000</b>	<b>140.0328</b>	<b>140.0328</b>	<b>0.0343</b>	<b>0.0000</b>	<b>140.8891</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.2 Pipeline Trenching - 2019****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	3.0200e-003	2.2000e-003	0.0231	6.0000e-005	6.6800e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	5.7736	5.7736	1.6000e-004	0.0000	5.7776
<b>Total</b>	<b>3.0200e-003</b>	<b>2.2000e-003</b>	<b>0.0231</b>	<b>6.0000e-005</b>	<b>6.6800e-003</b>	<b>4.0000e-005</b>	<b>6.7200e-003</b>	<b>1.7700e-003</b>	<b>4.0000e-005</b>	<b>1.8100e-003</b>	<b>0.0000</b>	<b>5.7736</b>	<b>5.7736</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>5.7776</b>

**3.2 Pipeline Trenching - 2020****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	0.1049	1.0295	1.0074	2.3200e-003		0.0464	0.0464		0.0445	0.0445	0.0000	202.5642	202.5642	0.0499	0.0000	203.8122
<b>Total</b>	<b>0.1049</b>	<b>1.0295</b>	<b>1.0074</b>	<b>2.3200e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0445</b>	<b>0.0445</b>	<b>0.0000</b>	<b>202.5642</b>	<b>202.5642</b>	<b>0.0499</b>	<b>0.0000</b>	<b>203.8122</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.2 Pipeline Trenching - 2020****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	4.1000e-003	2.8700e-003	0.0307	9.0000e-005	9.8000e-003	6.0000e-005	9.8600e-003	2.6000e-003	6.0000e-005	2.6600e-003	0.0000	8.2028	8.2028	2.1000e-004	0.0000	8.2079
<b>Total</b>	<b>4.1000e-003</b>	<b>2.8700e-003</b>	<b>0.0307</b>	<b>9.0000e-005</b>	<b>9.8000e-003</b>	<b>6.0000e-005</b>	<b>9.8600e-003</b>	<b>2.6000e-003</b>	<b>6.0000e-005</b>	<b>2.6600e-003</b>	<b>0.0000</b>	<b>8.2028</b>	<b>8.2028</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>8.2079</b>

**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	0.1049	1.0295	1.0074	2.3200e-003		0.0464	0.0464		0.0445	0.0445	0.0000	202.5639	202.5639	0.0499	0.0000	203.8120
<b>Total</b>	<b>0.1049</b>	<b>1.0295</b>	<b>1.0074</b>	<b>2.3200e-003</b>		<b>0.0464</b>	<b>0.0464</b>		<b>0.0445</b>	<b>0.0445</b>	<b>0.0000</b>	<b>202.5639</b>	<b>202.5639</b>	<b>0.0499</b>	<b>0.0000</b>	<b>203.8120</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.2 Pipeline Trenching - 2020****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	4.1000e-003	2.8700e-003	0.0307	9.0000e-005	9.8000e-003	6.0000e-005	9.8600e-003	2.6000e-003	6.0000e-005	2.6600e-003	0.0000	8.2028	8.2028	2.1000e-004	0.0000	8.2079
<b>Total</b>	<b>4.1000e-003</b>	<b>2.8700e-003</b>	<b>0.0307</b>	<b>9.0000e-005</b>	<b>9.8000e-003</b>	<b>6.0000e-005</b>	<b>9.8600e-003</b>	<b>2.6000e-003</b>	<b>6.0000e-005</b>	<b>2.6600e-003</b>	<b>0.0000</b>	<b>8.2028</b>	<b>8.2028</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>8.2079</b>

**3.3 Building Construction - 2019****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	0.1090	0.8979	0.7505	1.2400e-003		0.0526	0.0526		0.0504	0.0504	0.0000	105.9804	105.9804	0.0205	0.0000	106.4936
<b>Total</b>	<b>0.1090</b>	<b>0.8979</b>	<b>0.7505</b>	<b>1.2400e-003</b>		<b>0.0526</b>	<b>0.0526</b>		<b>0.0504</b>	<b>0.0504</b>	<b>0.0000</b>	<b>105.9804</b>	<b>105.9804</b>	<b>0.0205</b>	<b>0.0000</b>	<b>106.4936</b>



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.3 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2900e-003	0.0439	8.7300e-003	1.0000e-004	2.4000e-003	3.3000e-004	2.7300e-003	6.9000e-004	3.2000e-004	1.0100e-003	0.0000	9.4094	9.4094	8.0000e-004	0.0000	9.4295
Worker	4.9100e-003	3.5700e-003	0.0375	1.0000e-004	0.0109	7.0000e-005	0.0109	2.8800e-003	6.0000e-005	2.9500e-003	0.0000	9.3821	9.3821	2.6000e-004	0.0000	9.3886
<b>Total</b>	<b>6.2000e-003</b>	<b>0.0474</b>	<b>0.0462</b>	<b>2.0000e-004</b>	<b>0.0133</b>	<b>4.0000e-004</b>	<b>0.0137</b>	<b>3.5700e-003</b>	<b>3.8000e-004</b>	<b>3.9600e-003</b>	<b>0.0000</b>	<b>18.7915</b>	<b>18.7915</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>18.8180</b>

**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	0.1090	0.8979	0.7505	1.2400e-003		0.0526	0.0526		0.0504	0.0504	0.0000	105.9803	105.9803	0.0205	0.0000	106.4934
<b>Total</b>	<b>0.1090</b>	<b>0.8979</b>	<b>0.7505</b>	<b>1.2400e-003</b>		<b>0.0526</b>	<b>0.0526</b>		<b>0.0504</b>	<b>0.0504</b>	<b>0.0000</b>	<b>105.9803</b>	<b>105.9803</b>	<b>0.0205</b>	<b>0.0000</b>	<b>106.4934</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.3 Building Construction - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2900e-003	0.0439	8.7300e-003	1.0000e-004	2.4000e-003	3.3000e-004	2.7300e-003	6.9000e-004	3.2000e-004	1.0100e-003	0.0000	9.4094	9.4094	8.0000e-004	0.0000	9.4295
Worker	4.9100e-003	3.5700e-003	0.0375	1.0000e-004	0.0109	7.0000e-005	0.0109	2.8800e-003	6.0000e-005	2.9500e-003	0.0000	9.3821	9.3821	2.6000e-004	0.0000	9.3886
<b>Total</b>	<b>6.2000e-003</b>	<b>0.0474</b>	<b>0.0462</b>	<b>2.0000e-004</b>	<b>0.0133</b>	<b>4.0000e-004</b>	<b>0.0137</b>	<b>3.5700e-003</b>	<b>3.8000e-004</b>	<b>3.9600e-003</b>	<b>0.0000</b>	<b>18.7915</b>	<b>18.7915</b>	<b>1.0600e-003</b>	<b>0.0000</b>	<b>18.8180</b>

**3.3 Building Construction - 2020****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	0.1530	1.2881	1.1537	1.9400e-003		0.0714	0.0714		0.0684	0.0684	0.0000	164.2750	164.2750	0.0312	0.0000	165.0557
<b>Total</b>	<b>0.1530</b>	<b>1.2881</b>	<b>1.1537</b>	<b>1.9400e-003</b>		<b>0.0714</b>	<b>0.0714</b>		<b>0.0684</b>	<b>0.0684</b>	<b>0.0000</b>	<b>164.2750</b>	<b>164.2750</b>	<b>0.0312</b>	<b>0.0000</b>	<b>165.0557</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.3 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6900e-003	0.0619	0.0121	1.5000e-004	3.7600e-003	3.5000e-004	4.1100e-003	1.0800e-003	3.3000e-004	1.4200e-003	0.0000	14.6303	14.6303	1.1700e-003	0.0000	14.6596
Worker	7.1100e-003	4.9800e-003	0.0532	1.6000e-004	0.0170	1.0000e-004	0.0171	4.5200e-003	1.0000e-004	4.6100e-003	0.0000	14.2261	14.2261	3.6000e-004	0.0000	14.2350
<b>Total</b>	<b>8.8000e-003</b>	<b>0.0669</b>	<b>0.0653</b>	<b>3.1000e-004</b>	<b>0.0208</b>	<b>4.5000e-004</b>	<b>0.0212</b>	<b>5.6000e-003</b>	<b>4.3000e-004</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>28.8564</b>	<b>28.8564</b>	<b>1.5300e-003</b>	<b>0.0000</b>	<b>28.8946</b>

**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	0.1530	1.2881	1.1537	1.9400e-003		0.0714	0.0714		0.0684	0.0684	0.0000	164.2748	164.2748	0.0312	0.0000	165.0555
<b>Total</b>	<b>0.1530</b>	<b>1.2881</b>	<b>1.1537</b>	<b>1.9400e-003</b>		<b>0.0714</b>	<b>0.0714</b>		<b>0.0684</b>	<b>0.0684</b>	<b>0.0000</b>	<b>164.2748</b>	<b>164.2748</b>	<b>0.0312</b>	<b>0.0000</b>	<b>165.0555</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.3 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.6900e-003	0.0619	0.0121	1.5000e-004	3.7600e-003	3.5000e-004	4.1100e-003	1.0800e-003	3.3000e-004	1.4200e-003	0.0000	14.6303	14.6303	1.1700e-003	0.0000	14.6596
Worker	7.1100e-003	4.9800e-003	0.0532	1.6000e-004	0.0170	1.0000e-004	0.0171	4.5200e-003	1.0000e-004	4.6100e-003	0.0000	14.2261	14.2261	3.6000e-004	0.0000	14.2350
<b>Total</b>	<b>8.8000e-003</b>	<b>0.0669</b>	<b>0.0653</b>	<b>3.1000e-004</b>	<b>0.0208</b>	<b>4.5000e-004</b>	<b>0.0212</b>	<b>5.6000e-003</b>	<b>4.3000e-004</b>	<b>6.0300e-003</b>	<b>0.0000</b>	<b>28.8564</b>	<b>28.8564</b>	<b>1.5300e-003</b>	<b>0.0000</b>	<b>28.8946</b>

**3.4 Pipeline Installation and Backfill - 2019****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					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0583	0.4302	0.4826	7.1000e-004		0.0246	0.0246		0.0232	0.0232	0.0000	61.1419	61.1419	0.0174	0.0000	61.5757
<b>Total</b>	<b>0.0583</b>	<b>0.4302</b>	<b>0.4826</b>	<b>7.1000e-004</b>	<b>1.1000e-004</b>	<b>0.0246</b>	<b>0.0247</b>	<b>2.0000e-005</b>	<b>0.0232</b>	<b>0.0232</b>	<b>0.0000</b>	<b>61.1419</b>	<b>61.1419</b>	<b>0.0174</b>	<b>0.0000</b>	<b>61.5757</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.4 Pipeline Installation and Backfill - 2019****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	1.2000e-004	5.3300e-003	6.7000e-004	2.0000e-005	7.7000e-004	2.0000e-005	7.9000e-004	2.0000e-004	2.0000e-005	2.2000e-004	0.0000	1.4900	1.4900	1.0000e-004	0.0000	1.4925
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	2.8200e-003	2.0500e-003	0.0216	6.0000e-005	6.2400e-003	4.0000e-005	6.2800e-003	1.6600e-003	4.0000e-005	1.6900e-003	0.0000	5.3938	5.3938	1.5000e-004	0.0000	5.3975
<b>Total</b>	<b>2.9400e-003</b>	<b>7.3800e-003</b>	<b>0.0222</b>	<b>8.0000e-005</b>	<b>7.0100e-003</b>	<b>6.0000e-005</b>	<b>7.0700e-003</b>	<b>1.8600e-003</b>	<b>6.0000e-005</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>6.8838</b>	<b>6.8838</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>6.8899</b>

**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					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0583	0.4302	0.4826	7.1000e-004		0.0246	0.0246		0.0232	0.0232	0.0000	61.1419	61.1419	0.0174	0.0000	61.5756
<b>Total</b>	<b>0.0583</b>	<b>0.4302</b>	<b>0.4826</b>	<b>7.1000e-004</b>	<b>5.0000e-005</b>	<b>0.0246</b>	<b>0.0246</b>	<b>1.0000e-005</b>	<b>0.0232</b>	<b>0.0232</b>	<b>0.0000</b>	<b>61.1419</b>	<b>61.1419</b>	<b>0.0174</b>	<b>0.0000</b>	<b>61.5756</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.4 Pipeline Installation and Backfill - 2019****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	1.2000e-004	5.3300e-003	6.7000e-004	2.0000e-005	7.7000e-004	2.0000e-005	7.9000e-004	2.0000e-004	2.0000e-005	2.2000e-004	0.0000	1.4900	1.4900	1.0000e-004	0.0000	1.4925
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	2.8200e-003	2.0500e-003	0.0216	6.0000e-005	6.2400e-003	4.0000e-005	6.2800e-003	1.6600e-003	4.0000e-005	1.6900e-003	0.0000	5.3938	5.3938	1.5000e-004	0.0000	5.3975
<b>Total</b>	<b>2.9400e-003</b>	<b>7.3800e-003</b>	<b>0.0222</b>	<b>8.0000e-005</b>	<b>7.0100e-003</b>	<b>6.0000e-005</b>	<b>7.0700e-003</b>	<b>1.8600e-003</b>	<b>6.0000e-005</b>	<b>1.9100e-003</b>	<b>0.0000</b>	<b>6.8838</b>	<b>6.8838</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>6.8899</b>

**3.4 Pipeline Installation and Backfill - 2020****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					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0848	0.6342	0.7689	1.1500e-003		0.0346	0.0346		0.0326	0.0326	0.0000	96.5078	96.5078	0.0274	0.0000	97.1939
<b>Total</b>	<b>0.0848</b>	<b>0.6342</b>	<b>0.7689</b>	<b>1.1500e-003</b>	<b>1.1000e-004</b>	<b>0.0346</b>	<b>0.0347</b>	<b>2.0000e-005</b>	<b>0.0326</b>	<b>0.0327</b>	<b>0.0000</b>	<b>96.5078</b>	<b>96.5078</b>	<b>0.0274</b>	<b>0.0000</b>	<b>97.1939</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.4 Pipeline Installation and Backfill - 2020****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	1.7000e-004	7.9200e-003	1.0200e-003	2.0000e-005	8.3000e-004	2.0000e-005	8.5000e-004	2.2000e-004	2.0000e-005	2.4000e-004	0.0000	2.3681	2.3681	1.5000e-004	0.0000	2.3718
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	4.1900e-003	2.9400e-003	0.0314	9.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	6.0000e-005	2.7200e-003	0.0000	8.3867	8.3867	2.1000e-004	0.0000	8.3919
<b>Total</b>	<b>4.3600e-003</b>	<b>0.0109</b>	<b>0.0324</b>	<b>1.1000e-004</b>	<b>0.0109</b>	<b>8.0000e-005</b>	<b>0.0109</b>	<b>2.8800e-003</b>	<b>8.0000e-005</b>	<b>2.9600e-003</b>	<b>0.0000</b>	<b>10.7548</b>	<b>10.7548</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>10.7638</b>

**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					
Fugitive Dust					5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0848	0.6342	0.7689	1.1500e-003		0.0346	0.0346		0.0326	0.0326	0.0000	96.5077	96.5077	0.0274	0.0000	97.1938
<b>Total</b>	<b>0.0848</b>	<b>0.6342</b>	<b>0.7689</b>	<b>1.1500e-003</b>	<b>5.0000e-005</b>	<b>0.0346</b>	<b>0.0347</b>	<b>1.0000e-005</b>	<b>0.0326</b>	<b>0.0326</b>	<b>0.0000</b>	<b>96.5077</b>	<b>96.5077</b>	<b>0.0274</b>	<b>0.0000</b>	<b>97.1938</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.4 Pipeline Installation and Backfill - 2020****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	1.7000e-004	7.9200e-003	1.0200e-003	2.0000e-005	8.3000e-004	2.0000e-005	8.5000e-004	2.2000e-004	2.0000e-005	2.4000e-004	0.0000	2.3681	2.3681	1.5000e-004	0.0000	2.3718
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	4.1900e-003	2.9400e-003	0.0314	9.0000e-005	0.0100	6.0000e-005	0.0101	2.6600e-003	6.0000e-005	2.7200e-003	0.0000	8.3867	8.3867	2.1000e-004	0.0000	8.3919
<b>Total</b>	<b>4.3600e-003</b>	<b>0.0109</b>	<b>0.0324</b>	<b>1.1000e-004</b>	<b>0.0109</b>	<b>8.0000e-005</b>	<b>0.0109</b>	<b>2.8800e-003</b>	<b>8.0000e-005</b>	<b>2.9600e-003</b>	<b>0.0000</b>	<b>10.7548</b>	<b>10.7548</b>	<b>3.6000e-004</b>	<b>0.0000</b>	<b>10.7638</b>

**3.5 Repaving - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4500e-003	0.0462	0.0481	7.0000e-005		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	6.5718	6.5718	2.1300e-003	0.0000	6.6249
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.4500e-003</b>	<b>0.0462</b>	<b>0.0481</b>	<b>7.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.2700e-003</b>	<b>2.2700e-003</b>	<b>0.0000</b>	<b>6.5718</b>	<b>6.5718</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>6.6249</b>



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**3.5 Repaving - 2020****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	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521
<b>Total</b>	<b>2.8000e-004</b>	<b>1.9000e-004</b>	<b>2.0600e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>6.6000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.5518</b>	<b>0.5518</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.5521</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4500e-003	0.0462	0.0481	7.0000e-005		2.4700e-003	2.4700e-003		2.2700e-003	2.2700e-003	0.0000	6.5718	6.5718	2.1300e-003	0.0000	6.6249
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>4.4500e-003</b>	<b>0.0462</b>	<b>0.0481</b>	<b>7.0000e-005</b>		<b>2.4700e-003</b>	<b>2.4700e-003</b>		<b>2.2700e-003</b>	<b>2.2700e-003</b>	<b>0.0000</b>	<b>6.5718</b>	<b>6.5718</b>	<b>2.1300e-003</b>	<b>0.0000</b>	<b>6.6249</b>

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**3.5 Repaving - 2020****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	2.8000e-004	1.9000e-004	2.0600e-003	1.0000e-005	6.6000e-004	0.0000	6.6000e-004	1.8000e-004	0.0000	1.8000e-004	0.0000	0.5518	0.5518	1.0000e-005	0.0000	0.5521
<b>Total</b>	<b>2.8000e-004</b>	<b>1.9000e-004</b>	<b>2.0600e-003</b>	<b>1.0000e-005</b>	<b>6.6000e-004</b>	<b>0.0000</b>	<b>6.6000e-004</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>0.5518</b>	<b>0.5518</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.5521</b>

**3.6 Demolition - 2020****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					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8800e-003	0.0244	0.0270	4.0000e-005		1.4900e-003	1.4900e-003		1.4500e-003	1.4500e-003	0.0000	3.7115	3.7115	5.0000e-004	0.0000	3.7240
<b>Total</b>	<b>2.8800e-003</b>	<b>0.0244</b>	<b>0.0270</b>	<b>4.0000e-005</b>	<b>2.7000e-004</b>	<b>1.4900e-003</b>	<b>1.7600e-003</b>	<b>4.0000e-005</b>	<b>1.4500e-003</b>	<b>1.4900e-003</b>	<b>0.0000</b>	<b>3.7115</b>	<b>3.7115</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>3.7240</b>

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**3.6 Demolition - 2020****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	1.0000e-005	3.6000e-004	5.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1088	0.1088	1.0000e-005	0.0000	0.1089
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	1.1000e-004	8.0000e-005	8.6000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2299	0.2299	1.0000e-005	0.0000	0.2300
<b>Total</b>	<b>1.2000e-004</b>	<b>4.4000e-004</b>	<b>9.1000e-004</b>	<b>0.0000</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>3.1000e-004</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.3387</b>	<b>0.3387</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.3390</b>

**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					
Fugitive Dust					1.2000e-004	0.0000	1.2000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8800e-003	0.0244	0.0270	4.0000e-005		1.4900e-003	1.4900e-003		1.4500e-003	1.4500e-003	0.0000	3.7115	3.7115	5.0000e-004	0.0000	3.7240
<b>Total</b>	<b>2.8800e-003</b>	<b>0.0244</b>	<b>0.0270</b>	<b>4.0000e-005</b>	<b>1.2000e-004</b>	<b>1.4900e-003</b>	<b>1.6100e-003</b>	<b>2.0000e-005</b>	<b>1.4500e-003</b>	<b>1.4700e-003</b>	<b>0.0000</b>	<b>3.7115</b>	<b>3.7115</b>	<b>5.0000e-004</b>	<b>0.0000</b>	<b>3.7240</b>

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**3.6 Demolition - 2020****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	1.0000e-005	3.6000e-004	5.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1088	0.1088	1.0000e-005	0.0000	0.1089
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	1.1000e-004	8.0000e-005	8.6000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2299	0.2299	1.0000e-005	0.0000	0.2300
<b>Total</b>	<b>1.2000e-004</b>	<b>4.4000e-004</b>	<b>9.1000e-004</b>	<b>0.0000</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>3.1000e-004</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>8.0000e-005</b>	<b>0.0000</b>	<b>0.3387</b>	<b>0.3387</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.3390</b>

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

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

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

## 4.2 Trip Summary Information

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	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## 5.0 Energy Detail

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Historical Energy Use: N

Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

## 5.1 Mitigation Measures Energy

[illegible]

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

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

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

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

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

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

**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	tons/yr										MT/yr					
Mitigated	0.1127	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	0.1127	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



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**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	0.1127					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
<b>Total</b>	<b>0.1127</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

**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	0.1127					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
<b>Total</b>	<b>0.1127</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

**7.0 Water Detail**

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**7.1 Mitigation Measures Water**

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

**7.2 Water by Land Use****Unmitigated**

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

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Annual

**10.0 Stationary Equipment**

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**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**

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## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**Diamond Regional Sewer Lift Station Construction**  
**Riverside-South Coast County, Winter****1.0 Project Characteristics**

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**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

**1.2 Other Project Characteristics**

Urbanization	Urban	Wind Speed (m/s)	2.4	Precipitation Freq (Days)	28
Climate Zone	10			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

**1.3 User Entered Comments & Non-Default Data**

Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase - Estimated construction schedule.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Off-road Equipment - Anticipated construction equipment.

Trips and VMT - 1,700 CY yards of export at 16 CY per load.

Demolition -

Grading -

Vehicle Trips -

Area Coating - Construction emissions only.

Construction Off-road Equipment Mitigation -

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	15600	0
tblAreaCoating	Area_Nonresidential_Interior	46800	0
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	10
tblConstructionPhase	NumDays	0.00	390.00
tblConstructionPhase	NumDays	0.00	10.00
tblConstructionPhase	NumDays	0.00	370.00
tblConstructionPhase	NumDays	0.00	15.00
tblGrading	MaterialExported	0.00	1,700.00
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblTripsAndVMT	HaulingTripNumber	213.00	106.00

## 2.0 Emissions Summary

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Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

## 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					
2019	3.4318	28.5788	26.8834	0.0516	0.3678	1.5080	1.8758	0.0981	1.4399	1.5380	0.0000	4,969.6773	4,969.6773	1.0859	0.0000	4,996.8235
2020	3.1310	26.2908	26.5408	0.0515	0.3641	1.3251	1.6892	0.0972	1.2647	1.3619	0.0000	4,899.1334	4,899.1334	1.0683	0.0000	4,925.8416
Maximum	3.4318	28.5788	26.8834	0.0516	0.3678	1.5080	1.8758	0.0981	1.4399	1.5380	0.0000	4,969.6773	4,969.6773	1.0859	0.0000	4,996.8235

### 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					
2019	3.4318	28.5788	26.8834	0.0516	0.3675	1.5080	1.8755	0.0981	1.4399	1.5380	0.0000	4,969.6773	4,969.6773	1.0859	0.0000	4,996.8235
2020	3.1310	26.2908	26.5408	0.0515	0.3638	1.3251	1.6889	0.0972	1.2647	1.3619	0.0000	4,899.1334	4,899.1334	1.0683	0.0000	4,925.8416
Maximum	3.4318	28.5788	26.8834	0.0516	0.3675	1.5080	1.8755	0.0981	1.4399	1.5380	0.0000	4,969.6773	4,969.6773	1.0859	0.0000	4,996.8235

[illegible]

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6178	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
<b>Total</b>	<b>0.6178</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.3000e-004</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6178	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
<b>Total</b>	<b>0.6178</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.3000e-004</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

	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	Pipeline Trenching	Trenching	6/3/2019	11/6/2020	5	375	
2	Building Construction	Building Construction	6/3/2019	11/27/2020	5	390	
3	Pipeline Installation and Backfill	Grading	6/17/2019	11/13/2020	5	370	
4	Repaving	Paving	11/16/2020	12/4/2020	5	15	
5	Demolition	Demolition	11/30/2020	12/11/2020	5	10	

**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**

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Pipeline Trenching	Bore/Drill Rigs	1	8.00	221	0.50
Pipeline Trenching	Concrete/Industrial Saws	1	8.00	81	0.73
Pipeline Trenching	Excavators	1	8.00	158	0.38
Pipeline Installation and Backfill	Concrete/Industrial Saws	0	8.00	81	0.73
Pipeline Installation and Backfill	Excavators	1	8.00	158	0.38
Pipeline Installation and Backfill	Rubber Tired Dozers	0	1.00	247	0.40
Pipeline Installation and Backfill	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Pipeline Installation and Backfill	Welders	1	8.00	46	0.45
Repaving	Cement and Mortar Mixers	0	6.00	9	0.56
Repaving	Pavers	1	7.00	130	0.42
Repaving	Paving Equipment	1	7.00	132	0.36
Repaving	Rollers	1	7.00	80	0.38
Repaving	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	0	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37

Trips and VMT

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	5	13.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Trenching	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Pipeline Installation and Backfill	3	8.00	0.00	106.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Repaving	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	2	5.00	0.00	3.00	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

**3.2 Pipeline Trenching - 2019****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	1.0021	9.9622	9.0324	0.0208		0.4635	0.4635		0.4447	0.4447		2,031.0512	2,031.0512	0.4968		2,043.4713
<b>Total</b>	<b>1.0021</b>	<b>9.9622</b>	<b>9.0324</b>	<b>0.0208</b>		<b>0.4635</b>	<b>0.4635</b>		<b>0.4447</b>	<b>0.4447</b>		<b>2,031.0512</b>	<b>2,031.0512</b>	<b>0.4968</b>		<b>2,043.4713</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.2 Pipeline Trenching - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
<b>Total</b>	<b>0.0430</b>	<b>0.0280</b>	<b>0.2880</b>	<b>8.2000e-004</b>	<b>0.0894</b>	<b>5.5000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>81.6414</b>	<b>81.6414</b>	<b>2.2200e-003</b>		<b>81.6968</b>

**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	1.0021	9.9622	9.0324	0.0208		0.4635	0.4635		0.4447	0.4447	0.0000	2,031.0512	2,031.0512	0.4968		2,043.4713
<b>Total</b>	<b>1.0021</b>	<b>9.9622</b>	<b>9.0324</b>	<b>0.0208</b>		<b>0.4635</b>	<b>0.4635</b>		<b>0.4447</b>	<b>0.4447</b>	<b>0.0000</b>	<b>2,031.0512</b>	<b>2,031.0512</b>	<b>0.4968</b>		<b>2,043.4713</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.2 Pipeline Trenching - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
<b>Total</b>	<b>0.0430</b>	<b>0.0280</b>	<b>0.2880</b>	<b>8.2000e-004</b>	<b>0.0894</b>	<b>5.5000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.1000e-004</b>	<b>0.0242</b>		<b>81.6414</b>	<b>81.6414</b>	<b>2.2200e-003</b>		<b>81.6968</b>

**3.2 Pipeline Trenching - 2020****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	0.9407	9.2335	9.0351	0.0208		0.4165	0.4165		0.3990	0.3990		2,002.5899	2,002.5899	0.4935		2,014.9285
<b>Total</b>	<b>0.9407</b>	<b>9.2335</b>	<b>9.0351</b>	<b>0.0208</b>		<b>0.4165</b>	<b>0.4165</b>		<b>0.3990</b>	<b>0.3990</b>		<b>2,002.5899</b>	<b>2,002.5899</b>	<b>0.4935</b>		<b>2,014.9285</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.2 Pipeline Trenching - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0399</b>	<b>0.0249</b>	<b>0.2609</b>	<b>7.9000e-004</b>	<b>0.0894</b>	<b>5.4000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.0000e-004</b>	<b>0.0242</b>		<b>79.0589</b>	<b>79.0589</b>	<b>1.9600e-003</b>		<b>79.1080</b>

**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	0.9407	9.2335	9.0351	0.0208		0.4165	0.4165		0.3990	0.3990	0.0000	2,002.5899	2,002.5899	0.4935		2,014.9285
<b>Total</b>	<b>0.9407</b>	<b>9.2335</b>	<b>9.0351</b>	<b>0.0208</b>		<b>0.4165</b>	<b>0.4165</b>		<b>0.3990</b>	<b>0.3990</b>	<b>0.0000</b>	<b>2,002.5899</b>	<b>2,002.5899</b>	<b>0.4935</b>		<b>2,014.9285</b>



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.2 Pipeline Trenching - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0399</b>	<b>0.0249</b>	<b>0.2609</b>	<b>7.9000e-004</b>	<b>0.0894</b>	<b>5.4000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.0000e-004</b>	<b>0.0242</b>		<b>79.0589</b>	<b>79.0589</b>	<b>1.9600e-003</b>		<b>79.1080</b>

**3.3 Building Construction - 2019****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	1.4340	11.8143	9.8751	0.0163		0.6919	0.6919		0.6626	0.6626		1,537.1498	1,537.1498	0.2977		1,544.5928
<b>Total</b>	<b>1.4340</b>	<b>11.8143</b>	<b>9.8751</b>	<b>0.0163</b>		<b>0.6919</b>	<b>0.6919</b>		<b>0.6626</b>	<b>0.6626</b>		<b>1,537.1498</b>	<b>1,537.1498</b>	<b>0.2977</b>		<b>1,544.5928</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0175	0.5679	0.1240	1.2700e-003	0.0320	4.3800e-003	0.0364	9.2200e-003	4.1900e-003	0.0134		133.4693	133.4693	0.0123		133.7774
Worker	0.0699	0.0455	0.4681	1.3300e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		132.6672	132.6672	3.6000e-003		132.7572
<b>Total</b>	<b>0.0874</b>	<b>0.6133</b>	<b>0.5921</b>	<b>2.6000e-003</b>	<b>0.1773</b>	<b>5.2800e-003</b>	<b>0.1826</b>	<b>0.0478</b>	<b>5.0200e-003</b>	<b>0.0528</b>		<b>266.1366</b>	<b>266.1366</b>	<b>0.0159</b>		<b>266.5347</b>

**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	1.4340	11.8143	9.8751	0.0163		0.6919	0.6919		0.6626	0.6626	0.0000	1,537.1498	1,537.1498	0.2977		1,544.5928
<b>Total</b>	<b>1.4340</b>	<b>11.8143</b>	<b>9.8751</b>	<b>0.0163</b>		<b>0.6919</b>	<b>0.6919</b>		<b>0.6626</b>	<b>0.6626</b>	<b>0.0000</b>	<b>1,537.1498</b>	<b>1,537.1498</b>	<b>0.2977</b>		<b>1,544.5928</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0175	0.5679	0.1240	1.2700e-003	0.0320	4.3800e-003	0.0364	9.2200e-003	4.1900e-003	0.0134		133.4693	133.4693	0.0123		133.7774
Worker	0.0699	0.0455	0.4681	1.3300e-003	0.1453	9.0000e-004	0.1462	0.0385	8.3000e-004	0.0394		132.6672	132.6672	3.6000e-003		132.7572
<b>Total</b>	<b>0.0874</b>	<b>0.6133</b>	<b>0.5921</b>	<b>2.6000e-003</b>	<b>0.1773</b>	<b>5.2800e-003</b>	<b>0.1826</b>	<b>0.0478</b>	<b>5.0200e-003</b>	<b>0.0528</b>		<b>266.1366</b>	<b>266.1366</b>	<b>0.0159</b>		<b>266.5347</b>

**3.3 Building Construction - 2020****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	1.2854	10.8240	9.6951	0.0163		0.5999	0.5999		0.5745	0.5745		1,521.6987	1,521.6987	0.2893		1,528.9311
<b>Total</b>	<b>1.2854</b>	<b>10.8240</b>	<b>9.6951</b>	<b>0.0163</b>		<b>0.5999</b>	<b>0.5999</b>		<b>0.5745</b>	<b>0.5745</b>		<b>1,521.6987</b>	<b>1,521.6987</b>	<b>0.2893</b>		<b>1,528.9311</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0147	0.5118	0.1102	1.2600e-003	0.0320	2.9600e-003	0.0350	9.2200e-003	2.8300e-003	0.0121		132.5214	132.5214	0.0115		132.8087
Worker	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504
<b>Total</b>	<b>0.0795</b>	<b>0.5522</b>	<b>0.5342</b>	<b>2.5500e-003</b>	<b>0.1773</b>	<b>3.8400e-003</b>	<b>0.1812</b>	<b>0.0478</b>	<b>3.6400e-003</b>	<b>0.0514</b>		<b>260.9920</b>	<b>260.9920</b>	<b>0.0147</b>		<b>261.3591</b>

**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	1.2854	10.8240	9.6951	0.0163		0.5999	0.5999		0.5745	0.5745	0.0000	1,521.6987	1,521.6987	0.2893		1,528.9311
<b>Total</b>	<b>1.2854</b>	<b>10.8240</b>	<b>9.6951</b>	<b>0.0163</b>		<b>0.5999</b>	<b>0.5999</b>		<b>0.5745</b>	<b>0.5745</b>	<b>0.0000</b>	<b>1,521.6987</b>	<b>1,521.6987</b>	<b>0.2893</b>		<b>1,528.9311</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.3 Building Construction - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0147	0.5118	0.1102	1.2600e-003	0.0320	2.9600e-003	0.0350	9.2200e-003	2.8300e-003	0.0121		132.5214	132.5214	0.0115		132.8087
Worker	0.0648	0.0405	0.4240	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0394		128.4707	128.4707	3.1900e-003		128.5504
<b>Total</b>	<b>0.0795</b>	<b>0.5522</b>	<b>0.5342</b>	<b>2.5500e-003</b>	<b>0.1773</b>	<b>3.8400e-003</b>	<b>0.1812</b>	<b>0.0478</b>	<b>3.6400e-003</b>	<b>0.0514</b>		<b>260.9920</b>	<b>260.9920</b>	<b>0.0147</b>		<b>261.3591</b>

**3.4 Pipeline Installation and Backfill - 2019****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					
Fugitive Dust					5.8000e-004	0.0000	5.8000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.8205	6.0592	6.7974	0.0101		0.3460	0.3460		0.3263	0.3263		949.2597	949.2597	0.2694		955.9941
<b>Total</b>	<b>0.8205</b>	<b>6.0592</b>	<b>6.7974</b>	<b>0.0101</b>	<b>5.8000e-004</b>	<b>0.3460</b>	<b>0.3466</b>	<b>9.0000e-005</b>	<b>0.3263</b>	<b>0.3264</b>		<b>949.2597</b>	<b>949.2597</b>	<b>0.2694</b>		<b>955.9941</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.4 Pipeline Installation and Backfill - 2019****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	1.6900e-003	0.0739	0.0104	2.1000e-004	0.0111	2.7000e-004	0.0114	2.8700e-003	2.6000e-004	3.1200e-003		22.7973	22.7973	1.5900e-003		22.8371
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
<b>Total</b>	<b>0.0447</b>	<b>0.1019</b>	<b>0.2984</b>	<b>1.0300e-003</b>	<b>0.1005</b>	<b>8.2000e-004</b>	<b>0.1013</b>	<b>0.0266</b>	<b>7.7000e-004</b>	<b>0.0273</b>		<b>104.4387</b>	<b>104.4387</b>	<b>3.8100e-003</b>		<b>104.5339</b>

**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					
Fugitive Dust					2.6000e-004	0.0000	2.6000e-004	4.0000e-005	0.0000	4.0000e-005			0.0000			0.0000
Off-Road	0.8205	6.0592	6.7974	0.0101		0.3460	0.3460		0.3263	0.3263	0.0000	949.2597	949.2597	0.2694		955.9941
<b>Total</b>	<b>0.8205</b>	<b>6.0592</b>	<b>6.7974</b>	<b>0.0101</b>	<b>2.6000e-004</b>	<b>0.3460</b>	<b>0.3463</b>	<b>4.0000e-005</b>	<b>0.3263</b>	<b>0.3264</b>	<b>0.0000</b>	<b>949.2597</b>	<b>949.2597</b>	<b>0.2694</b>		<b>955.9941</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.4 Pipeline Installation and Backfill - 2019****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	1.6900e-003	0.0739	0.0104	2.1000e-004	0.0111	2.7000e-004	0.0114	2.8700e-003	2.6000e-004	3.1200e-003		22.7973	22.7973	1.5900e-003		22.8371
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
<b>Total</b>	<b>0.0447</b>	<b>0.1019</b>	<b>0.2984</b>	<b>1.0300e-003</b>	<b>0.1005</b>	<b>8.2000e-004</b>	<b>0.1013</b>	<b>0.0266</b>	<b>7.7000e-004</b>	<b>0.0273</b>		<b>104.4387</b>	<b>104.4387</b>	<b>3.8100e-003</b>		<b>104.5339</b>

**3.4 Pipeline Installation and Backfill - 2020****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					
Fugitive Dust					5.8000e-004	0.0000	5.8000e-004	9.0000e-005	0.0000	9.0000e-005			0.0000			0.0000
Off-Road	0.7442	5.5628	6.7446	0.0101		0.3036	0.3036		0.2863	0.2863		933.1725	933.1725	0.2654		939.8068
<b>Total</b>	<b>0.7442</b>	<b>5.5628</b>	<b>6.7446</b>	<b>0.0101</b>	<b>5.8000e-004</b>	<b>0.3036</b>	<b>0.3042</b>	<b>9.0000e-005</b>	<b>0.2863</b>	<b>0.2864</b>		<b>933.1725</b>	<b>933.1725</b>	<b>0.2654</b>		<b>939.8068</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.4 Pipeline Installation and Backfill - 2020****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	1.5500e-003	0.0684	9.8000e-003	2.1000e-004	7.3700e-003	2.2000e-004	7.5900e-003	1.9500e-003	2.1000e-004	2.1600e-003		22.5625	22.5625	1.5100e-003		22.6002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0414</b>	<b>0.0933</b>	<b>0.2707</b>	<b>1.0000e-003</b>	<b>0.0968</b>	<b>7.6000e-004</b>	<b>0.0976</b>	<b>0.0257</b>	<b>7.1000e-004</b>	<b>0.0264</b>		<b>101.6213</b>	<b>101.6213</b>	<b>3.4700e-003</b>		<b>101.7082</b>

**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					
Fugitive Dust					2.6000e-004	0.0000	2.6000e-004	4.0000e-005	0.0000	4.0000e-005			0.0000			0.0000
Off-Road	0.7442	5.5628	6.7446	0.0101		0.3036	0.3036		0.2863	0.2863	0.0000	933.1725	933.1725	0.2654		939.8068
<b>Total</b>	<b>0.7442</b>	<b>5.5628</b>	<b>6.7446</b>	<b>0.0101</b>	<b>2.6000e-004</b>	<b>0.3036</b>	<b>0.3039</b>	<b>4.0000e-005</b>	<b>0.2863</b>	<b>0.2863</b>	<b>0.0000</b>	<b>933.1725</b>	<b>933.1725</b>	<b>0.2654</b>		<b>939.8068</b>



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.4 Pipeline Installation and Backfill - 2020****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	1.5500e-003	0.0684	9.8000e-003	2.1000e-004	7.3700e-003	2.2000e-004	7.5900e-003	1.9500e-003	2.1000e-004	2.1600e-003		22.5625	22.5625	1.5100e-003		22.6002
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0414</b>	<b>0.0933</b>	<b>0.2707</b>	<b>1.0000e-003</b>	<b>0.0968</b>	<b>7.6000e-004</b>	<b>0.0976</b>	<b>0.0257</b>	<b>7.1000e-004</b>	<b>0.0264</b>		<b>101.6213</b>	<b>101.6213</b>	<b>3.4700e-003</b>		<b>101.7082</b>

**3.5 Repaving - 2020****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	0.5935	6.1537	6.4103	9.9700e-003		0.3294	0.3294		0.3030	0.3030		965.8834	965.8834	0.3124		973.6930
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.5935</b>	<b>6.1537</b>	<b>6.4103</b>	<b>9.9700e-003</b>		<b>0.3294</b>	<b>0.3294</b>		<b>0.3030</b>	<b>0.3030</b>		<b>965.8834</b>	<b>965.8834</b>	<b>0.3124</b>		<b>973.6930</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.5 Repaving - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0399</b>	<b>0.0249</b>	<b>0.2609</b>	<b>7.9000e-004</b>	<b>0.0894</b>	<b>5.4000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.0000e-004</b>	<b>0.0242</b>		<b>79.0589</b>	<b>79.0589</b>	<b>1.9600e-003</b>		<b>79.1080</b>

**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	0.5935	6.1537	6.4103	9.9700e-003		0.3294	0.3294		0.3030	0.3030	0.0000	965.8834	965.8834	0.3124		973.6930
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.5935</b>	<b>6.1537</b>	<b>6.4103</b>	<b>9.9700e-003</b>		<b>0.3294</b>	<b>0.3294</b>		<b>0.3030</b>	<b>0.3030</b>	<b>0.0000</b>	<b>965.8834</b>	<b>965.8834</b>	<b>0.3124</b>		<b>973.6930</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.5 Repaving - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
<b>Total</b>	<b>0.0399</b>	<b>0.0249</b>	<b>0.2609</b>	<b>7.9000e-004</b>	<b>0.0894</b>	<b>5.4000e-004</b>	<b>0.0900</b>	<b>0.0237</b>	<b>5.0000e-004</b>	<b>0.0242</b>		<b>79.0589</b>	<b>79.0589</b>	<b>1.9600e-003</b>		<b>79.1080</b>

**3.6 Demolition - 2020****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					
Fugitive Dust					0.0545	0.0000	0.0545	8.2500e-003	0.0000	8.2500e-003			0.0000			0.0000
Off-Road	0.5753	4.8775	5.3963	8.5900e-003		0.2980	0.2980		0.2900	0.2900		818.2410	818.2410	0.1105		821.0035
<b>Total</b>	<b>0.5753</b>	<b>4.8775</b>	<b>5.3963</b>	<b>8.5900e-003</b>	<b>0.0545</b>	<b>0.2980</b>	<b>0.3525</b>	<b>8.2500e-003</b>	<b>0.2900</b>	<b>0.2983</b>		<b>818.2410</b>	<b>818.2410</b>	<b>0.1105</b>		<b>821.0035</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.6 Demolition - 2020****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	1.6200e-003	0.0717	0.0103	2.2000e-004	5.2500e-003	2.3000e-004	5.4800e-003	1.4400e-003	2.2000e-004	1.6600e-003		23.6267	23.6267	1.5800e-003		23.6663
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0249	0.0156	0.1631	5.0000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		49.4118	49.4118	1.2300e-003		49.4425
<b>Total</b>	<b>0.0265</b>	<b>0.0872</b>	<b>0.1734</b>	<b>7.2000e-004</b>	<b>0.0611</b>	<b>5.7000e-004</b>	<b>0.0617</b>	<b>0.0163</b>	<b>5.3000e-004</b>	<b>0.0168</b>		<b>73.0385</b>	<b>73.0385</b>	<b>2.8100e-003</b>		<b>73.1087</b>

**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					
Fugitive Dust					0.0245	0.0000	0.0245	3.7100e-003	0.0000	3.7100e-003			0.0000			0.0000
Off-Road	0.5753	4.8775	5.3963	8.5900e-003		0.2980	0.2980		0.2900	0.2900	0.0000	818.2410	818.2410	0.1105		821.0035
<b>Total</b>	<b>0.5753</b>	<b>4.8775</b>	<b>5.3963</b>	<b>8.5900e-003</b>	<b>0.0245</b>	<b>0.2980</b>	<b>0.3225</b>	<b>3.7100e-003</b>	<b>0.2900</b>	<b>0.2937</b>	<b>0.0000</b>	<b>818.2410</b>	<b>818.2410</b>	<b>0.1105</b>		<b>821.0035</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**3.6 Demolition - 2020****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	1.6200e-003	0.0717	0.0103	2.2000e-004	5.2500e-003	2.3000e-004	5.4800e-003	1.4400e-003	2.2000e-004	1.6600e-003		23.6267	23.6267	1.5800e-003		23.6663
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0249	0.0156	0.1631	5.0000e-004	0.0559	3.4000e-004	0.0562	0.0148	3.1000e-004	0.0151		49.4118	49.4118	1.2300e-003		49.4425
<b>Total</b>	<b>0.0265</b>	<b>0.0872</b>	<b>0.1734</b>	<b>7.2000e-004</b>	<b>0.0611</b>	<b>5.7000e-004</b>	<b>0.0617</b>	<b>0.0163</b>	<b>5.3000e-004</b>	<b>0.0168</b>		<b>73.0385</b>	<b>73.0385</b>	<b>2.8100e-003</b>		<b>73.1087</b>

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

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

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

## 4.2 Trip Summary Information

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

## 4.3 Trip Type Information

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

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## 5.0 Energy Detail

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Historical Energy Use: N

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.6178	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	0.6178	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



## Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

**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	0.6178					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
<b>Total</b>	<b>0.6178</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**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	0.6178					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
<b>Total</b>	<b>0.6178</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**7.0 Water Detail**

Diamond Regional Sewer Lift Station Construction - Riverside-South Coast County, Winter

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**7.1 Mitigation Measures Water****8.0 Waste Detail**

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**8.1 Mitigation Measures Waste****9.0 Operational Offroad**

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

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**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**

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## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

## Diamond Regional Sewer Lift Station Operational Phase 1

### Riverside-South Coast County, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity usage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	30.98
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

**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	0.1272	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	307.9718	307.9718	0.0127	2.6300e-003	309.0736
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>308.5352</b>	<b>308.5352</b>	<b>0.0128</b>	<b>2.6300e-003</b>	<b>309.6380</b>

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1272	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	307.9718	307.9718	0.0127	2.6300e-003	309.0736
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>308.5352</b>	<b>308.5352</b>	<b>0.0128</b>	<b>2.6300e-003</b>	<b>309.6380</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0  
(Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**3.2 Architectural Coating - 2019****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					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

## 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	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Unmitigated	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

[illegible]

**Mitigated**

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	966576	307.9718	0.0127	2.6300e-003	309.0736
<b>Total</b>		<b>307.9718</b>	<b>0.0127</b>	<b>2.6300e-003</b>	<b>309.0736</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	966576	307.9718	0.0127	2.6300e-003	309.0736
<b>Total</b>		<b>307.9718</b>	<b>0.0127</b>	<b>2.6300e-003</b>	<b>309.0736</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1272	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	0.1272	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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**



## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

	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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Annual

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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**10.1 Stationary Sources****Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
<b>Total</b>	<b>3.7000e-004</b>	<b>1.0300e-003</b>	<b>1.3400e-003</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1714</b>	<b>0.1714</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.1720</b>

**11.0 Vegetation**

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

## Diamond Regional Sewer Lift Station Operational Phase 1

### Riverside-South Coast County, Winter

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MWhr)</b>	702.44	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity useage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	30.98
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>



## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**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	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.4

### 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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

### 3.2 Architectural Coating - 2019

### Unmitigated Construction Off-Site

[illegible]

### Mitigated Construction On-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**3.2 Architectural Coating - 2019****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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Unmitigated	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## 5.0 Energy Detail

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Historical Energy Use: N

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.6970	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	0.6970	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

## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**7.0 Water Detail**



## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

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**7.1 Mitigation Measures Water**

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**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**9.0 Operational Offroad**

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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
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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## Diamond Regional Sewer Lift Station Operational Phase 1 - Riverside-South Coast County, Winter

**10.1 Stationary Sources****Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (100 - 175 HP)	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.0615</b>	<b>0.1720</b>	<b>0.2233</b>	<b>3.0000e-004</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>31.4818</b>	<b>31.4818</b>	<b>4.4100e-003</b>		<b>31.5921</b>

**11.0 Vegetation**

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

## Diamond Regional Sewer Lift Station Operational Phase 2

### Riverside-South Coast County, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity usage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	56.79
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

**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	0.1272	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	564.5279	564.5279	0.0233	4.8200e-003	566.5475
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>565.0912</b>	<b>565.0912</b>	<b>0.0234</b>	<b>4.8200e-003</b>	<b>567.1119</b>

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1272	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	564.5279	564.5279	0.0233	4.8200e-003	566.5475
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>565.0912</b>	<b>565.0912</b>	<b>0.0234</b>	<b>4.8200e-003</b>	<b>567.1119</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0  
(Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**3.2 Architectural Coating - 2019****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					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

## 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	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Unmitigated	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

## 5.2 Energy by Land Use - NaturalGas

**Unmitigated**

[illegible]

**Mitigated**

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	1.77178e+006	564.5279	0.0233	4.8200e-003	566.5475
<b>Total</b>		<b>564.5279</b>	<b>0.0233</b>	<b>4.8200e-003</b>	<b>566.5475</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	1.77178e+006	564.5279	0.0233	4.8200e-003	566.5475
<b>Total</b>		<b>564.5279</b>	<b>0.0233</b>	<b>4.8200e-003</b>	<b>566.5475</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1272	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	0.1272	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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**



## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

	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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**8.0 Waste Detail**

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**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

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Annual

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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**10.1 Stationary Sources****Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
<b>Total</b>	<b>3.7000e-004</b>	<b>1.0300e-003</b>	<b>1.3400e-003</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1714</b>	<b>0.1714</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.1720</b>

**11.0 Vegetation**

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

## Diamond Regional Sewer Lift Station Operational Phase 2

### Riverside-South Coast County, Winter

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity useage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	56.79
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>



## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**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	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.4

### 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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

### 3.2 Architectural Coating - 2019

### Unmitigated Construction Off-Site

[illegible]

### Mitigated Construction On-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**3.2 Architectural Coating - 2019****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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Unmitigated	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## 5.0 Energy Detail

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Historical Energy Use: N

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.6970	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	0.6970	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

## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**7.0 Water Detail**



## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

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**7.1 Mitigation Measures Water**

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**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**9.0 Operational Offroad**

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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
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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## Diamond Regional Sewer Lift Station Operational Phase 2 - Riverside-South Coast County, Winter

**10.1 Stationary Sources****Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (100 - 175 HP)	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.0615</b>	<b>0.1720</b>	<b>0.2233</b>	<b>3.0000e-004</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>31.4818</b>	<b>31.4818</b>	<b>4.4100e-003</b>		<b>31.5921</b>

**11.0 Vegetation**

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

## Diamond Regional Sewer Lift Station Operational Phase 3 Riverside-South Coast County, Annual

### 1.0 Project Characteristics

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#### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

#### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

#### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity usage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	82.60
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

## 2.1 Overall Construction

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

**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	0.1272	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	821.1257	821.1257	0.0339	7.0100e-003	824.0633
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>821.6890</b>	<b>821.6890</b>	<b>0.0339</b>	<b>7.0100e-003</b>	<b>824.6276</b>

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**2.2 Overall Operational****Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1272	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	821.1257	821.1257	0.0339	7.0100e-003	824.0633
Mobile	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Stationary	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
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
<b>Total</b>	<b>0.1276</b>	<b>1.6100e-003</b>	<b>2.3400e-003</b>	<b>0.0000</b>	<b>3.3000e-004</b>	<b>5.0000e-005</b>	<b>3.8000e-004</b>	<b>9.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>821.6890</b>	<b>821.6890</b>	<b>0.0339</b>	<b>7.0100e-003</b>	<b>824.6276</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**Acres of Grading (Site Preparation Phase): 0****Acres of Grading (Grading Phase): 0****Acres of Paving: 0****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0  
(Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48

**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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**



## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

### Unmitigated Construction Off-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**3.2 Architectural Coating - 2019****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					
Archit. Coating	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**4.0 Operational Detail - Mobile**

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

## 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	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924
Unmitigated	6.0000e-005	5.8000e-004	9.9000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.3920	0.3920	2.0000e-005	0.0000	0.3924

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

**Mitigated**

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	2.57712e+006	821.1257	0.0339	7.0100e-003	824.0633
<b>Total</b>		<b>821.1257</b>	<b>0.0339</b>	<b>7.0100e-003</b>	<b>824.0633</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	2.57712e+006	821.1257	0.0339	7.0100e-003	824.0633
<b>Total</b>		<b>821.1257</b>	<b>0.0339</b>	<b>7.0100e-003</b>	<b>824.0633</b>

**6.0 Area Detail****6.1 Mitigation Measures Area**

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1272	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	0.1272	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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**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	0.0145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1127					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
<b>Total</b>	<b>0.1272</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.0000</b>	<b>3.0000e-005</b>

**7.0 Water Detail****7.1 Mitigation Measures Water**



## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

	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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Annual

**10.0 Stationary Equipment****Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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**10.1 Stationary Sources****Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (100 - 175 HP)	3.7000e-004	1.0300e-003	1.3400e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.1714	0.1714	2.0000e-005	0.0000	0.1720
<b>Total</b>	<b>3.7000e-004</b>	<b>1.0300e-003</b>	<b>1.3400e-003</b>	<b>0.0000</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>		<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>0.0000</b>	<b>0.1714</b>	<b>0.1714</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.1720</b>

**11.0 Vegetation**

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

## Diamond Regional Sewer Lift Station Operational Phase 3

### Riverside-South Coast County, Winter

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.00	31,200.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.4	<b>Precipitation Freq (Days)</b>	28
<b>Climate Zone</b>	10			<b>Operational Year</b>	2020
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	702.44	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Square footage estimated from trenching area and lift station footprint.

Construction Phase -

Vehicle Trips - 1 weekly maintenance trip.

Energy Use - Estimated electricity useage.

Operational Off-Road Equipment -

Stationary Sources - Emergency Generators and Fire Pumps -

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblEnergyUse	T24E	0.00	82.60
tblLandUse	LandUseSquareFeet	0.00	31,200.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	150.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.25
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	3.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	0.20

## 2.0 Emissions Summary

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Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

## 2.1 Overall Construction (Maximum Daily Emission)

### Unmitigated Construction

[illegible]

### Mitigated Construction

[illegible][illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**2.2 Overall Operational****Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>



## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**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	lb/day										lb/day					
Area	0.6970	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Stationary	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.7590</b>	<b>0.1764</b>	<b>0.2307</b>	<b>3.3000e-004</b>	<b>2.5800e-003</b>	<b>9.0800e-003</b>	<b>0.0117</b>	<b>6.9000e-004</b>	<b>9.0800e-003</b>	<b>9.7700e-003</b>		<b>34.7407</b>	<b>34.7407</b>	<b>4.5500e-003</b>	<b>0.0000</b>	<b>34.8547</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**3.0 Construction Detail****Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	6/3/2019	6/2/2019	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 46,800; Non-Residential Outdoor: 15,600; Striped Parking Area: 0 (Architectural Coating – sqft)**

## OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.4

### 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
Architectural Coating	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

### 3.1 Mitigation Measures Construction

### 3.2 Architectural Coating - 2019

### Unmitigated Construction On-Site

[illegible]

Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

### 3.2 Architectural Coating - 2019

### Unmitigated Construction Off-Site

[illegible]

### Mitigated Construction On-Site

[illegible]

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**3.2 Architectural Coating - 2019****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	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
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

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

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

	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	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623
Unmitigated	4.8000e-004	4.3500e-003	7.3100e-003	3.0000e-005	2.5800e-003	3.0000e-005	2.6100e-003	6.9000e-004	3.0000e-005	7.2000e-004		3.2587	3.2587	1.4000e-004		3.2623

## 4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.20	0.00	0.00	863	863
Total	0.20	0.00	0.00	863	863

## 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	100.00	0.00	0.00	100	0	0

## 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

## 5.0 Energy Detail

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Historical Energy Use: N

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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	0.6970	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	0.6970	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

## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**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	0.0792					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.6178					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
<b>Total</b>	<b>0.6970</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>2.2000e-004</b>	<b>2.2000e-004</b>	<b>0.0000</b>		<b>2.3000e-004</b>

**7.0 Water Detail**



## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

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**7.1 Mitigation Measures Water**

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**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

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**9.0 Operational Offroad**

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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
Emergency Generator	1	0.25	3	150	0.73	Diesel

**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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## Diamond Regional Sewer Lift Station Operational Phase 3 - Riverside-South Coast County, Winter

**10.1 Stationary Sources****Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (100 - 175 HP)	0.0615	0.1720	0.2233	3.0000e-004		9.0500e-003	9.0500e-003		9.0500e-003	9.0500e-003		31.4818	31.4818	4.4100e-003		31.5921
<b>Total</b>	<b>0.0615</b>	<b>0.1720</b>	<b>0.2233</b>	<b>3.0000e-004</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>9.0500e-003</b>	<b>9.0500e-003</b>		<b>31.4818</b>	<b>31.4818</b>	<b>4.4100e-003</b>		<b>31.5921</b>

**11.0 Vegetation**

## Appendix B

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### Biological Resources Letter Report

January 18, 2019

EVM-01 Task 13

Mr. Jason Dafforn, PE  
Director of Engineering and Water Resources  
Elsinore Valley Municipal Water District  
31315 Chaney Street  
Lake Elsinore, CA 92530

Subject: Biological Resources Letter Report for the Diamond Regional Sewer Lift Station and  
Dual Force Mains Project

Dear Mr. Dafforn:

This letter presents the results of a biological resources technical study completed by HELIX Environmental Planning, Inc. (HELIX) for the Diamond Regional Sewer Lift Station and Dual Force Mains Project (project) located in the City of Lake Elsinore (City), Riverside County, California. The Elsinore Valley Municipal Water District (EVMWD; project applicant) proposes to replace the existing B-Series Interceptor sewer system, including two lift stations with new parallel 16-inch and 24-inch diameter force mains that would pump wastewater to a junction structure at the corner of East Lakeshore Drive and Elm Street.

This letter report is intended to summarize the existing biological resources within the site and provide an analysis of the proposed impacts in accordance with the California Environmental Quality Act (CEQA) and applicable federal, state, and local policy, including consistency with the adopted Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

## INTRODUCTION

### Project Location

The proposed project is generally located east of Lake Elsinore and approximately 0.7 mile west of Interstate (I-) 15, in the City of Lake Elsinore, in western Riverside County, California (Figure 1). The project site is situated in the unsectioned La Laguna land grant on the Lake Elsinore, California U.S. Geological Survey (USGS) quadrangle map (Figure 2). More specifically, the project site is located south of East Lakeshore Drive, along Elm Street in the north and along Diamond Circle in the southern portion of the proposed alignment, at 18523 Malaga Road (Figure 3). The impact site includes portions of Assessor Parcel Numbers 371-030-053, 371-030-052, 363-130-087, 373-210-030, 373-320-002, 373-320-003, 373-320-004, 373-320-005, 373-320-007, and City right-of-way for Elm Street and Malaga Road.

The project site is located within the Elsinore Area Plan of the MSHCP, within Criteria Cells 4743 and 4846 (Figure 4); however, the EVMWD is not a signatory to the MSHCP and is not subject to the provisions therein.

## **Project Description**

The proposed project would replace the existing B-Series Interceptor sewer system, including two lift stations (B1 and B2). The project would collect raw wastewater and then pump the sewage through parallel force mains to a junction structure at the corner of East Lakeshore Drive and Elm Street where it would discharge the sewage.

The construction of the Diamond Regional Sewer Lift Station and Dual Force Mains would include approximately 3,400 linear feet of dual force mains of 16-inch and 24-inch diameters. The proposed alignment would connect at the north end of the proposed lift station, head east and then north along Diamond Circle into Peter Lehr Drive, cross the San Jacinto River, continue along Elm Street, and proceed to the North Reach connection point at Elm Street and East Lakeshore Drive.

Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving affected portions of streets. In addition to trenching operations, microtunneling procedures would be used to install the pipeline where the proposed alignment crosses the San Jacinto River. Jack-and-bore procedures (also known as auger boring) may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore processes for this project would involve digging a pit on each side (an entrance and exit pit) with an excavator, and tunneling or boring under the channel or roadway from the entrance pit to the exit pit on the other side.

The pipeline trench is expected to be less than 10 feet wide and a minimum of 4 feet deep.

The proposed lift station would serve as a main wastewater lift station and would have the capability of pumping up to 19.9 million gallons per day (MGD). The anticipated initial average inflow would be 3.0 MGD with a peak hour inflow of 9.0 MGD. The project would consist of a new below grade sewage lift station with wet well, diesel generator, odor control system, chemical feed equipment, electrical building, grinding (pre-treatment) facility, pigging station, flow metering vault, and all associated site yard piping and site grading.

## **METHODS**

### **Pre-Survey Investigation**

The study area for this report is based on a 100-foot buffer from the proposed impact area/alignment. Prior to conducting field surveys, a thorough review of relevant maps, databases, and literature pertaining to biological resources known to occur within the project vicinity was performed. Recent and historical aerial imagery (Google 2017), topographic maps (USGS Elsinore Quadrangle), soils maps (Natural Resource Conservation Service [NRCS] 2017), and other maps of the study area and vicinity were acquired and reviewed to obtain updated information on the natural environmental setting.

In addition, a query of sensitive species and habitats databases was conducted, including the U.S. Fish and Wildlife Service (USFWS) Critical Habitat Portal (2017a), USFWS species records (USFWS 2017b),

California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB; CDFW 2017), and California Native Plant Society (CNPS) Electronic Inventory (California Native Plant Society [CNPS] 2017a). The USFWS' National Wetlands Inventory (NWI) was also reviewed (USFWS 2017c). Recorded locations of species, habitat types, wetlands, and other resources were mapped and overlaid onto aerial imagery using Geographic Information Systems (GIS). The MSHCP was also thoroughly reviewed for context and to identify regional conservation goals and objectives for the vicinity of the project site that might conflict with the project, although the EVMWD is not a signatory to the MSHCP and is not subject to the provisions therein.

## General Biological Survey

HELIX biologist Rob Hogenauer performed a general biological survey on May 3, 2017, which included 100 percent visual coverage of the study area and immediate vicinity (Table 1). An additional biological survey was conducted on November 30, 2018 to gather additional information on the project site to address a slight project alignment change. The general biological survey included a general inventory of existing conditions and focused primarily on verifying existing vegetation communities or habitat types, delineating and mapping potential jurisdictional waters and wetlands, assessing suitability for sensitive plant and animal species, and noting other sensitive biological resources that occur or have the potential to occur. Meandering pedestrian transects were performed throughout the site in order to obtain 100 percent visual coverage. Off-site areas were inspected by visual scans. Physical parameters assessed included vegetation and soil conditions, presence of indicator plant and animal species, slope, aspect, and hydrology.

**Table 1**  
**HELIX SURVEY INFORMATION**

Date	Personnel	Purpose	Time (Hours)	Weather Conditions
4/12/2017	Beth Ehsan	Burrowing owl	0619-0822	Sunny
4/24/2017	Rob Hogenauer	Least Bell's vireo	0650-0710	Cloudy
5/3/2017	Rob Hogenauer	General biological survey, jurisdictional delineation, rare plants	0630-1130	Mostly Sunny
5/5/2017	Rob Hogenauer	Least Bell's vireo	0630-0715	Sunny
5/9/2017	Rob Hogenauer	Burrowing owl	0620-0800	Mostly Sunny
5/15/2017	Rob Hogenauer	Least Bell's vireo	0700-0725	Cloudy
5/25/2017	Rob Hogenauer	Least Bell's vireo	0645-0725	Cloudy
6/4/2017	Rob Hogenauer	Burrowing owl	1805-1920	Sunny
6/6/2017	Rob Hogenauer	Least Bell's vireo	0630-0655	Cloudy
6/16/2017	Rob Hogenauer	Least Bell's vireo	0625-0700	Sunny
6/26/2017	Katie Bellon	Least Bell's vireo	0915-1000	Sunny
6/30/2017	Rob Hogenauer	Burrowing owl	0545-0700	Mostly Cloudy
7/7/2017	Rob Hogenauer	Least Bell's vireo	0750-0815	Sunny
11/30/2018	Rob Hogenauer	Update jurisdictional delineation and vegetation mapping	0930-1230	Partly Cloudy

Vegetation was mapped on 1"=200' scale aerial imagery with one-foot interval topographic contour lines. Vegetation community classifications follow Holland (1986) with additional classification assistance from the online Manual of California Vegetation (CNPS 2017b). Plant species observed or otherwise detected during biological surveys of the study area are included in Attachment A. Sensitive species recorded within a nine-quadrangle search area centered on the Lake Elsinore quadrangle were analyzed for potential to occur (Attachments B and C; status codes in Attachment D). Due to the variance of habitats and elevation within the large search area, an elevation range of 500 to 2,000 feet above mean sea level (AMSL) was used. A complete list was compiled and recorded, and locations were mapped and overlaid onto aerial imagery using GIS. Plant identifications were made in the field. Directed inspections of habitat were performed to locate target rare plant species known to occur on the site and/or in the region. Animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. Representative photographs of the site were taken and are included in Attachment E.

## Formal Jurisdictional Delineation

Mr. Hogenauer performed a formal jurisdictional delineation of the entire study area on May 3, 2017, concurrent with the general biological survey. Additional information for the delineation was collected on November 30, 2018. Prior to beginning fieldwork, aerial photographs (1"=100' scale), topographic maps (1"=100' scale), and NWI maps were reviewed to assist in determining the location of potential jurisdictional areas in the study area. The field delineation was conducted to identify and map potential water and wetland resources that could be subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to CWA Section 401 or State Porter-Cologne Water Quality Control Act, and CDFW jurisdiction pursuant to Sections 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.

Subsequent analysis of topographic elevations was performed in the office based on the elevation lines applicable to Lake Elsinore, as follows. The limit of USACE jurisdiction along Lake Elsinore is the 1,255-foot AMSL elevation line, according to an Approved Jurisdictional Determination issued by USACE for Lake Elsinore in 2007. The limit of CDFW jurisdiction along Lake Elsinore is the 1,265-foot AMSL elevation line, according to CDFW (personal communication, February 17, 2017). The RWQCB jurisdiction under CWA Section 401 coincides with USACE jurisdiction, and RWQCB jurisdiction under the State Porter-Cologne Water Quality Control Act coincides with CDFW. HELIX used elevation lines provided by the project applicant to map the 1,255- and 1,265-foot elevation lines.

## Burrowing Owl Surveys

Mr. Robert Hogenauer and HELIX biologist Ms. Beth Ehsan conducted a nesting season burrowing owl (*Athene cunicularia*) survey in 2017 (Table 1; HELIX 2017a). The four site visits were conducted between April 12 and June 30, 2017 in accordance with the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The habitat assessment covered the entire property, with the survey being conducted on the potential habitat in the project study area. Burrows with a diameter of at least three inches and with potential to support burrowing owls were mapped. HELIX surveyed transects no greater than 20 meters apart through potential owl habitat located on the property. In addition, a 500-foot buffer zone was surveyed on foot where accessible, with private property surveyed visually using binoculars from the

edge of the subject property where owl habitat bordered the property. The biologists walked slowly and methodically, closely checking the areas that met the basic requirements of owl habitat. The realigned portion of the pipeline is located within the 500-foot buffer that was surveyed.

### **Least Bell's Vireo Surveys**

Mr. Robert Hogenauer and HELIX biologist Ms. Katie Bellon conducted a least Bell's vireo (*Vireo bellii pusillus*) survey in 2017, which consisted of eight site visits conducted between April 24 and July 7, 2017 (Table 1; HELIX 2017b), in accordance with the current USFWS survey protocol (2001). The survey covered potential least Bell's vireo habitat preliminarily identified on and within 500 feet of the project site. The surveys were conducted on foot by walking within and along the periphery of potential habitat while listening for least Bell's vireo and viewing birds with the aid of binoculars. Binoculars were used when birds could not be readily identified by unaided eyesight or by sound; no recorded least Bell's vireo vocalizations were played. The survey route was arranged to ensure complete survey coverage of habitat with potential for occupancy by least Bell's vireo. The realigned portion of the pipeline is located within the 500-foot buffer that was surveyed.

### **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 used in this report follows The Jepson Manual for plants (Baldwin et al. 2012), Taggart (2012) for reptiles, American Ornithological Society (2017) for birds, and Bradley et al. (2014) for mammals.

## **RESULTS**

### **Existing Conditions**

#### **General Land Use**

General land uses within the study area include East Lakeshore Drive, Elm Street, Pete Lehr Drive, Diamond Circle, a parking area for Diamond Stadium, the San Jacinto River spillway to Lake Elsinore, vacant land, and the existing Back Basin lift station, as pictured in Attachment E. General land uses adjacent to the site include residential homes, vacant land, additional parking for the Diamond Stadium, and an active construction site.

#### **Disturbance**

The study area is substantially disturbed. There is a well-used walking trail that runs along the levee on the south side of the San Jacinto River toward Lake Elsinore. The pipeline alignment runs along and underneath paved roads for part of its length. The vegetation is also disturbed by the presence of non-native and/or invasive plant species such as salt cedar (*Tamarix ramosissima*), Russian thistle (*Salsola tragus*), stinknet (*Oncosiphon piluliferum*), and sour clover (*Melilotus indicus*).



## Topography and Soils

Elevations within the study area range from approximately 1,275 feet (389 meters) AMSL on either end to 1,245 feet (379 meters) AMSL in the San Jacinto River channel in the center of the study area. Eight soil types, as mapped by NRCS (2017), occur within the survey area (Figure 6): Garretson gravelly very fine sandy loam, 2 to 8 percent slopes; Traver loamy fine sand, eroded; Grangeville loamy fine sand, drained, 0 to 5 percent slopes; Traver loamy fine sand, saline-alkali, eroded; Water; Soboba stony loamy sand, 2 to 15 percent slopes; Waukena loamy fine sand, saline-alkali; and Riverwash.

## Vegetation Communities/Habitat Types

Vegetation communities or land uses are classified in this report according to Holland (1986). Nine vegetation communities or land use types were mapped within the study area: Riversidean sage scrub, non-native grassland, non-native woodland, disturbed, developed, streambed, southern willow scrub-disturbed, tamarisk scrub-disturbed, and constructed basin (Figure 7; Table 1). A brief description of each community is provided below.

**Table 2**  
**VEGETATION COMMUNITIES AND LAND USES**

Vegetation Community	Existing Acreage*
<b>Upland</b>	
Riversidean sage scrub	0.6
Non-native grassland	0.1
Non-native woodland	0.1
Disturbed	7.8
Developed	11.1
Subtotal	19.7
<b>Wetland/Riparian</b>	
Streambed	0.99
Southern willow scrub-disturbed	0.06
Tamarisk scrub-disturbed	0.53
Constructed basin	0.15
Subtotal	1.73
<b>TOTAL</b>	<b>21.43</b>

\*Upland habitats are rounded to the nearest 0.1 acre and wetland/riparian habitats are rounded to the nearest 0.01 acre. Total reflects rounding.

## Riversidean Sage Scrub

Riversidean sage scrub is the most xeric expression of coastal sage scrub south of Point Conception, California. Typical stands are fairly open and dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), and foxtail chess (*Bromus madritensis* ssp. *rubens*), each attaining at least 20 percent cover. Typically found on xeric sites such as steep slopes, severely drained soils, or clays that release stored soil moisture only slowly. Intergrades at slightly higher elevations with several southern Californian chaparrals. The study area supports 0.6 acre of this

vegetation community to the west of the proposed lift station site (Figure 7). The Riversidean sage scrub consists of restoration planting, as evidenced by the presence of above ground irrigation lines. Species present include California buckwheat and brittlebush (*Encelia farinosa*).

#### Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut grass (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985). The study area supports 0.1 acre of this vegetation community at the far northern end (Figure 7). Species present include oats, red brome, and ripgut grass.

#### Non-native Woodland

Non-native woodland is an open canopy dominated by non-native species, including ornamental trees. The study area supports 0.1 acre of this vegetation community at the south end of Elm Street (Figure 7). Species present include Peruvian pepper tree (*Schinus molle*), pines (*Pinus* sp.), and tree of heaven (*Ailanthus altissima*).

#### Disturbed

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat is generally dominated by non-native weedy species that adapt to frequent disturbance or consists of dirt trails and roads. The study area supports 7.8 acres of this vegetation community (Figure 7). A portion of the disturbed habitat has recently been developed as an access road to the partially constructed Summerly Community Park. An additional portion of the disturbed habitat has been subject to grading for the Tough Mudder event that was held on the site. Disturbed habitat dominates the site and is either unvegetated or dominated by disturbance-tolerant invasive species including short-podded mustard (*Hirschfeldia incana*), jimson weed (*Datura wrightii*), Russian thistle, stinknet, Mediterranean grass (*Schismus barbatus*), and red brome.

#### Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained. Developed land in the study area consists of Elm Street, East Lakeshore Drive, Malaga Road, homes along Elm Street, the existing Back Basin lift station, and the Diamond Stadium parking lot. The study area includes 11.1 acres of developed land.

### Streambed

Streambed consists of areas that are largely unvegetated due to their location within a stream channel. The study area supports 0.99 acre of this vegetation community within the channel of the Lake Elsinore inlet channel (Figure 7). This habitat is only sparsely vegetated and includes species such as tamarisk (*Tamarix ramosissima*), cocklebur (*Xanthium strumarium*), castor bean (*Ricinus communis*), and salt heliotrope (*Heliotropium curassavicum*).

### Southern Willow Scrub-Disturbed

Southern willow scrub consists of dense, broad-leaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*). This habitat typically occurs on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding or limited hydrology maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). The study area supports 0.06 acre of this vegetation community surrounding the constructed basin (Figure 7). The habitat on site is mapped as disturbed because of its sparse cover and occurrence within an artificially created and maintained drainage basin and the inclusion of non-native species. Species present include Goodding's black willow (*Salix gooddingii*), tamarisk, and mule fat.

### Tamarisk Scrub-Disturbed

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species but may also contain willows (*Salix* spp.), salt bushes (*Atriplex* spp.), catclaw acacia (*Acacia greggii*), and salt grass (*Distichlis spicata*). This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. The study area supports 0.53 acre of this vegetation community. Tamarisk scrub occurs on the slope south of Elm Street, along with additional patches along the edge of the streambed (Figure 7). The habitat on site is mapped as disturbed because of the sparse distribution of tamarisk mixed with native and non-native species along with human created paths within the habitat. Species present include tamarisk, short-pod mustard, salt heliotrope, stinknet, horsetweed (*Erigeron canadensis*), cattail (*Typha* sp.), mule fat, and sweetbush (*Bebbia juncea* var. *aspera*).

### Constructed Basin

The study area supports 0.15 acre of constructed basin north of the Back Basin lift station (Figure 7). The basin was constructed between 2005 and 2009, is periodically maintained, and appears to collect runoff from Malaga Road and/or the adjacent parking lot. The basin was inundated when the field work began in April, and was dry before the field work ended in July.

### General Fauna

The study area is generally disturbed and does not provide extensive high-quality habitat for animal species, although shorebirds such as great egret (*Ardea alba*), green heron (*Butorides virescens*), and black-necked stilt (*Himantopus mexicanus*) were observed in association with the San Jacinto River and Lake Elsinore inlet channel. Other species observed or otherwise detected on site included mostly common bird species such as common raven (*Corvus corax*), lesser goldfinch (*Spinus psaltria*),

mourning dove (*Zenaida macroura*), red-winged blackbird (*Agelaius phoeniceus*), and Anna's hummingbird (*Calypte anna*). A full list of animal species observed on site is included in Attachment B.

## Sensitive Biological Resources

### Sensitive Natural Communities

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

The study area supports the following sensitive natural communities: Riversidean sage scrub, non-native grassland, and tamarisk scrub-disturbed. Although tamarisk is an invasive species, the disturbed tamarisk scrub on site is considered sensitive because of its association with the inlet channel. Southern willow scrub is often considered a sensitive natural community, but the disturbed southern willow scrub within the study area is not sensitive because of its disturbed state and occurrence within an artificially constructed and regularly maintained drainage basin.

### 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 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. Special-status plant species also include those identified in the MSHCP. A complete list of special-status plants known to occur in the area or listed for this area by the MSHCP, along with their potential to occur on site, is included as Attachment C.

Sixty-eight special-status plant species are known to occur in the general vicinity of the project site, nine of which are listed at the federal and/or state level. Eight of the nine listed species are not expected to occur on the site. One, San Diego ambrosia (*Ambrosia pumila*), has a low potential to occur but was not observed during the sensitive plant survey.

The project is located within Area 2 of the MSHCP Narrow Endemic Plant Species Survey Area (NEPSSA). NEPSSA Area 2 plants are Munz's onion (*Allium munzii*), San Diego ambrosia, many-stemmed dudleya (*Dudleya multicaulis*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), Hammitt's clay cress (*Sibaropsis hammittii*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *Wrightii*). None of these species were observed during the sensitive plant survey conducted on May 3, 2017, or during any of the other site surveys. In addition, except for a low potential for San Diego ambrosia, none of these species have potential to occur within the project impact footprint due to the lack of appropriate habitat and/or soils (Attachment C).

The project is within Area 2 of the MSHCP Criteria Area Species Survey Area (CASSA). CASSA Area 2 plants are San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), Parish's brittlescale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), round-leaved filaree (*Erodium macrophyllum*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), and little mouseltail

(*Myosurus minimus*). Smooth tarplant was the only one of these species observed during the sensitive plant survey conducted on May 3, 2017, or during any of the other site surveys. In addition, except for smooth tarplant, none of these species have potential to occur within the project impact footprint due to the lack of appropriate habitat and/or soils (Attachment C).

A brief description of smooth tarplant, the only sensitive plant species observed within the study area, is provided below.

**Smooth tarplant (*Centromadia pungens* ssp. *laevis*)**

**Listing:** --/--; CNPS List 1B.1

**Distribution:** San Diego, Orange, Riverside, Los Angeles, Kern, and San Bernardino counties below approximately 1,500 feet in elevation

**Habitat:** Valley and foothill grasslands, particularly near alkaline locales

**Status on site:** More than 2,800 individuals of smooth tarplant were observed within the study area and immediately adjacent to the study area, with the large majority occurring just south of the inlet channel streambed and just north of Pete Lehr Drive. A smaller population occurs along the edge of the constructed drainage basin in the southern part of the study area. The smooth tarplant observed north of Pete Lehr Drive occurs within a fenced area and exact numbers could not be quantified.

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. Special-status animal species also include those identified in the MSHCP. Special-status animal species with potential to occur in the study area are included in Attachment C.

Fifty-two listed or sensitive animal species are known to occur in the general vicinity of the project site, 12 of which are listed at the federal and/or state level. Only two listed species have low potential to occur on site: the federally listed as threatened and state species of concern western snowy plover (*Charadrius alexandrinus nivosus*), and the state listed as endangered bald eagle (*Haliaeetus leucocephalus*). The protocol burrowing owl survey completed in 2017 was negative and the site is not occupied by the burrowing owl.

There were three special-status animal species observed within the study area or 500-foot buffer area: California horned lark (*Eremophila alpestris actia*, a CDFW Watch List species), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*, a CDFW Species of Special Concern), and white-faced ibis (*Plegadis chihi*, a CDFW Watch List species) (Figure 7). In addition, Cooper's hawk (*Accipiter cooperii*, a CDFW Watch List species) and the federally and state listed as endangered least Bell's vireo were detected more than 500 feet from the impact area. A brief description of each sensitive animal species observed during project surveys is provided below. An explanation of status codes can be found in Attachment D.

**California horned lark (*Eremophila alpestris actia*)**

**Status:** --/WL

**Distribution:** The California horned lark is relatively widely-distributed throughout the MSHCP Plan Area within its suitable habitat. It occurs in some of the sparsely vegetated habitats concentrated in several Core Areas, which do not include Lake Elsinore.

**Habitat(s):** Coastal strand, arid grasslands, and sandy desert floors

**Status on site:** Observed on a manufactured slope within the 500-foot buffer area southwest of the impact area.

**White-faced ibis (*Plegadis chihi*)**

**Status:** --/WL

**Distribution:** The white-faced ibis is sparsely distributed throughout the Riverside Lowlands Bioregions of the MSHCP Plan Area within its suitable habitat and is only documented for breeding at two locations: Prado Basin and Mystic Lake/San Jacinto Wildlife Area. The species uses a wide variety of Habitats for foraging during winter and transient visits including agricultural land, grassland, and areas at the edges of drainages.

**Habitat(s):** Nests in freshwater marshes and forages in shallow waters and wet, grassy habitats

**Status on site:** Observed on the south side of the inlet channel within the 500-foot buffer area.

**San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)**

**Listing:** --/SSC

**Distribution:** Southern Santa Barbara County, south on the coastal slope to the vicinity of San Quintin, Baja California, Mexico. Localities on the eastern edge of its range include Jacumba and San Felipe Valley in San Diego County.

**Habitat:** Occurs primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.

**Status on site:** Observed in the southern part of the study area west of the Diamond Stadium parking lot.

**Cooper's hawk (*Accipiter cooperii*)**

**Status:** --/WL

**Distribution:** The Cooper's hawk is widely distributed throughout the MSHCP Plan Area within suitable habitat. It occurs within all Bioregions of the Plan Area. There are several areas that appear to be Core Areas, not including Lake Elsinore.

**Habitat(s):** Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests

**Status on site:** Observed flying over the San Jacinto River more than 500 feet from the impact area.

**Least Bell's vireo (*Vireo bellii pusillus*)**

**Status:** FE/SE

**Distribution:** The least Bell's vireo is relatively well distributed throughout the MSHCP Plan Area within suitable habitat in the Riverside Lowland and San Jacinto Foothills Bioregions. It occurs in several Core Areas, not including Lake Elsinore.

**Habitat(s):** Mature riparian woodland

**Status on site:** Observed along the San Jacinto River more than 500 feet from the impact area during the 2017 protocol survey. The protocol survey was negative for least Bell's vireo within the impact site or within a 500-foot buffer. The project site is not occupied by least Bell's vireo, nor is this species expected to use the site.

**Nesting Birds and Raptors**

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

## Jurisdictional Waters and Wetlands

In the context of this assessment, jurisdictional waters and wetlands include waters of the U.S. regulated by the USACE pursuant to CWA Section 404; waters of the State regulated by the RWQCB pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; and/or streambed and riparian habitat regulated by the CDFW pursuant to Sections 1600 *et seq.* of CFG Code.

HELIX's jurisdictional delineation confirmed that the study area supports non-wetland waters of the U.S./State (Table 2, Figure 8). No wetland waters of the U.S. were observed within the study area. Waters of the U.S./State within the study area are associated with Lake Elsinore and the inlet channel. The limit of USACE jurisdiction along Lake Elsinore is the 1,255-foot AMSL elevation line, according to an Approved Jurisdictional Determination issued by USACE for Lake Elsinore in 2007, and RWQCB jurisdiction under CWA Section 401 coincides with USACE jurisdiction. Waters of the U.S./State as defined by the 1,255-foot elevation line extend beyond the ordinary high water mark (OHWM) observed in the field, except for a short section of 2-foot-wide streambed west of Pete Lehr Drive. The constructed basin at the south end of the project site was determined not to be jurisdictional waters of the U.S./State because it is a constructed and periodically maintained water detention facility.

**Table 3**  
**JURISDICTIONAL WATERS**

<b>Jurisdictional Resource</b>	<b>Existing (acres) †</b>
<b>Waters of the U.S./State – USACE/RWQCB Jurisdiction</b>	
Disturbed Land	0.39
Streambed	0.96
Tamarisk Scrub-disturbed	0.40
<b>TOTAL</b>	<b>1.75</b>
<b>Waters of the State – CDFW/RWQCB Jurisdiction</b>	
Disturbed Land	4.08
Streambed	1.01
Non-native Woodland	0.04
Riversidean Sage Scrub	0.57
Tamarisk Scrub-disturbed	0.53
<b>TOTAL</b>	<b>6.23</b>

†Acreage rounded to the nearest hundredth.

The CDFW jurisdiction within the study area consists of riparian and upland habitat associated with Lake Elsinore (Table 3, Figure 9). The limit of CDFW jurisdiction along Lake Elsinore is the 1,265-foot AMSL elevation line, according to CDFW (personal communication, February 17, 2017). The RWQCB takes jurisdiction of areas between the 1,255-foot and 1,265-foot elevation lines under the State Porter-Cologne Water Quality Control Act. The constructed basin at the south end of the project site was determined not to be CDFW- or RWQCB-jurisdictional because it is a constructed and periodically maintained water detention facility. CDFW jurisdiction includes an intermittent swale north of Pete Lehr Drive. This feature was mapped as CDFW streambed based on signs of water flow, but was not mapped as Waters of the U.S./State because it lacked an OHWM.



## Wildlife Corridors and Linkages

Important corridors and linkages have been identified on a local and regional scale throughout the MSHCP planning area.

The nearest core area identified by the MSHCP is Existing Core E, which consists of Lake Elsinore and its immediate shoreline. Existing Core E provides for live-in habitat for a number of plant and animal planning species. Urban development partially constrains the Core, and management of the edge conditions around the natural lands is necessary to ensure the Core provides habitat and functions for the planning species. The section of the inlet channel within the study area provides a connection from the lake to the San Jacinto River. It also provides live-in and foraging habitat for some wildlife species. The study area is designated as Proposed Extension of Existing Core 3 and a portion of the study area west of the proposed pipeline is Public/Quasi Public (PQP) conserved habitat under the MSHCP. The PQP lands are MSHCP Conservation Area lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the conservation of Covered Species. In this case the PQP lands support revegetated Riversidean sage scrub habitat along a secondary stream channel that connects from the San Jacinto River/inlet channel to the wetland restoration area on the southwest side of the Back Basin, which could also facilitate local wildlife movement. The project is proposed to occur adjacent to but not within the PQP lands associated with the restored channel.

## APPLICABLE REGULATIONS

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

### Federal

#### Federal Endangered Species Act

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

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



## Migratory Bird Treaty Act

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

## Clean Water Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. (including wetlands and vernal pools) is overseen by the USACE under Section 404 of the CWA. Projects may be permitted on an individual basis or may be covered under one of several approved Nationwide Permits. Individual Permits are assessed individually based on the type of action, amount of fill, etc. A CWA Section 401 Water Quality Certification, which is administered by the RWQCB, must be issued prior to any 404 permit. Impacts to waters of the U.S. would result in a need for both a USACE 404 permit and a RWQCB 401 certification.

## State

### California Endangered Species Act

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

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

### California Fish and Game Code Section 1600

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

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

These sections of the CFG Code prohibit the take or possession of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a take. Such a take would also violate federal law protecting migratory birds. ITPs are required from the CDFW for projects that may result in the incidental take of species listed by the state as endangered, threatened, or candidate species. The wildlife agencies require that impacts to protected species be minimized to the extent possible and mitigated to a less-than-significant level.

### California Natural Community Conservation Planning Act of 1991

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

### Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and the RWQCB regulate the discharge of waste to waters of the State via the 1969 Porter-Cologne Water Quality Control Act as described in the California Water Code. The California Water Code is the State's version of the federal CWA. Waste, according to the California Water Code, includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of, disposal.

State waters that are not federal waters may be regulated under the Porter-Cologne Water Quality Control Act. A Report of Waste Discharge must be filed with the RWQCB for projects that result in discharge of waste into waters of the State. The RWQCB will issue Waste Discharge Requirements (WDRs) or a waiver. The WDRs are the Porter-Cologne Water Quality Control Act version of a CWA Section 401 Water Quality Certification.

## Local

### Multiple Species Habitat Conservation Plan

Although the EVMWD is not a permittee or signatory of the MSHCP, this report analyzes the project for any conflicts with the MSHCP.

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

## SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

This section provides a project-level biological resources impact analysis for the proposed project in support of environmental review. The issues addressed in this section are derived from Appendix G of the CEQA Guidelines. Mitigation, monitoring, and reporting requirements to eliminate or reduce project impacts to a less-than-significant level are also provided in this section. Figure 12 depicts the project impacts to vegetation communities and sensitive resources.

### 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 with Mitigation. Smooth tarplant is the only special status plant species observed within the project impact area or determined to have a high potential to occur. The study area and adjacent area supports more than 2,800 individuals of smooth tarplant, of which 82 (approximately 3 percent) would be impacted by project construction. Another two smooth tarplant within the impact footprint were impacted by Summerly Park access road construction and grading related to a Tough Mudder event held on the site after the rare plant survey was conducted. Furthermore, the 82 smooth tarplant to be impacted are located within a constructed, maintained drainage basin, and thus do not have long-term conservation value. Because 97 percent of the smooth tarplant within and adjacent to the study area would be avoided, the project would not have a substantial adverse effect on the species, and no mitigation is proposed for impacts to smooth tarplant.

Three special status wildlife species, California horned lark, white-faced ibis, and San Diego black-tailed jackrabbit, were observed within 500 feet of the project impact area and could use the impact area. The Cooper's hawk was observed more than 500 feet from the impact area but has high potential to occur on site, and additional species listed in Attachment C have low or moderate potential to occur on site.

However, the project has been designed to impact non-sensitive habitats, while preserving the higher quality habitat within the inlet channel itself. The inlet channel and adjacent PQP lands within the study area as well as the nearby habitat along the shore of Lake Elsinore and the San Jacinto River channel to the north provide ample higher quality habitat for the special status wildlife species with potential to use the impact area. Therefore, the project would not have a substantial adverse effect on special status species.

If certain avoidance measures were not incorporated during construction, the project could have an adverse effect on nesting birds protected by the MBTA and CFG Code, as discussed below.

### Nesting Birds

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

### Issue 1 Mitigation Measures

- BIO-1 Nesting Bird and Raptor Avoidance.** If initial grading and vegetation removal activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird breeding season for migratory birds and raptors (January 15 through September 15), the project applicant shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of the activities. If the qualified biologist determines that no active migratory bird or raptor nests occur within 300 feet of the impact site (500 feet for raptors), the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or until noise barriers have been installed that adequately protect the nest, as determined by the qualified biologist.
- BIO-2 Burrowing Owl Pre-construction Survey.** A pre-construction burrowing owl survey shall be conducted in accordance with the protocol described in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The initial take avoidance survey shall occur no less than 14 days prior to initiating ground-disturbing activities, with a final survey conducted within 24 hours prior to initiating ground-disturbing activities. If, after the initial take avoidance survey, no

suitable burrowing owl habitat, including burrows, is present, the second survey 24 hours prior to ground disturbance shall not be required. The project shall avoid disturbing active burrowing owl burrows (active nests). Based on the required construction activities, the level of potential disturbance on active burrows, if found, is expected to be low. In accordance with CDFW protocol for low disturbance projects, initial setback distances for avoidance of active burrows shall be 200 meters from April 1 to October 15 and 50 meters from October 16 to March 31. Exceptions can be made to the avoidance distance for areas with natural (hills, trees) or artificial (buildings, walls) barriers in place. The final avoidance buffer shall be at the discretion of the biologist. If, after consideration of a reduced buffer, an adequate avoidance buffer cannot be provided between an occupied burrow and required ground-disturbing activities, then passive relocation activities during the non-breeding season (September 1 through January 31) may be authorized in consultation with CDFW, which would include preparation, approval, and implementation of a Burrowing Owl Exclusion Plan in accordance with protocol described in the CDFW Staff Report on Burrowing Owl Mitigation. No impacts shall occur to active burrowing owl nests.

## 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 with Mitigation. Temporary and permanent impacts would occur within non-sensitive habitats (Table 3; Figure 10). There would be no direct impacts to sensitive riparian habitat or other sensitive natural community.

**Table 3**  
**IMPACTS TO VEGETATION COMMUNITIES**

<b>Vegetation Community</b>	<b>Existing Acreage<sup>1</sup></b>	<b>Permanent Impact</b>	<b>Temporary Impact</b>
<b>Upland</b>			
Riversidean sage scrub	0.6	0	0
Non-native grassland	0.1	0	0
Non-native woodland	0.1	0	0
Disturbed	7.8	0.7	0.2
Developed	11.1	0.2	3.2
<b>Subtotal</b>	<b>19.7</b>	<b>0.9</b>	<b>3.4</b>
<b>Wetland/Riparian</b>			
Streambed	0.99	0	0
Southern willow scrub-disturbed <sup>2</sup>	0.06	0.06	0
Tamarisk scrub-disturbed	0.53	0	0
Constructed basin <sup>2</sup>	0.15	0.15	0
<b>Subtotal</b>	<b>1.73</b>	<b>0.21</b>	<b>0</b>
<b>TOTAL</b>	<b>21.43</b>	<b>1.11</b>	<b>3.4</b>

<sup>1</sup>Upland habitats are rounded to the nearest 0.1 acre and wetland/riparian habitats are rounded to the nearest 0.01 acre. Total reflects rounding.

<sup>2</sup>These habitats are not sensitive because the basin is constructed and maintained.

The temporary impact area consists of the temporary construction area, which would be used for construction access and stockpiling during construction. The permanent impact area consists of the lift station building and pavement. There would be no impacts to the inlet channel because the project would use HDD methods to install the pipes completely underground, with no impacts on the ground surface for that section of pipeline. The impacts shown at East Lakeshore Drive may also be avoided if HDD is used to cross East Lakeshore Drive. Future maintenance would be accomplished using the same method. The impact footprint shown on Figures 10 through 12 includes the minor grading and laydown areas required for construction; thus, there would be no additional impacts beyond the footprint shown.

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

## Issue 2 Mitigation Measures

**BIO-3 Construction Fencing.** Temporary construction fencing (with silt barriers as needed according to the stormwater pollution prevention plan [SWPPP]) shall be installed at the limits of project impacts (including construction staging areas and access routes) adjacent to sensitive habitat to prevent sensitive habitat impacts and to prevent the spread of silt from the construction zone into adjacent habitats. Temporary fencing shall be located on the western boundary of the impact area south of the inlet channel, and on the north and south side of the inlet channel (Figure 10). Fencing shall be installed in a manner that does not impact habitats to be avoided.

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

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

### **ISSUE 3: Wetlands**

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

#### Issue 3 Impact Analysis

Less than Significant with Mitigation. As shown on Figure 11, temporary and permanent impacts have been restricted to disturbed uplands and a manmade basin that occur outside of jurisdictional waters of the U.S. subject to USACE; therefore, the project would have no impact on federally-protected wetlands as defined by CWA Section 404. Similarly, the project would have no impact on waters of the State subject to RWQCB jurisdiction pursuant to CWA Section 401.

The project would also avoid temporary and permanent impacts to streambed and riparian habitat subject to CDFW jurisdiction pursuant to CFG Code Sections 1600 et seq. The project has been modified to also avoid impacts to disturbed uplands below the 1,265-foot elevation limit and under the regulatory jurisdiction of CDFW (Figure 12).

In addition, indirect impacts would be prevented through the implementation of mitigation measure BIO-3. No additional mitigation measures are proposed.

#### Issue 3 Mitigation Measures

Implementation of mitigation measure BIO-3 would reduce potential indirect impacts on jurisdictional waters and wetlands to less than significant.

### **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. The project site encompasses developed and undeveloped land within the Elsinore Area Plan of the MSHCP. The section of the Lake Elsinore inlet channel within the study area provides a connection from the San Jacinto River to the lake. The river channel is elevated and separated from the lake via a riprap slope. The project would not impact movement through this area because the proposed HDD pits would avoid impacts to the inlet channel. The project would also avoid impacts to wildlife movement along the secondary stream channel that connects from the San Jacinto River/inlet channel to the wetland restoration area on the southwest side of the Back Basin, by locating the pipeline along Diamond Circle, close to the Diamond Stadium parking lot. In addition, once constructed, the pipeline would be buried underground and have no permanent impacts on wildlife movement across the impact site. Finally, the lift station structures would not impact wildlife movement because they would be located adjacent to the parking lot and existing Back Basin Lift Station.



Project construction would be restricted to daytime hours and would not be expected to result in adverse indirect impacts on off-site habitat adjacent to the site. Construction work limits would be contained within temporary construction fencing in accordance with mitigation measure BIO-3. In addition, there is no permanent lighting associated with the pipeline. Therefore, potential impacts on wildlife movement and nursery sites within the study area would be less than significant.

#### Issue 4 Mitigation Measures

Mitigation is not 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 local policies or ordinances protecting biological resources, as further detailed below.

#### Consistency with City of Lake Elsinore Municipal Code

There are no City ordinances that protect biological resources on the site.

#### Issue 5 Mitigation Measures

Mitigation is not 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

Less than Significant. The project occurs within the boundaries of the adopted MSHCP, within the Elsinore Area Plan within Criteria Cells 4743 and 4846. Although the EVMWD is not subject to the MSHCP, the project would be consistent with the MSHCP, as detailed below.

#### MSHCP Consistency Analysis

The purpose of this section is to provide an analysis of the project with respect to potential conflicts with biological resources aspects of the MSHCP.

The project was evaluated for consistency with the following MSHCP issue areas:

- MSHCP Reserve Assembly requirements;
- Section 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools);



- Section 6.1.3 (Protection of Narrow Endemic Plant Species);
- Section 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface);
- Section 6.3.2 (Additional Survey Needs and Procedures); and,
- Section 6.4 (Fuels Management).

The sections below provide a summary demonstrating how the project is consistent with MSHCP requirements for each of the above-listed issue areas.

#### Project Relationship to the Reserve Assembly

The study area is located in the Elsinore Area Plan of the MSHCP within Criteria Cells 4743 and 4846 (Figure 4). The study area is located within Proposed Extension of Existing Core 3 (Lake Elsinore Soils), which connects Existing Core E (Lake Elsinore) to other MSHCP conserved lands. Proposed Extension of Existing Core 3 conserves soils of the Traver series, which is important to the maintenance of several species of Narrow Endemic Plants. The northern portion of the extension also provides for movement of species along the lower San Jacinto River to Proposed Linkage 8. Together with Existing Core E, Proposed Extension of Existing Core 3 provides Habitat for shorebird use.

Although the study area does support Traver soils, smooth tarplant is the only Traver soil-associated species detected during the 2017 sensitive plant surveys, and 97 percent of the smooth tarplant occurring within the vicinity of the study area would be avoided. The project would also avoid impacts to wildlife movement, as discussed above, and the shorebird habitat within the inlet channel would be avoided. Therefore, the project is consistent with the goals for Proposed Extension of Existing Core 3.

The northern half of the project site is located in Criteria Cell 4743, which is described as follows: "Conservation within this Cell will contribute to assembly of Proposed Extension of Existing Core 3 and Proposed Linkage 8. Conservation within this Cell will focus on riparian scrub, woodland, forest and grassland habitat associated with the San Jacinto River. Areas conserved within this Cell will be connected to riparian scrub, woodland and forest habitat proposed for conservation in Cell #4646 to the north and to grassland habitat proposed for conservation in Cell #4742 to the west and #4846 to the south. Conservation within this Cell will range from 45 percent-55 percent of the Cell focusing in the southern and northeastern portions of the Cell." The project would primarily impact developed areas within this Cell, and would use directional drilling to avoid impacts to the San Jacinto River/inlet channel in the southern portion of the Cell. The project would not impact the northeastern portion of the Cell. Therefore, the project would not preclude preserve assembly in this Cell.

The southern half of the project site is located in Criteria Cell 4846, which is described as follows: "Conservation within this Cell will contribute to assembly of Proposed Extension of Existing Core 3. Conservation within this Cell will focus on grassland habitat associated with the San Jacinto River. Areas conserved within this Cell will be connected to grassland habitat proposed for conservation in Cell #4845 to the west, #4743 to the north and #4937 to the south. Conservation within this Cell will range from 65%-75% of the Cell focusing in the western portion of the Cell." The impacts within this Cell are focused on disturbed and developed habitat and a constructed basin, and would not impact grassland habitat. Project impacts are located adjacent to the existing parking lot in the eastern half of the cell, and most of the project impacts would be underground pipeline with no above-ground structures. Therefore, the project would not preclude preserve assembly in this Cell.

Based on the limited size and nature of the project, composition of the habitats proposed for impacts, location of the impacts adjacent to development, and consistency with Criteria Cell goals, implementation of the project would not conflict with the conservation goals of the MSHCP. The project is consistent with MSHCP Reserve Assembly requirements.

#### Consistency with Multiple Species Habitat Conservation Plan Section 6.1.2

The project is consistent with the policies of Section 6.1.2 that protect species associated with Riparian/Riverine Areas and Vernal Pools. No vernal pools, ephemeral ponds, or similar habitat exist on site and no associated species are expected to occur. The project was redesigned to avoid temporary and permanent impacts to areas below the 1,265-foot elevation limit for CDFW's jurisdiction for Lake Elsinore, which is also considered a Riverine Area.

The project would use directional drilling to completely avoid direct impacts to Riparian Areas within the Lake Elsinore inlet channel and implement MM Bio-3 to avoid indirect impacts to Riparian/Riverine Areas to the maximum extent possible. The project is designed to minimize impacts by locating the lift station adjacent to the existing Back Basin lift station and Diamond Stadium parking lot. The proposed pipeline would also run along Diamond Circle near the Diamond Stadium parking lot, rather than encroaching on the disturbed habitat adjacent to the secondary stream channel that connects from the San Jacinto River/inlet channel to the wetland restoration area on the southwest side of the Back Basin.

Smooth tarplant was the only plant or animal species listed in Section 6.1.2 that was observed on site, and bald eagle was the only species determined to have a low potential to occur in the study area. All of the 82 smooth tarplant proposed to be impacted are located within a constructed and maintained drainage basin, and, thus, do not have long-term conservation value. In addition, 97 percent of the smooth tarplant within the study area would be avoided. Therefore, impacts to Riparian/Riverine Species are less than significant. Implementation of MM Bio-1 would result in the project avoiding potential impacts to bald eagle and other birds.

#### Consistency with Multiple Species Habitat Conservation Plan Section 6.1.3

As discussed above, no NEPSSA plant species were observed during sensitive plant surveys and none have a moderate or high potential to occur within the project impact footprint; therefore, no impacts to NEPSSA species are proposed. The project is consistent with Section 6.1.3 of the MSHCP.

#### Consistency with Multiple Species Habitat Conservation Plan Section 6.1.4

The study area is located in close proximity to PQP land and within Criteria Cells that have land proposed for conservation as part of the MSHCP reserve. The Urban/Wildland Interface Guidelines (UWIG) of MSHCP Section 6.1.4 apply to projects that occur within or adjacent to the conservation area under the MSHCP. This project occurs in proximity to MSHCP conservation and, therefore, is showing voluntary consistency with the provisions of the UWIG of MSHCP Section 6.1.4. The UWIG requires the project to be compliant with respect to drainage, toxics, lighting, noise, invasive plants, barriers, and grading.

The project does not involve the use of lighting, is not a noise generating land use, does not include landscaping, and would not result in additional impacts from humans or domestic animals, since the lift station would be remotely operated and does not include an office that would be regularly staffed. The

project also would not alter the topography of the landscape along the pipeline alignment, as the ground surface above the pipeline would be returned to its pre-construction condition. The proposed lift station would occupy a relatively small footprint and would not introduce a large enough area of impermeable surface to substantially alter the existing drainage pattern of the surrounding area. The project would follow all applicable regulations for storage of chemicals, to prevent toxics from escaping the lift station. The pipeline easement would not be fenced.

As required for water pollution control and for avoidance/minimization of potential indirect impacts, the project would implement Best Management Practices (BMPs) during construction, including silt fencing as needed according to mitigation measure BIO-3 and the SWPPP. Additional BMPs may include:

- Installation and maintenance of temporary construction fence during construction;
- Installation of erosion control measures, such as silt fence, gravel bags, fiber roll/straw wattle, geotextiles, mats, fiber rolls, sprayed on binders, mulch on flat areas, or other acceptable measures;
- Not working during storm events;
- Fueling, lubrication, or maintenance of construction equipment in disturbed upland areas away from environmentally sensitive areas;
- Proper management of waste, including solid, sanitary, concrete (e.g., concrete wash out areas), hazardous, equipment-related wastes, and stock piles (protection from wind and rain); and,
- Prevention of storm water contamination by construction materials through covering and/or providing secondary containment of storage areas and taking adequate precautions when handling materials.

#### Consistency with Multiple Species Habitat Conservation Plan Policy Section 6.3.2

The project is within CASSA Area 2, and although the project is not subject to the MSHCP, a sensitive rare plant survey was conducted on May 3, 2017. Smooth tarplant was the only one of these species observed on site or having potential to occur within the project impact footprint. The project would avoid impacts to 97 percent of the smooth tarplant within and adjacent to the study area by using horizontal drilling to avoid impacting the ground surface. The proposed smooth tarplant impacts cannot be avoided because the lift station must be located adjacent to the existing Back Basin lift station and must have adequate road access and connect to the proposed pipelines. Most of the smooth tarplant to be impacted are located within an existing constructed drainage basin subject to regular maintenance, and thus do not have long-term conservation value. The project would reduce indirect impacts to the remaining smooth tarplant in the area by using temporary fencing during construction and not introducing landscaping or irrigation. Therefore, the project is consistent with the 90 percent avoidance threshold for CASSA species.

A burrowing owl habitat assessment was conducted consistent with MSHCP Section 6.3.2. Because burrows with potential to support burrowing owls were observed, a protocol burrowing owl survey was conducted. There were no burrowing owls detected on site or within 500 feet of the impact area, and the site is considered unoccupied; however, a pre-construction survey would be conducted per mitigation measure BIO-2.

## Fuels Management (Multiple Species Habitat Conservation Plan Section 6.4)

There are no fuel management restrictions for this project and the project would be consistent with this requirement.

## Multiple Species Habitat Conservation Plan Development Fee

The project is not a residential or commercial development project and would not be subject to the associated per acre fee. Because the EVMWD is not a signatory to the MSHCP, this project is not subject to the MSHCP mitigation fee.

## ISSUE 6 Mitigation Measures

Mitigation is not required.

## CLOSING

The proposed biological mitigation measures for the project are summarized in Table 4.

**Table 4**  
**SUMMARY OF BIOLOGICAL MITIGATION MEASURES**

Impact	Proposed Mitigation	Level of Significance After Mitigation
Issue 1: Nesting Birds	<b>BIO-1 Nesting Bird and Raptor Avoidance.</b> If initial grading and vegetation removal activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird breeding season for migratory birds and raptors (January 15 through September 15), the project applicant shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of the activities. If the qualified biologist determines that no active migratory bird or raptor nests occur within 300 feet of the impact site (500 feet for raptors), the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or until noise barriers have been installed that adequately protect the nest, as determined by the qualified biologist.	Less than significant

**Table 4 (cont.)**  
**SUMMARY OF BIOLOGICAL MITIGATION MEASURES**

Impact	Proposed Mitigation	Level of Significance After Mitigation
Issue 1: Burrowing Owls	<p><b>BIO-2 Burrowing Owl Pre-construction Survey.</b> A pre-construction burrowing owl survey shall be conducted in accordance with the protocol described in the CDFW Staff Report on Burrowing Owl Mitigation (CDFW 2012). The initial take avoidance survey shall occur no less than 14 days prior to initiating ground-disturbing activities, with a final survey conducted within 24 hours prior to initiating ground-disturbing activities. If, after the initial take avoidance survey, no suitable burrowing owl habitat, including burrows, is present, the second survey 24 hours prior to ground disturbance shall not be required. The project shall avoid disturbing active burrowing owl burrows (active nests). Based on the required construction activities, the level of potential disturbance on active burrows, if found, is expected to be low. In accordance with CDFW protocol for low disturbance projects, initial setback distances for avoidance of active burrows shall be 200 meters from April 1 to October 15 and 50 meters from October 16 to March 31. Exceptions can be made to the avoidance distance for areas with natural (hills, trees) or artificial (buildings, walls) barriers in place. The final avoidance buffer shall be at the discretion of the biologist. If, after consideration of a reduced buffer, an adequate avoidance buffer cannot be provided between an occupied burrow and required ground-disturbing activities, then passive relocation activities during the non-breeding season (September 1 through January 31) may be authorized in consultation with CDFW, which would include preparation, approval, and implementation of a Burrowing Owl Exclusion Plan in accordance with protocol described in the CDFW Staff Report on Burrowing Owl Mitigation. No impacts shall occur to active burrowing owl nests.</p>	Less than significant
Issue 2: Riparian Habitat and Sensitive Natural Communities	<p><b>BIO-3 Construction Fencing.</b> Temporary construction fencing (with silt barriers as needed according to the stormwater pollution prevention plan [SWPPP]) shall be installed at the limits of project impacts (including construction staging areas and access routes) adjacent to sensitive habitat to prevent sensitive habitat impacts and to prevent the spread of silt from the construction zone into adjacent habitats. Temporary fencing shall be located on the western boundary of the impact area south of the inlet channel, and on the north and south side of the inlet channel (Figure 10). Fencing shall be installed in a manner that does not impact habitats to be avoided.</p>	Less than significant

**Table 4 (cont.)**  
**SUMMARY OF BIOLOGICAL MITIGATION MEASURES**

<b>Impact</b>	<b>Proposed Mitigation</b>	<b>Level of Significance After Mitigation</b>
Issue 3: Jurisdictional Wetlands and Waters	<p>Construction crews shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint. Equipment maintenance, staging, and dispensing of fuel, oil, coolant, or other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent runoff from entering adjacent habitat and shall be shown on the construction plans. Contractor equipment shall be checked for leaks prior to operation and repair, as necessary. "No-fueling zones" shall be designated on construction plans.</p> <p>If work occurs beyond the fenced or demarcated limits of impact, work shall cease until the problem has been remedied to the satisfaction of EVMWD. Impacts that occur to sensitive areas beyond the approved fence shall be mitigated as determined by EVMWD in coordination with the USFWS, USACE, RWQCB, and/or CDFW. Temporary construction fencing shall be removed upon project completion.</p>	Less than significant

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

Sincerely,



Beth Ehsan  
Biology Project Manager

#### **Attachments**

- Figure 1 Regional Location
- Figure 2 USGS Topography
- Figure 3 Aerial Photograph
- Figure 4 MSHCP Criteria Cells
- Figure 5 Site Plan
- Figure 6 Soils
- Figure 7 Vegetation and Sensitive Species
- Figure 8 Waters of the U.S./State
- Figure 9 CDFW Jurisdiction and Riparian/Riverine Areas
- Figure 10 Vegetation and Sensitive Species
- Figure 11 Waters of the U.S./State Impacts

Figure 12 CDFW Jurisdiction and Riparian/Riverine Area Impacts

- Attachment A Plant Species Observed
- Attachment B Animal Species Observed or Detected
- Attachment C Special-Status Species with Potential to Occur
- Attachment D Explanation of Status Codes for Plant and Animal Species
- Attachment E Representative Site Photographs

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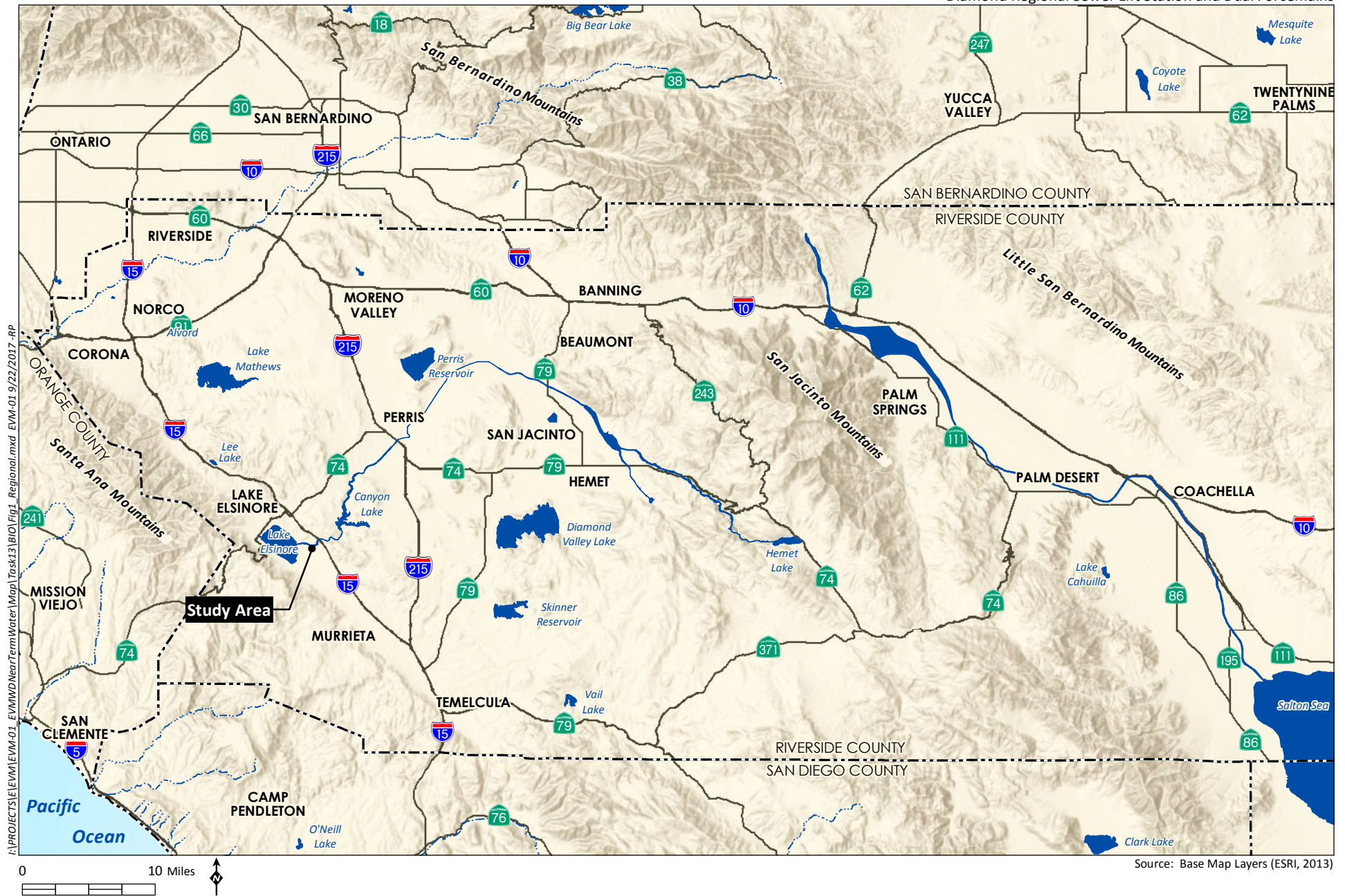
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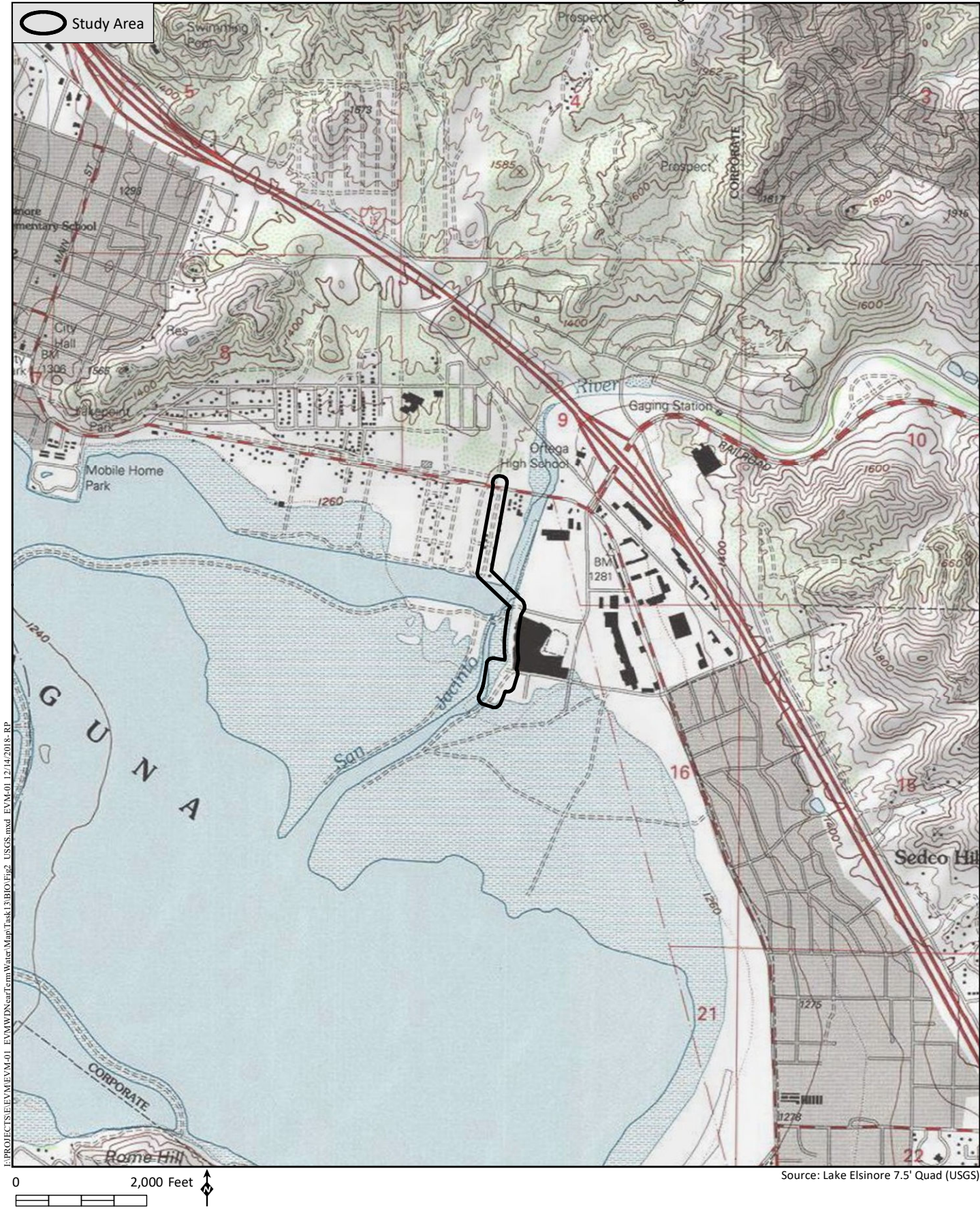
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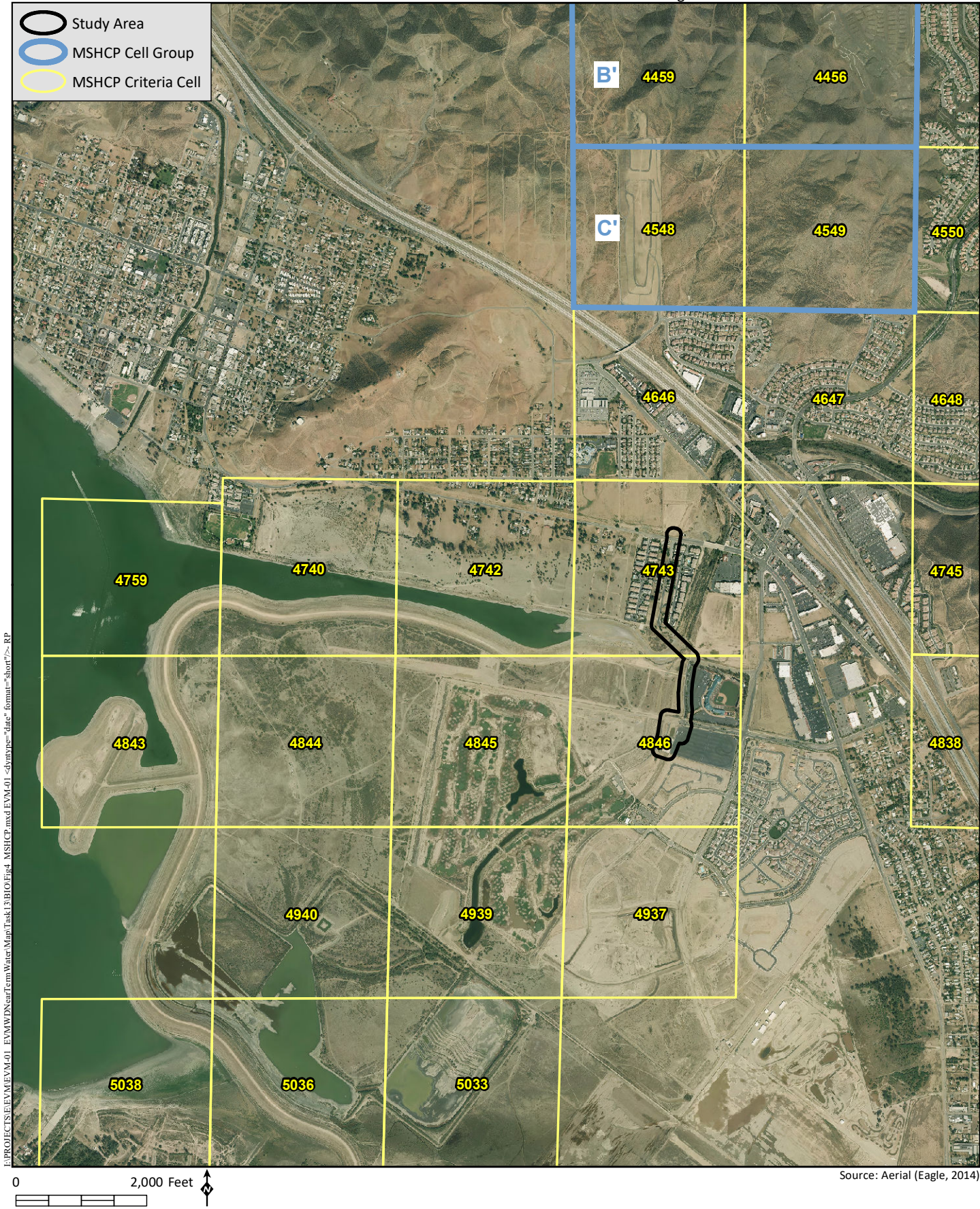




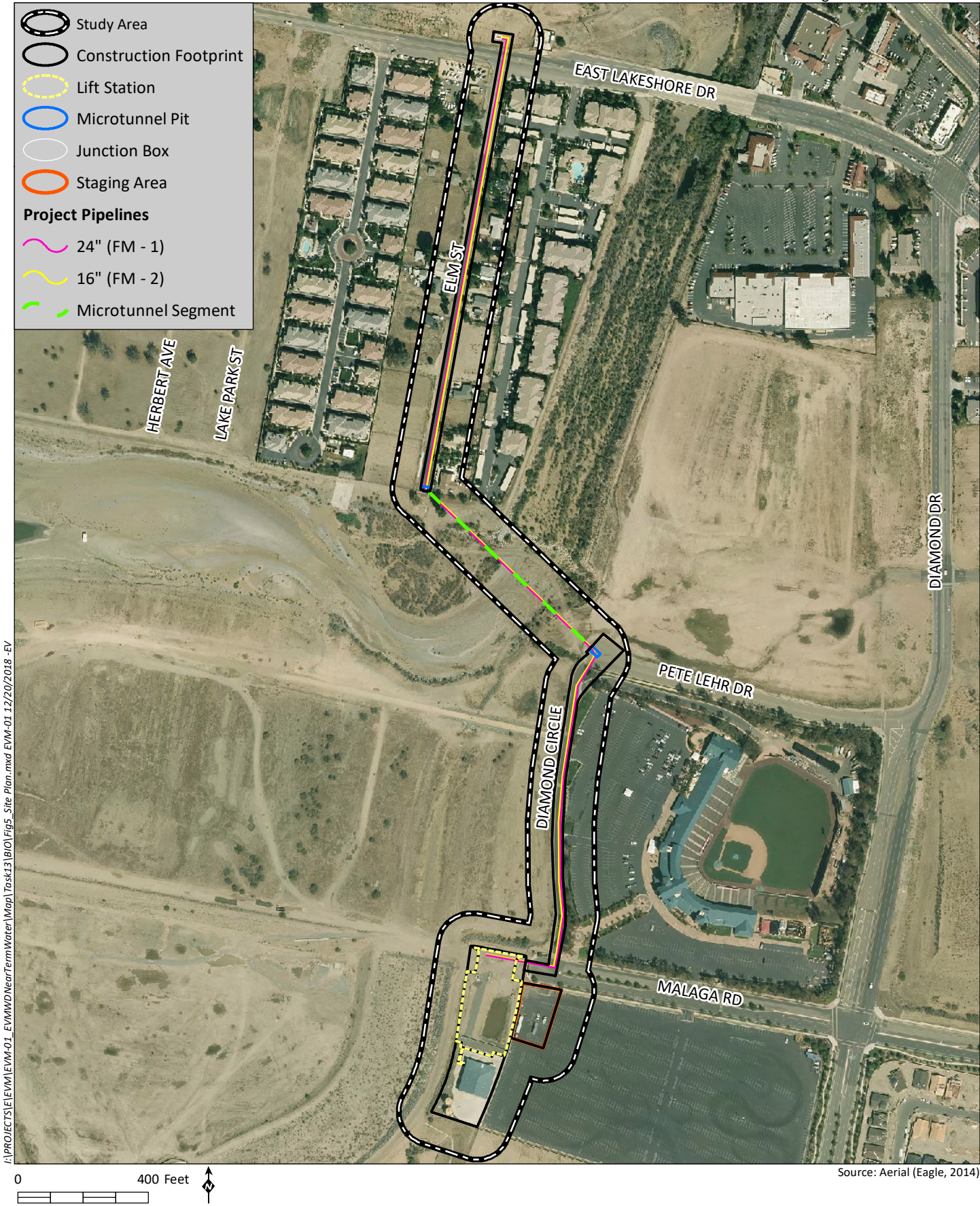




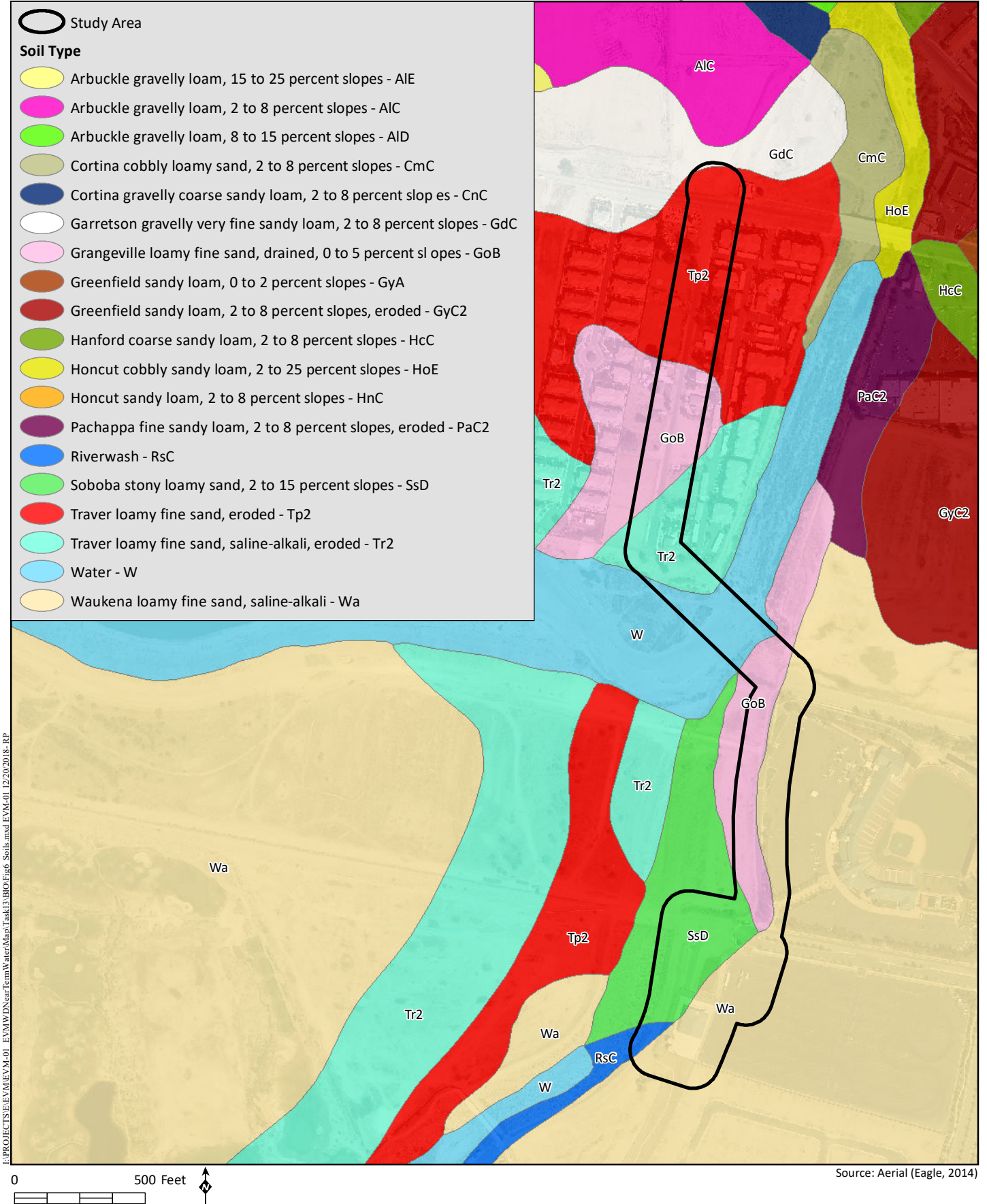




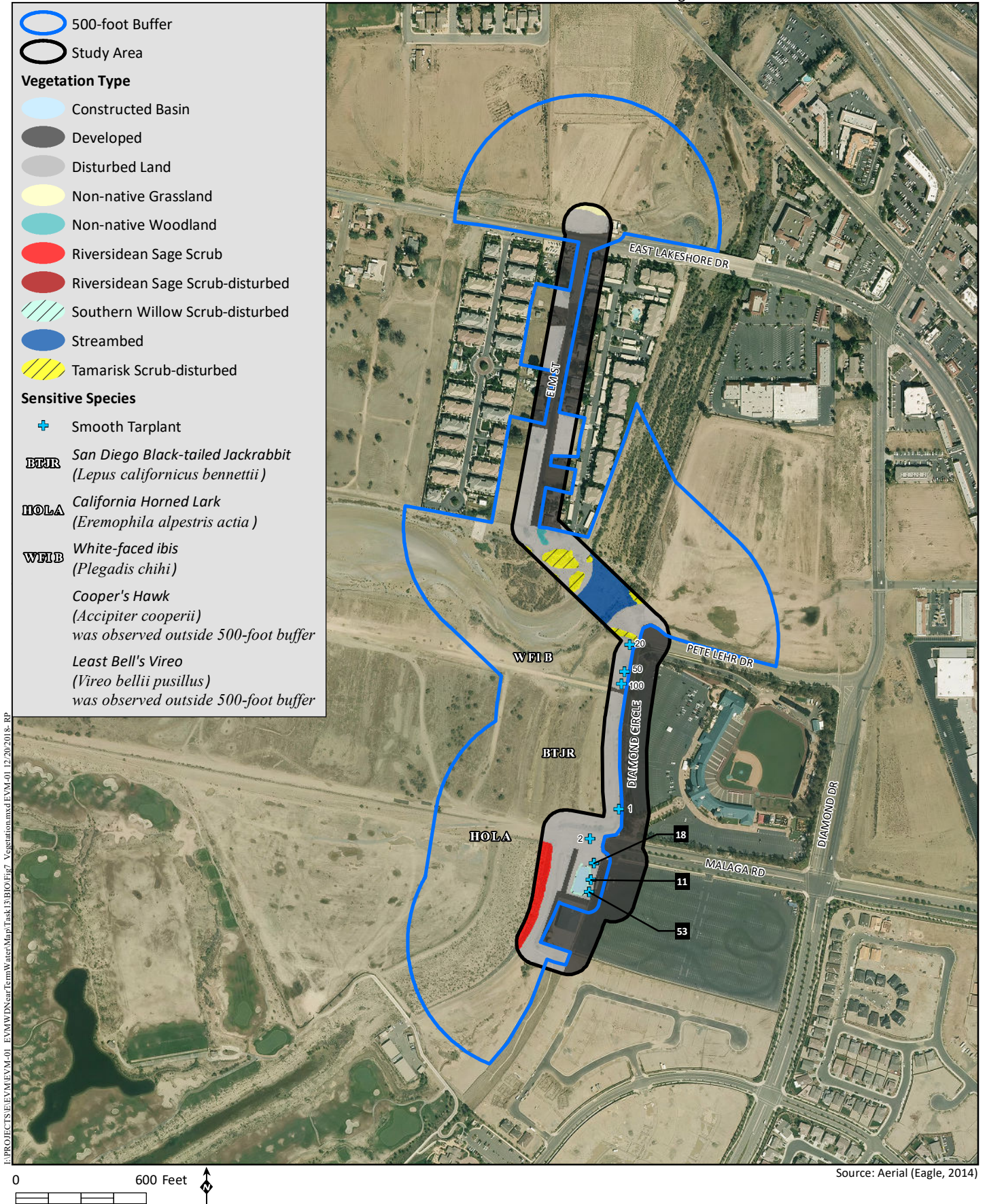








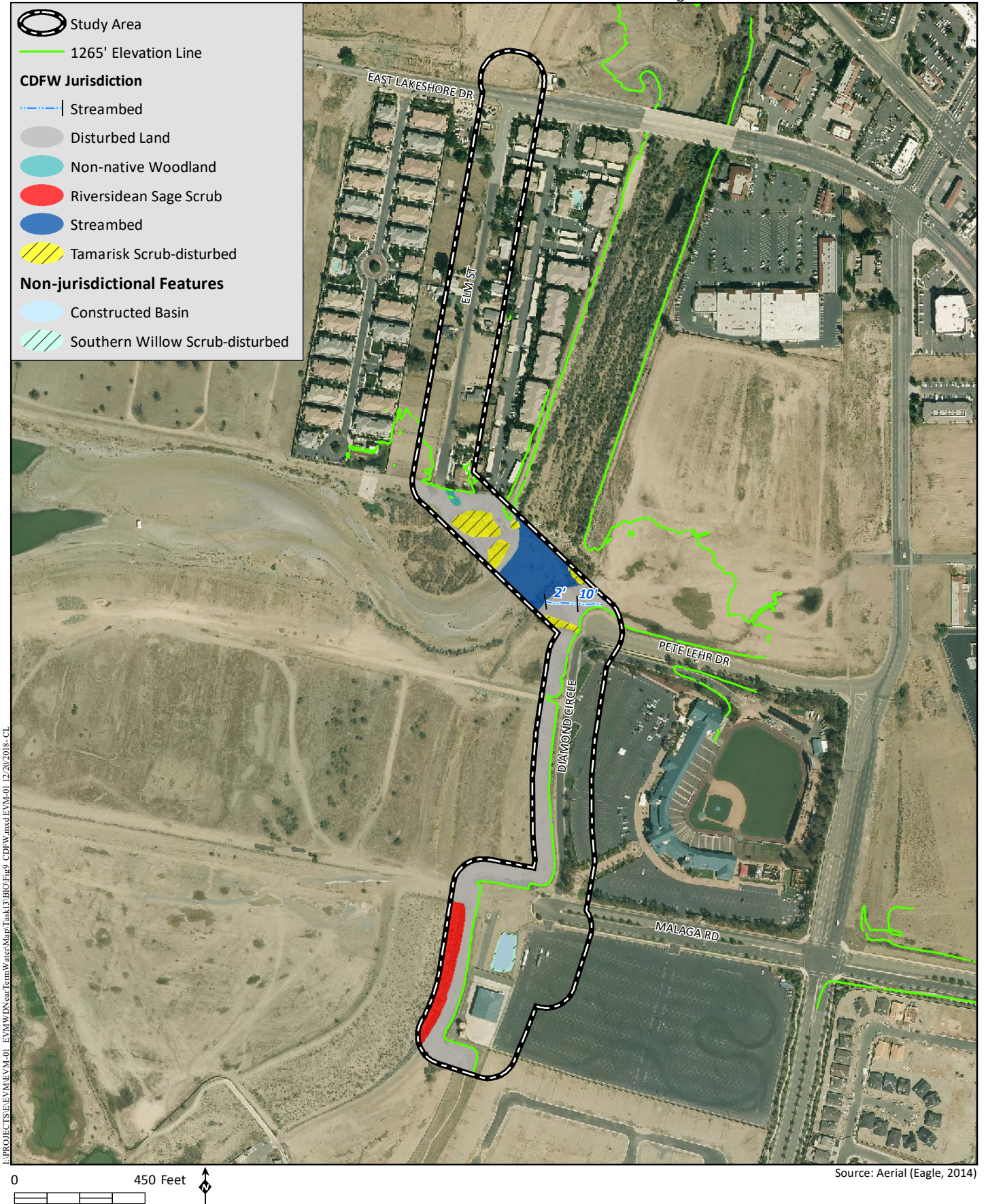




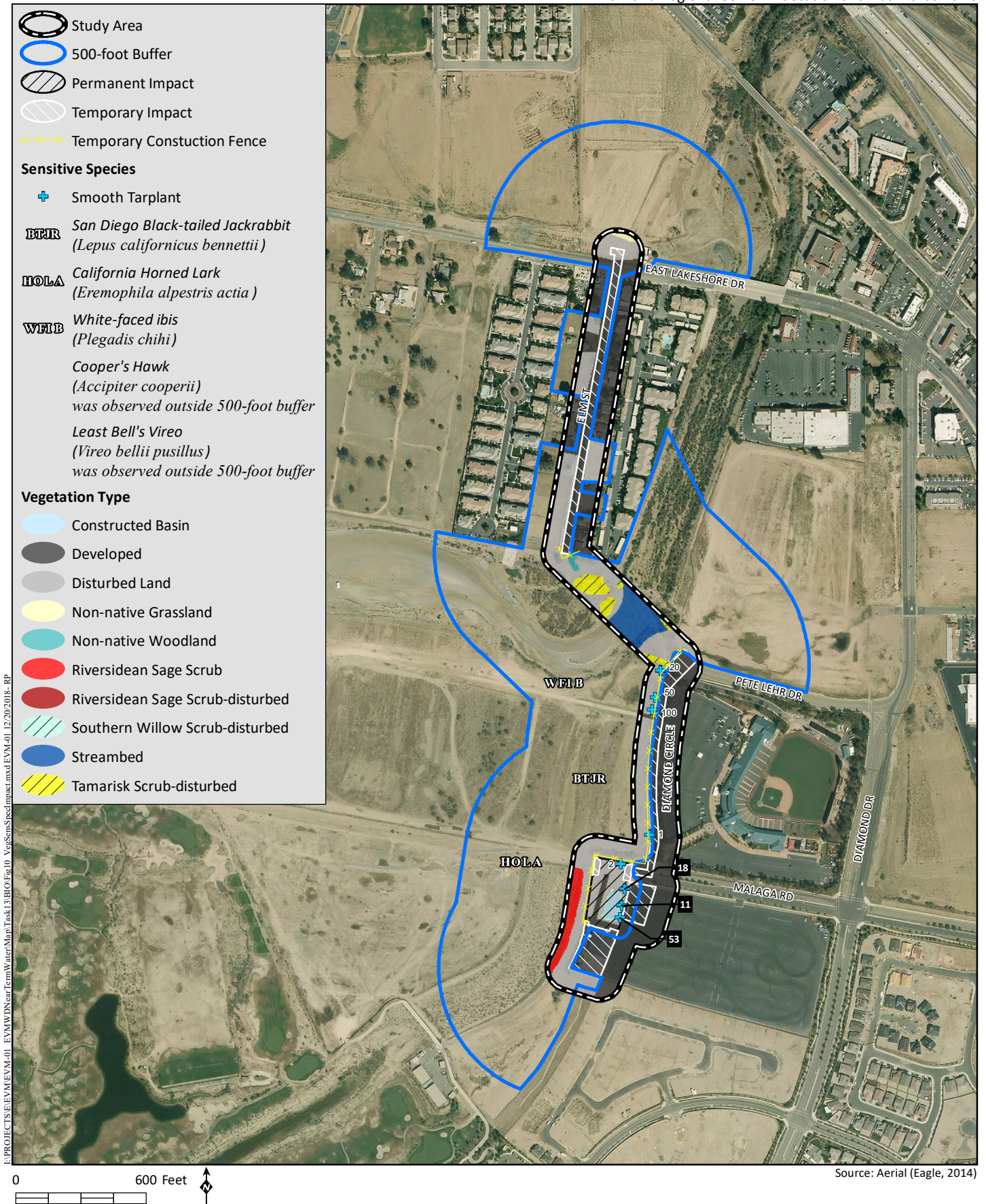








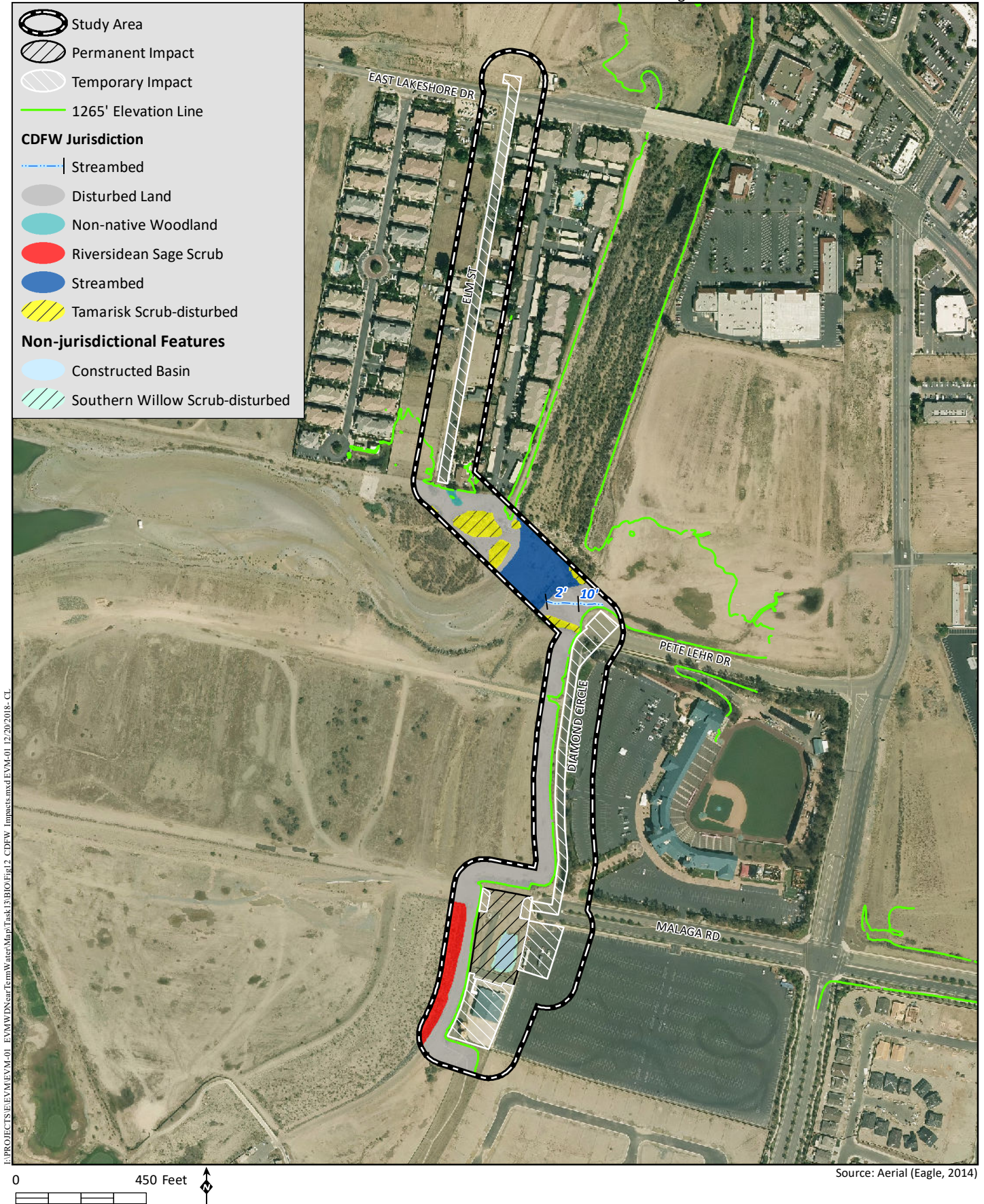












## CDFW Jurisdiction and Riparian/Riverine Area Impacts

Figure 12

## Attachment A Plant Species Observed

Family	Scientific Name	Common Name
Anacardiaceae	<i>Schinus molle</i> *	Peruvian pepper tree
Asteraceae	<i>Ambrosia psilostachya</i>	western ragweed
	<i>Baccharis salicifolia</i>	mule fat
	<i>Bebbia juncea</i> var. <i>aspera</i>	sweetbush
	<i>Centaurea melitensis</i> *	tocalote/Maltese star thistle
	<i>Centromadia pungens</i> ssp. <i>laevis</i> †	smooth tarplant
	<i>Corethrogyne filaginifolia</i>	California aster
	<i>Encelia farinosa</i>	brittlebush
	<i>Ericameria pinifolia</i>	pine-bush
	<i>Erigeron canadensis</i>	horseweed
	<i>Helianthus annuus</i>	annual sunflower
	<i>Isocoma menziesii</i>	goldenbush
	<i>Lactuca serriola</i> *	wild lettuce
	<i>Logfia</i> sp.	filago
	<i>Oncosiphon piluliferum</i> *	stinknet
	<i>Pseudognaphalium canescens</i>	everlasting
	<i>Psilocarphus</i> sp.	woolly-heads
	<i>Xanthium strumarium</i>	cocklebur
Boraginaceae	<i>Amsinckia menziesii</i>	common fiddleneck
	<i>Cryptantha</i> sp.	cryptantha
	<i>Heliotropium curassavicum</i>	salt heliotrope
Brassicaceae	<i>Hirschfeldia incana</i> *	short-pod mustard
	<i>Lepidium</i> sp.	pepperweed
	<i>Sisymbrium orientale</i> *	Indian hedgemustard
Caprifoliaceae	<i>Sambucus nigra caerulea</i>	blue elderberry
Chenopodiaceae	<i>Chenopodium album</i> *	lamb's quarter
	<i>Salsola tragus</i> *	prickly Russian thistle
Convolvulaceae	<i>Cressa truxillensis</i>	alkali weed
Euphorbiaceae	<i>Croton setiger</i>	dove weed
	<i>Euphorbia albomarginata</i>	rattlesnake weed
Fabaceae	<i>Acmispon glaber</i>	deer weed
	<i>Astragalus</i> sp.	milkvetch
	<i>Lupinus bicolor</i>	miniature lupine
	<i>Lupinus</i> sp.	lupine
	<i>Medicago polymorpha</i> *	burclover
	<i>Melilotus indicus</i> *	sourclover
Geraniaceae	<i>Erodium</i> spp.*	filaree
Malvaceae	<i>Malva parviflora</i> *	cheeseweed
Phrymaceae	<i>Mimulus guttatus</i>	seep monkey-flower
Pinaceae	<i>Pinus</i> sp.	pine
Plantaginaceae	<i>Veronica anagallis-aquatica</i> *	water speedwell
Poaceae	<i>Avena</i> spp.*	oat
	<i>Bromus diandrus</i> *	common ripgut grass
	<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome
	<i>Hordeum murinum</i> *	hare barley
	<i>Lamarckia</i> spp.	goldentop
	<i>Polypogon monspeliensis</i> *	annual beard grass
	<i>Schismus barbatus</i> *	Mediterranean grass

## Attachment A (cont.) Plant Species Observed

Family	Scientific Name	Common Name
Polygonaceae	<i>Eriogonum fasciculatum</i>	buckwheat
	<i>Rumex crispus</i> *	curly dock
Portulacaceae	<i>Portulaca oleracea</i> *	purslane
Salicaceae	<i>Salix gooddingii</i>	Goodding's black willow
Simaroubaceae	<i>Ailanthus altissima</i> *	tree of heaven
Solanaceae	<i>Datura wrightii</i>	jimson weed
	<i>Nicotiana glauca</i> *	tree tobacco
Tamaricaceae	<i>Tamarix ramosissima</i> *	saltcedar, tamarisk

\* Non-native species.

†Sensitive species.



## Attachment B

### Animal Species Observed or Detected

Family	Scientific Name	Common Name
<b>Reptile</b>		
Phrynosomatidae	<i>Phrynosoma coronatum</i>	coast horned lizard
	<i>Uta stansburiana</i>	common side-blotched lizard
Hylidae	<i>Pseudacris regilla</i>	Pacific tree frog
<b>Birds</b>		
Accipitridae	<i>Accipiter cooperii</i> †*	Cooper's hawk
	<i>Buteo jamaicensis</i>	red-tailed hawk
Aegithalidae	<i>Psaltiriparus minimus</i>	bushtit
Alaudidae	<i>Eremophila alpestris</i> †	horned lark
Anatidae	<i>Anas platyrhynchos</i>	mallard duck
Ardeidae	<i>Ardea alba</i>	great egret
	<i>Bubulcus ibis</i>	cattle egret
	<i>Butorides virescens</i>	green heron
	<i>Egretta thula</i>	snowy egret
Cathartidae	<i>Cathartes aura</i>	turkey vulture
Charadriidae	<i>Charadrius vociferus</i>	killdeer
Columbidae	<i>Zenaida macroura</i>	mourning dove
Corvidae	<i>Corvus corax</i>	common raven
Emberizidae	<i>Chondestes grammacus</i>	lark sparrow
	<i>Pipilo crissalis</i>	California towhee
Fringillidae	<i>Carduelis psaltria</i>	lesser goldfinch
	<i>Carduelis tristis</i>	American goldfinch
	<i>Carpodacus mexicanus</i>	house finch
Hirundinidae	<i>Stelgidopteryx serripennis</i>	northern rough-winged swallow
Icteridae	<i>Agelaius phoeniceus</i>	red-winged black bird
	<i>Euphagus cyanocephalus</i>	Brewer's blackbird
	<i>Icterus cucullatus</i>	hooded oriole
	<i>Sturnella neglecta</i>	western meadowlark
Mimidae	<i>Mimus polyglottos</i>	northern mockingbird
Parulidae	<i>Geothlypis trichas</i>	common yellowthroat
Recurvirostridae	<i>Himantopus mexicanus</i>	black-necked stilt
Sturnidae	<i>Sturnus vulgaris</i>	European starling
Threkiornithidae	<i>Plegadis chihi</i> †	white-faced ibis
Trochilidae	<i>Calypte anna</i>	Anna's hummingbird
Troglodytidae	<i>Thryomanes bewickii</i>	Bewick's wren
Tyrannidae	<i>Sayornis nigricans</i>	black phoebe
	<i>Sayornis saya</i>	Say's phoebe
Vireonidae	<i>Vireo bellii pusillus</i> †*	least Bell's vireo
<b>Mammals</b>		
Leporidae	<i>Lepus californicus bennettii</i> †	San Diego black-tailed jack rabbit
	<i>Sylvilagus audubonii</i>	desert cottontail
Muridae	<i>Rattus norvegicus</i> *	Norway or brown rat
Sciuridae	<i>Spermophilus beecheyi</i>	California ground squirrel

\*Species detected off site outside of the project 500 foot buffer.

†Sensitive species.



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**Attachment C**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

<b>Species</b>	<b>Sensitivity Status*</b>	<b>Habitat</b>	<b>Status On Site</b>
Chaparral sand verbena ( <i>Abronia villosa aurita</i> )	--/-- CNPS List 1B.1	Sandy soils, requires bare ground, not tolerant of weeds.	Not expected. Species is conspicuous and would have been seen if present.
Munz's onion ( <i>Allium munzii</i> )	FE/ST CNPS List 1B.1	Clay soils, opening in grassland, sage scrub.	Not expected. Sage scrub and clay soils do not occur on site. Species not observed during sensitive plant survey.
Alkali marsh aster ( <i>Almutaster pauciflorus</i> )	--/-- CNPS Rank 2B.2	Damp, alkaline habitats.	Low. Marginal potential habitat present. Not observed during sensitive plant survey.
San Diego ambrosia ( <i>Ambrosia pumila</i> )	FE/-- CNPS List 1B.1	Floodplain terraces and vernal pool margins.	Low. Vernal pools not present. Floodplain terrace is present. Species not observed during sensitive plant survey. Potential habitat areas highly disturbed from human activities.
Rainbow manzanita ( <i>Arctostaphylos rainbowensis</i> )	--/-- CNPS List 1B.1	Chaparral.	Not expected. Not observed on site, though species conspicuous year round.
Western spleenwort ( <i>Asplenium vespertinum</i> )	--/-- CNPS List 4.2	Chaparral, woodland, coastal sage scrub, and rocky areas with semi-shaded but seasonally arid conditions.	Not expected. Habitat does not occur in project area. Not observed during sensitive plant survey.
San Jacinto Valley crownscale ( <i>Atriplex coronata</i> var. <i>notatior</i> )	FE/-- CNPS Rank 1B.1	Occurs in playas, chenopod scrub, valley and foothill grassland, and vernal pools. From 1,250 to 1,805 feet in elevation.	Not expected. Grassland habitat occurs on site, but is disturbed. Not observed during sensitive plant surveys.
South Coast saltscale ( <i>Atriplex pacifica</i> )	--/-- CNPS List 1B.2	Xeric, often mildly disturbed locales of coastal bluff scrub.	Not expected. Coastal bluff habitat not present.
Parish's brittlescale ( <i>Atriplex parishii</i> )	--/-- CNPS Rank 1B.1	Alkaline lowlands with saline soil.	Not expected. Marginal habitat occurs on site. Species was not observed during sensitive plant survey.
Davidson's saltscale ( <i>Atriplex serenana</i> var. <i>davidsonii</i> )	--/-- CNPS Rank 1B.2	Alkaline lowlands with saline soil.	Not expected. Marginal habitat occurs on site. Species was not observed during sensitive plant surveys.
California ayenia ( <i>Ayenia compacta</i> )	--/-- CNPS Rank 2B.3	Washes associated with creosote bush scrub.	Not expected. Desert scrub habitat does not occur on site. Species not observed during sensitive plant surveys.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	FT/SE CNPS List 1B.1	Semi alkaline mud flats and vernal pools, in clay soils.	Not expected. Habitat does not occur in project area. Not observed during sensitive plant survey.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	--/-- CNPS List 1B.1	Mesic clay, woodland, chaparral scrub, vernal pools.	Not expected. Chaparral, woodland, and vernal pools not present. Clays soils do not occur on site.
Santa Rosa basalt brodiaea ( <i>Brodiaea santarosae</i> )	--/-- CNPS Rank 1B.2	Valley and foothill grasslands on basaltic soils.	Not expected. Appropriate soils do not occur on site. Species not observed during the sensitive plant survey.
Plummer's mariposa lily ( <i>Calochortus plummerae</i> )	--/-- CNPS Rank 4.2	Rocky, sandy, alluvial or granite, sage scrub, woodland, and grassland.	Low. Rocky and sandy soils are present. Not observed during sensitive plant surveys.
Intermediate mariposa lily ( <i>Calochortus weedii</i> var. <i>intermedius</i> )	--/-- CNPS List 1B.2	Rocky, chaparral, scrub, grassland.	Not expected. Marginal habitat present. Species not observed during sensitive plant survey.
Payson's jewel-flower ( <i>Caulanthus simulans</i> )	--/-- CNPS Rank 4.2	Pinyon-juniper woodland, chaparral and sage scrub. Typically on slopes and ridgelines with sandy granitic soil.	Not expected. Preferred habitat does not occur on site. Not observed during sensitive plant surveys.
Smooth tarplant ( <i>Centromadia pungens</i> spp. <i>laevis</i> )	--/-- CNPS List 1B.1	Riparian/watercourse, grassland, alkali scrub. Does well in disturbed areas.	Present. A population of over 2,500 plants was observed on site during the sensitive plant survey.
Peninsular spineflower ( <i>Chorizanthe leptotheca</i> )	--/-- CNPS Rank 4.2	Xeric openings in chamise chaparral.	Not expected. Chaparral habitat not present.
Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	--/-- CNPS List 1B.1	Openings in chaparral and sage scrub, sandy, or rocky soil.	Not expected. Chaparral and sage scrub not present on site. Not observed during sensitive plant species.
Long-spined spineflower ( <i>Chorizanthe polygonoides</i> var. <i>longispina</i> )	--/-- CNPS List 1B.1	Chaparral, sage scrub, grassland, often in clay soils.	Not expected. Chaparral and sages scrub not present. No clay soils mapped on site.
Summer holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> )	--/-- CNPS List 1B.2	Chaparral and cismontane woodland.	Not expected. Habitat does not occur on site.
Small-flowered morning-glory ( <i>Convolvulus simulans</i> )	--/-- CNPS Rank 4.2	Clay soils in perennial grasslands, on vernal pools periphery, or in broad openings in sage scrub.	Not expected. No vernal pool or clay soils occur on site. Not observed during sensitive plant surveys.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Paniculate tarplant ( <i>Deinandra paniculata</i> )	--/-- CNPS List 4.2	Scrub and grassland, vernally mesic.	Low. Potential habitat is present on site. Species not observed during sensitive plant survey.
Cleveland's bush monkeyflower ( <i>Diplacus clevelandii</i> )	--/-- CNPS List 4.2	Chaparral and lower montane coniferous forest.	Not expected. Habitat not present.
Slender-horned spineflower ( <i>Dodecahema leptoceras</i> )	FE/SE CNPS List 1B.1	Chaparral, woodland, scrub, sandy soil.	Not expected. Habitat does not occur on site. Sandy soils are present, species not observed during sensitive plant surveys.
Many-stemmed dudleya ( <i>Dudleya multicaulis</i> )	--/-- CNPS List 1B.2	Clay soils in barren, rocky areas with limited vegetation.	Not expected. Rocky habitat present. No clay soils mapped on site. Not observed during sensitive plant surveys.
Sticky dudleya ( <i>Dudleya viscida</i> )	--/-- CNPS List 1B.2	Chaparral, scrub, coastal bluffs, rocky.	Not expected. Habitat does not occur on site.
Round-leaved filaree ( <i>Erodium macrophyllum</i> )	--/-- CNPS List 1B.2	Clay soils, woodland and grassland.	Not expected. Clay soils not mapped on site. Species not observed during sensitive plant survey.
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	FE/SE CNPS List 1B.3	Mesic area, sage scrub, grassland, vernal pools.	Not expected. No vernal pools or sage scrub present. Mesic habitat limited to streamside. Not observed during sensitive plant surveys.
Palomar monkeyflower ( <i>Erythranthe diffusa</i> )	--/-- CNPS List 4.3	Lower montane coniferous forest and chaparral understory.	Not expected. Coniferous forest and chaparral not present.
Campbell's liverwort ( <i>Geothallus tuberosus</i> )	--/-- CNPS Rank 1B.1	Mesic soil, in wetlands, vernal pools, grassland, chaparral and coastal scrub.	Low. Limited mesic areas. Not observed during sensitive plant survey.
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	--/-- CNPS List 4.2	Clay soil, chaparral, sage scrub and grassland.	Not expected. Chaparral and sage scrub do not occur on site. Clays soils do not occur on site. Grassland on site is non-native. Not observed during sensitive plant surveys.
Tecate cypress ( <i>Hesperocyparis forbesii</i> )	--/-- CNPS List 1B.1	Clay, gabbroic or metavolcanic soils in coniferous forest or chaparral.	Not expected. Habitat does not occur on site. Appropriate soils not present.
Graceful tarplant ( <i>Holocarpha virgata</i> ssp. <i>elongata</i> )	--/-- CNPS List 4.2	Coastal mesas and foothills with grassland habitats.	Not expected. Habitat does not occur on site.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Vernal barley ( <i>Hordeum intercedens</i> )	--/-- CNPS List 3.2	Mesic grasslands, vernal pools, and large saline flats or depressions.	Not expected. Vernal pools and similar habitat not present. Not observed during sensitive plant surveys.
Mesa horkelia ( <i>Horkelia cuneata</i> ssp. <i>puberula</i> )	--/-- CNPS List 1B.1	Chaparral, woodland, and scrub, sandy or gravelly soils.	Not expected. chaparral, and sage scrub habitat not present. Woodlands limited to non-native woodland. Not observed during sensitive plant surveys.
Southern California black walnut ( <i>Juglans californica</i> )	--/-- CNPS Rank 4.2	Chaparral, cismontane woodland, coastal scrub, riparian woodland, alluvial soils.	Not expected. Species conspicuous year round and was not observed.
Santa Lucia dwarf rush ( <i>Juncus luciensis</i> )	--/-- CNPS List 1B.2	Wet sandy soils, streamside.	Low. Sandy stream side habitat present. Species not observed during sensitive plant surveys.
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )	--/-- CNPS List 1B.1	Alkaline playas, salt marsh and vernal pool habitats associated w/Traver soils.	Not expected. Although Traver soils occur on site, the site does not support salt marsh or vernal pool habitat. Not observed during sensitive plant surveys.
Heart-leaved pitcher sage ( <i>Lepechinia cardiophylla</i> )	--/-- CNPS List 1B.2	Perennial shrub found in coniferous forests, chaparral and cismontane woodland.	Not expected. Coniferous forests, chaparral and cismontane woodland do not occur on site.
Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	--/-- CNPS List 4.3	Openings in chaparral and sage scrub, typically dry sites	Not expected. Chaparral and sage scrub habitats not present. Not observed during sensitive plant surveys.
Ocellated Humboldt lily ( <i>Lilium humboldtii</i> ssp. <i>ocellatum</i> )	--/-- CNPS List 4.2	Shaded montane canyons.	Not expected. Habitat not present.
Lemon lily ( <i>Lilium parryi</i> )	--/-- CNPS List 1B.2	Moist montane meadows.	Not expected. Montane meadows are not present on site.
Parish's meadowfoam ( <i>Limnanthes alba</i> ssp. <i>parishii</i> )	--/SE CNPS List 1B.2	Vernally mesic mountain habitats including meadows and seeps, and vernal pools.	Not expected. Mountain habitats not present on site.
Small-flowered microseris ( <i>Microseris douglasii</i> ssp. <i>platycarpa</i> )	--/-- CNPS Rank 4.2	Coastal clay areas in openings of chaparral, sage scrub, and grasslands.	Not expected. Clay soils not present. Chaparral and sage scrub do not occur on site. Not observed during sensitive plant surveys.
Intermediate monardella ( <i>Monardella hypoleuca</i> ssp. <i>intermedia</i> )	--/-- CNPS List 1B.3	Chaparral, cismontane woodland and occasionally coniferous forest.	Not expected. Coniferous forests, chaparral and cismontane woodland do not occur on site.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Hall's monardella ( <i>Monardella macrantha</i> ssp. <i>hallii</i> )	--/-- CNPS List 1B.3	Lower montane coniferous forest and montane chaparral, usually near rocky rubble and boulders where shrub cover is limited.	Not expected. Coniferous forest and chaparral habitats do not occur on site.
Little mouselink ( <i>Myosurus minimus</i> )	--/-- CNPS List 3.1	Vernal pools, valley & foothill grassland, alkaline soils.	Not expected. No vernal pools on site. Not observed during sensitive plant surveys.
Spreading navarretia ( <i>Navarretia fossalis</i> )	FT/-- CNPS List 1B.1	Vernal pools.	Not expected. No vernal pools occur on site.
Prostrate navarretia ( <i>Navarretia prostrate</i> )	--/-- CNPS List 1B.1	Mesic, alkaline, vernal pools, grassland, scrub.	Not expected. Vernal pools not present. Not observed during sensitive plant surveys.
Chaparral nolina ( <i>Nolina cismontane</i> )	--/-- CNPS Rank 1B.2	Chaparral and coastal scrub.	Not expected. Appropriate habitat not present in project area.
California Orcutt grass ( <i>Orcuttia californica</i> )	FE/SE CNPS List 1B.1	Vernal pools.	Not expected. Vernal pools not present in project area.
Woolly chaparral-pea ( <i>Pickeringia montana</i> var. <i>tomentosa</i> )	--/-- CNPS List 4.3	Chaparral, washes.	Not expected. Chaparral not present. Species not observed during sensitive plant surveys.
Fish's milkwort ( <i>Polygala cornuta</i> var. <i>fishiae</i> )	--/-- CNPS List 4.3	Shaded, rocky places in canyons in association with oak woodland or chaparral.	Not expected. Habitat does not occur on site.
White rabbit tobacco ( <i>Pseudognaphalium</i> <i>leucocephalum</i> )	--/-- CNPS List 2.2	Sandy or gravelly benches, dry stream or canyon bottoms.	Low. Gravelly, sandy streambed present. Species not observed during sensitive plant surveys.
Engelmann oak ( <i>Quercus engelmannii</i> )	--/-- CNPS List 4.2	Oak woodland and southern mixed chaparral.	Not expected. Species is conspicuous and was not observed.
Coulter's matilija poppy ( <i>Romneya coulteri</i> )	--/-- CNPS List 4.2	Dry washes and canyons in chaparral and coastal sage scrub communities, often areas that have been burned.	Not expected. Habitat does occur, but species is conspicuous and was not observed during sensitive plant survey.
San Miguel savory ( <i>Satureja</i> <i>chandleri</i> )	--/-- CNPS List 1B.2	Chaparral, woodland, scrub, grassland, rocky areas.	Not expected. Habitat not present on site.
Southern mountains skullcap ( <i>Scutellaria bolanderi</i> spp. <i>austromontana</i> )	--/-- CNPS List 1B.2	Woodland, chaparral, mesic.	Not expected. Habitat does not occur on site. Species was not observed during sensitive plant surveys.
Hammit's clay-cress ( <i>Sibbaropsis hammittii</i> )	--/-- CNPS List 1B.2	Grows in mesic, grassy openings in chaparral on volcanic soils.	Not expected. Volcanic soils and chaparral do not occur on site.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 1 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE PLANTS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Bottle liverwort ( <i>Sphaerocarpos drewei</i> )	--/-- CNPS Rank 1B.1	Chaparral or coastal scrub below 2,000 feet amsl.	Not expected. Habitat not present on site.
San Bernardino aster ( <i>Symphyotrichum defoliatum</i> )	--/-- CNPS List 1B.2	Grassland and disturbed areas.	Low. Disturbed habitat present. Species not observed during sensitive plant surveys.
Parry's tetracoccus ( <i>Tetracoccus dioicus</i> )	--/-- CNPS List 1B.2	Chaparral and coastal scrub.	Not expected. Chaparral and sage scrub not present on site. Not observed during sensitive plant species.
Woven-spored lichen ( <i>Texosporium sancti-jacobi</i> )	--/-- CNPS List 3	Chaparral openings, usually on animal pellets, dead twigs or detritus rich soil.	Not expected. Chaparral not present. Species not observed during sensitive plant species.
California screw moss ( <i>Tortula californica</i> )	--/-- CNPS Rank 1B.2	Sandy soils in chenopod scrub or native grasslands.	Not expected. Chenopod scrub and native grassland habitats do not occur.
Wright's trichocoronis ( <i>Trichocoronis wrightii</i> var. <i>wrightii</i> )	--/-- CNPS List 1B.1	Alkaline grassland, vernal pools, and playas.	Not expected. Vernal pools and similar habitat not present.
La Purisima viguiera ( <i>Viguiera purisimae</i> )	--/-- CNPS List 1B.3	Coastal scrub and chaparral.	Not expected. Coastal scrub and chaparral are not present to on site.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 2**  
**POTENTIAL FOR LISTED OR SENSITIVE ANIMALS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Cooper's hawk ( <i>Accipiter cooperii</i> )	--/WL	Forest and woodland habitats. Will forage in grasslands.	High. Small patch of non-native woodland on site, riparian woodland nearby. Potential foraging habitat on and adjacent to site. Species observed foraging nearby.
Tricolored blackbird ( <i>Agelaius tricolor</i> )	--/SSC	Freshwater marsh, swamp, wetlands. Preferred reeds or cattails and requires open water nearby.	Not expected. Tamarisk scrub habitat and open water occur on and adjacent to site, stands of cattails, reeds or similar not present.
Southern California rufous-crowned sparrow ( <i>Aimophila ruficeps canescens</i> )	--/WL	Hillsides, with grassland, sage scrub, or chaparral.	Low to moderate. Grassland like habitat occurs nearby. Potential habitat limited within project area. Species locally common.
Bell's sage sparrow ( <i>Amphispiza belli belli</i> )	--/WL	Evenly spaced sage scrub.	Not expected. Preferred sage scrub habitat not present.
Arroyo toad ( <i>Anaxyrus californicus</i> )	FE/--	Low flow streams with sparse cover in foothills, valleys and mountains. Requires sandy terraces.	Not expected. Stream on site does not have the required upland habitat. Stream flow is irregular and is often dry.
Golden eagle ( <i>Aquila chrysaetos</i> )	--/FP	Open country, prefers mountains or hills.	Not expected. No habitat on site. Species uncommon and typically not found near residential areas.
California glossy snake ( <i>Arizona elegans occidentalis</i> )	--/SSC	Scrub and grassland habitats, usually with loose or sandy soils. A generalist.	Low. Sandy soils are present, but are disturbed from human activity.
Long-eared owl ( <i>Asio otus</i> )	--/SSC	Oak woodland, riparian areas, or other dense trees.	Low. Limited habitat for species occurs on edge of site. Riparian area mainly comprised of tamarisk scrub.
Burrowing owl ( <i>Athene cunicularia</i> )	--/SSC	Grassland, fallow agriculture, and areas of sparse cover, preferably with burrows of fossorial mammals.	Not expected. Habitat with low potential occurs in the study area. Species not detected during focused surveys.
Crotch bumblebee ( <i>Bombus crotchii</i> )	--/--	Scrub and grassland habitats. Uses sage, sunflowers, and similar species for nectar.	Low. Typical nectaring resources are limited on site.
Vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	FT/--	Vernal pool and playa habitat, cool pools, preferable on clay soils.	Not expected. Habitat for species not observed in project area. Potential ephemeral pool habitat was noted within buffer survey area.



**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 2 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE ANIMALS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Ferruginous hawk ( <i>Buteo regalis</i> )	--/WL	Large areas of open grassland or shrub with elevated nest sites.	Low. Little to no habitat on site. Potential habitat occurs in buffer. Species uncommon.
Swainson's Hawk ( <i>Buteo swainsoni</i> )	--/ST	Open desert, sparse scrub with large trees.	Not expected. Typical habitat not present on site.
Dulzura pocket mouse ( <i>Chaetodipus californicus femoralis</i> )	--/SSC	Grassland and chaparral ecotone, sage scrub.	Not expected. Grassland limited on site and are disturbed from prior human activity. No ecotone habitats present.
Northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	--/SSC	Sage scrub and grassland, sandy soils.	Low. Non-native grassland occurs, but is disturbed. No sage scrub habitat occurs. Sandy soils present, but have been disturbed from previous human activities.
Western snowy plover ( <i>Charadrius alexandrinus nivosus</i> )	FT/SSC	Coastal beaches, sand dune beaches, river mouths, estuaries.	Low. Preferred habitat is present, species not known to nest in western Riverside county.
Senile tiger beetle ( <i>Cicindela senilis frosti</i> )	--/--	Mud shore, wetlands at marine shoreline, salt marshes, and Lake Elsinore.	Moderate to low. Species known from Lake Elsinore. Soils in project area rocky. Mud shore occurs nearby.
Western pond turtle ( <i>Clemmys marmorata pallida</i> )	--/SSC	Slow-moving streams, ponds, reservoirs, other water bodies deeper than 6 feet with logs or other submerged cover.	Not expected. Stream with deep pools or other submerged cover does not occur in project area.
Orange-throated whiptail ( <i>Cnemidophorus hyperthrus</i> )	--/WL	Chaparral, sage scrub, grassland, woodland, riparian areas.	Moderate. Property includes potential habitat. Species locally common.
Coastal western whiptail ( <i>Cnemidophorus tigris stenjnegeri</i> )	--/SSC	Open rocky areas with sparse vegetation usually scrub or grassland.	Moderate. Potential habitat occurs on site. Species locally common.
Red-diamond rattlesnake ( <i>Crotalus ruber</i> )	--/SSC	Heavy brush, boulders, can use a variety of habitats. Prey density a determining factor.	Low to Moderate. Species locally common.
San Bernardino ringneck snake ( <i>Diadophis punctatus modestus</i> )	S/--	Moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands.	Low to not expected. Streambed present, not perennially wet. Mostly disturbed habitat present.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 2 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE ANIMALS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Stephen's kangaroo rat ( <i>Dipodomys stephensi</i> )	FE/ST	Open areas with sparse perennial cover and loose soil.	Not expected. Preferred habitat does not occur on site. Kangaroo rat burrows not observed on site.
White-tailed kite ( <i>Elanus leucurus</i> )	--/FP	Grassland, agriculture with nearby woodland for nesting.	Low. Disturbed habitat similar to grassland and agriculture habitats. Woodland habitat occurs nearby.
California horned lark ( <i>Eremophila alpestris actia</i> )	--/WL	Grassland, agriculture fields, and disturbed fields.	Not expected to low. Disturbed habitat occurs on site but is not a field typically associated with species.
Western mastiff bat ( <i>Eumops perotis californicus</i> )	--/SSC	Rocky areas, cliff faces, known to roost in buildings.	Not expected. No cliffs or other roosting locations on site.
Quino checkerspot butterfly ( <i>Euphydryas editha quino</i> )	FE/--	Open areas, sparse vegetation, flowers. Host plants include <i>Plantago</i> spp., <i>Antirrhinum coulterianum</i> , <i>Cordylanthus rigidus</i> .	Not expected. Host plant not observed in the project area.
Arroyo chub ( <i>Gila orcuttii</i> )	--/SSC	Streams and rivers.	Not expected. Species not known from Lake Elsinore. Stream in project site does not have perennial flow.
Bald eagle ( <i>Haliaeetus leucocephalus</i> )	--/SE	Close proximity to lakes or other water bodies.	Low. Habitat for species is present in adjacent Lake Elsinore. Species not known to nest at Lake Elsinore.
Yellow-breasted chat ( <i>Icteria virens</i> )	--/SSC	Mature riparian woodland.	Not expected. Habitat does not occur on site or within buffer.
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	--/SSC	Open ground, short vegetation, pastures, agriculture.	Low. Disturbed habitat has low potential for species.
Western yellow bat ( <i>Lasiurus xanthinus</i> )	--/SSC	Desert grassland and scrub with an associated water feature.	Low. Water and desert Grassland with scrub occurs nearby.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	--/SSC	Primarily open scrub with short grasses.	Low. Species locally common, disturbed habitat with grasses present but mostly overgrown with tall weeds.
Santa Rosa Plateau fairy shrimp ( <i>Linderiella santarosae</i> )	--/--	Cool-water vernal pools which are formed on Southern Basalt Flows.	Not expected. Vernal pool habitat not present.
Yuma myotis ( <i>Myotis yumanensis</i> )	--/--	Always near pond, streams, or lakes. By day, under sidings or shingles, caves, mines, buildings, or under bridges.	Low to not expected. Roosting habitat does not occur on site. Bridge occurs nearby.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 2 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE ANIMALS TO OCCUR ON SITE**

<b>Species</b>	<b>Sensitivity Status*</b>	<b>Habitat</b>	<b>Status On Site</b>
San Diego desert woodrat ( <i>Neotoma lepida</i> )	--/SSC	Scrub and desert, rock outcrops, or areas of dense cover.	Not expected. No Neotoma middens observed. Scrub habitat not present.
Pocketed free-tailed bat ( <i>Nyctinomops femorosaccus</i> )	--/SSC	Desert; roosts in rock outcrops.	Not expected. Desert habitat not present.
Steelhead - southern California DPS ( <i>Oncorhynchus mykiss irideus</i> )	--/SE	Prefers streams and rivers with dissolved oxygen concentration of at least 7 parts per million. Deep low-velocity pools are important wintering habitats. Spawning habitat consists of gravel substrates free of excessive silt.	Not expected. Stream on site does not constitute potential habitat for species.
Southern grasshopper mouse ( <i>Onychomys torridus ramona</i> )	--/SSC	Grassland and sparse sage scrub.	Not expected. Only known in Riverside between Diamond Valley Lake and Lake Skinner. No sage scrub habitat present.
Osprey ( <i>Pandion haliaetus</i> )	--/WL	Coasts and inland lakes.	Low. Habitat present on adjacent Lake Elsinore. Species not known from lake.
Los Angeles pocket mouse ( <i>Perognathus longimembris brevinasus</i> )	--/SSC	Fine sandy soils with sparse vegetation.	Not expected. Sandy soils are present but are either covered with dense cover or have gravel and cobble present.
Coast horned lizard ( <i>Phrynosoma coronatum blainvillei</i> )	--/SSC	Grassland, scrub, chaparral, woodland.	Low. Potential habitat for species occurs. Species not observed during the various surveys.
White-faced ibis ( <i>Plegadis chihi</i> )	--/WL	Nests in freshwater marshes and forages in shallow waters and wet, grassy habitats.	Low. Habitat does not occur on site. Marsh like habitat occurs nearby in tamarisk scrub.
Coastal California gnatcatcher ( <i>Polioptila californica californica</i> )	FT/SSC	Coastal sage and other low scrub.	Not expected. Habitat for species does not occur on site.
California red-legged frog ( <i>Rana draytonii</i> )	FT/SSC	dense, shrubby riparian vegetation with deep, slow-moving water.	Not expected. Stream on site is not perennial. Species not known from Lake Elsinore.

**Attachment C (cont.)**  
**Potential for Listed or Sensitive Plants and Animals to Occur on Site**

**Table 2 (cont.)**  
**POTENTIAL FOR LISTED OR SENSITIVE ANIMALS TO OCCUR ON SITE**

Species	Sensitivity Status*	Habitat	Status On Site
Coast patch-nosed snake ( <i>Salvadora hexalepis virgultea</i> )	--/SSC	Primarily found in chaparral but also inhabits coastal sage scrub and areas of grassland mixed with scrub.	Low to not expected. Marginal habitat for species occurs adjacent to site.
Western spadefoot ( <i>Scaphiopus hammondi</i> )	--/SSC	Grassland, sage scrub or occasionally chaparral. Standing water, puddles, vernal pools, needed for reproduction.	Low to moderate. Marginal habitat present. Documented from north side of lake.
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	FE/--	Vernal pools.	Not expected. No habitat on site.
Coast range newt ( <i>Taricha torosa torosa</i> )	--/SSC	Grassland, woodland associated with ponds, slow-moving streams.	Not expected. Stream on site is often dry.
American badger ( <i>Taxidea taxus</i> )	--/SSC	Open plains and prairies, farmland, and sometimes edges of woods.	Low. Potential habitat occurs adjacent to project site.
Two-striped garter snake ( <i>Thamnophis hammondi</i> )	--/SSC	Stream course with adjacent dense vegetation.	Low to Moderate. Stream course crosses project with dense tamarisk scrub nearby.
Least Bell's vireo ( <i>Vireo bellii pusillus</i> )	FE/SE	Riparian areas with dense ground cover and stratified canopy, prefers willows.	Not expected. Southern willow scrub on site is disturbed and not typical habitat for species. Adjacent tamarisk scrub is marginal habitat. Species not detected on site during focused surveys.

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## **Attachment D**

### **Explanation of Status Codes for Plant and Animal Species**

#### **FEDERAL AND STATE CODES**

##### **U.S. Fish and Wildlife Service (USFWS)**

BCC	Bird of Conservation Concern
BGEPA	Bald and Golden Eagle Protection Act
FC	Federal candidate species
FE	Federally listed endangered
FPD	Federally proposed for delisting
FPE	Federally proposed endangered
FPT	Federally proposed threatened
FT	Federally listed threatened

##### **USFWS Birds of Conservation Concern (BCC)**

The primary legal authority for Birds of Conservation Concern (2008) is the Fish and Wildlife Conservation Act of 1980 (FWCA), as amended. Other authorities include the Endangered Species Act, Fish and Wildlife Act (1956) and 16 USC §701. A FWCA 1988 amendment (Public Law 100-653, Title VIII) requires the Secretary of the Interior through the USFWS to “identify species, subspecies, and populations of all migratory non-game birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act of 1973.” The 2008 BCC report is the most recent effort by the USFWS to carry out this proactive conservation mandate.

The BCC report aims to identify accurately the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the USFWS’ highest conservation priorities and draw attention to species in need of conservation action. The USFWS hopes that by focusing attention on these highest priority species, the report will promote greater study and protection of the habitats and ecological communities upon which these species depend, thereby ensuring the future of healthy avian populations and communities. Birds of Conservation Concern 2008 lists are available online at <https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>.

##### **USFWS Federal Candidate (FC) Species**

Federal candidate species are those for which the USFWS has on file “sufficient information on biological vulnerability and threats to support a proposal to list as endangered or threatened, but for which preparation and publication of a proposal is precluded by higher-priority listing actions. [The USFWS] maintain[s] this list for a variety of reasons: to notify the public that these species are facing threats to their survival; to provide advance knowledge of potential listings that could affect decisions of environmental planners and developers; to provide information that may stimulate conservation efforts that will remove or reduce threats to these species; to solicit input from interested parties to help us identify those candidate species that may not require protection under the [Endangered Species Act] or additional species that may require the Act’s protections; and to solicit necessary information for setting priorities for preparing listing proposals” (Federal Register 70:90 [May 11, 2005]).

## **Attachment D (cont.)**

### **Explanation of Status Codes for Plant and Animal Species**

#### **USFWS Federal Proposed Endangered (FPE) Species**

Any species the Service has determined is in danger of extinction throughout all or a significant portion of its range and the Service has proposed a draft rule to list as endangered. Proposed endangered species are not protected by the take prohibitions of section 9 of the ESA until the rule to list is finalized. Under section 7(a)(4) of the ESA, federal agencies must confer with the Service if their action will jeopardize the continued existence of a proposed species.

#### **USFWS Federal Proposed Threatened (FPT) Species**

Any species the Service has determined is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and the Service has proposed a draft rule to list as threatened. Proposed threatened species are not protected by the take prohibitions of section 9, consistent with any protective regulations finalized under section 4(d) of the ESA, until the rule to list is finalized. Under section 7(a)(4) of the ESA, federal agencies must confer with the Service if their action will jeopardize the continued existence of a proposed species.

#### **USFWS Bald and Golden Eagle Protection Act (BGEPA)**

In 1782, Continental Congress adopted the bald eagle as a national symbol. During the next one and a half centuries, the bald eagle was heavily hunted by sportsmen, taxidermists, fisherman, and farmers. To prevent the species from becoming extinct, Congress passed the Bald Eagle Protection Act in 1940. The Act was extremely comprehensive, prohibiting the take, possession, sale, purchase, barter, or offer to sell, purchase, or barter, export or import of the bald eagle “at any time or in any manner.”

In 1962, Congress amended the Eagle Act to cover golden eagles, a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. The golden eagle, however, is accorded somewhat lighter protection under the Act than the bald eagle. Another 1962 amendment authorizes the Secretary of the Interior to grant permits to Native Americans for traditional religious use of eagles and eagle parts and feathers.

#### **California Department of Fish and Wildlife (CDFW)**

SCE	State candidate for listing as endangered
SCT	State candidate for listing as threatened
SE	State listed endangered
SR	State listed rare
ST	State listed threatened
SSC	State species of special concern
WL	Watch List
FP	Fully Protected species refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.
Special Animal	Refers to all vertebrate and invertebrate taxa of concern to the Natural Diversity Database regardless of legal or protection status.

## **Attachment D (cont.)**

### **Explanation of Status Codes for Plant and Animal Species**

#### **California Environmental Quality Act (CEQA)**

For plants with no current federal or state legal standing, “CEQA” refers to the fact that under the Act, impacts to species may be found significant under certain circumstances (e.g., the species are regionally sensitive and/or are protected by a local policy, ordinance, or habitat conservation plan; or the impact involves interference with certain movements or migrations, with wildlife corridors or with nursery sites).

#### **County of Riverside**

##### **Multiple Species Habitat Conservation Plan (MSHCP) Covered**

MSHCP Covered Species indicates that the species is part of a proposed list of species (146 total) considered at this time to be adequately conserved by the Western Riverside County MSHCP, provided that participants meet all conditions listed in the Final MSHCP. These species are discussed in Section 2.1.4 and 9.2 of the MSHCP, Volume 1.

##### **Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Group Designation**

Group 1 – Take coverage is warranted based upon regional or landscape level considerations, such as healthy population levels, widespread distribution throughout the MSHCP Plan Area, and life history characteristics that respond to habitat-scale conservation and management actions.

Group 2 – Take coverage is warranted based upon regional or landscape level considerations with the addition of site-specific conservation and management requirements that area clearly identified in the MSHCP for species that are generally well distributed but that have core habitats that require conservation.

Group 3 – Take coverage is warranted based upon site-specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined habitat or limited geographic area within the MSHCP Plan Area.

##### **Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Special Species Acronyms/Abbreviations**

NEPSSA	Narrow Endemic Plant Species Survey Area species – Designated Area where focused surveys are required for plant species that are highly restricted by their habitat affinities, edaphic requirements, or other ecological factors, and for which specific conservation measures have been identified in Section 6.1.3 of the MSHCP, Volume I.
CASSA	Criteria Area Species Survey Area – Designated areas where focused surveys for specific species are required. These are species for which existing available information is not sufficient, and for which specific conservation measures have been identified in Section 6.3.2 of the MSHCP, Volume I.



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

Planning Species      Subsets of Covered Species that are intended to provide guidance for MSHCP Reserve assembly in Cores, Linkages, and Area Plans.

### OTHER CODES AND ABBREVIATIONS

#### California Native Plant Society California Rare Plant Rank (CRPR) Codes

##### Lists

1A = Presumed extirpated in California and either rare or extinct elsewhere. Eligible for state listing.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2A = Presumed extirpated in California but common elsewhere. Eligible for state listing.

2B = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Review List: Plants about which more information is needed. Some eligible for state listing.

4 = Watch List: Plants of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

##### List/Threat Code Extensions

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

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

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

A "CA Endemic" entry corresponds to those taxa that only occur in California.

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



Photo 1. Disturbed habitat and non-native grassland at the north end of the study area.



Photo 2. Disturbed habitat along Elm Street in the northern part of the study area.

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Photo 3. Looking west over streambed habitat in the San Jacinto River/Inlet Channel in the middle of the study area, with disturbed habitat in the foreground.



Photo 4. Smooth tarplant (*Centromadia pungens* ssp. *laevis*) in the middle of the study area.

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Photo 5. Disturbed habitat in the southern part of the study area.



Photo 6. Constructed basin and southern willow scrub-disturbed at the proposed lift station site, with the existing Back Basin lift station in the background.

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## Appendix C

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### Cultural Resources Survey Report

February 11, 2019

EVM-01 Task 13

Mr. Jason Dafforn, P.E.  
Engineering Manager  
Elsinore Valley Municipal Water District  
31315 Chaney Road  
Lake Elsinore, CA 92531

**Subject: Diamond Regional Sewer Lift Station and Dual Force Mains Project Cultural Resources Survey Report**

Dear Mr. Dafforn:

HELIX Environmental Planning, Inc., (HELIX) was contracted to conduct a cultural resources survey for the Diamond Regional Sewer Lift Station and Dual Force Mains Project (project) in the City of Lake Elsinore, California. The cultural resources survey included a records search and literature review, Sacred Lands File (SLF) search and Native American outreach, review of historic maps and aerial photographs, discussions with Tribal representatives, an intensive survey by a HELIX archaeologist and Luiseño Native American monitor, and preparation of this letter report. Several cultural resources are recorded near the proposed project area, but these resources would not be subject to impacts from the project. This letter report details the methods and results of the cultural resources survey, as well as mitigation measures for the proposed project.

## **PROJECT LOCATION AND DESCRIPTION**

The project area is located in the City of Lake Elsinore, in southwestern Riverside County, California (Figure 1, *Regional Location*). The project site is located west of Interstate 15 and south of State Route (SR) 74. It is on the eastern shore of Lake Elsinore, immediately south of East Lakeshore Drive, and just west of Malaga Road and Diamond Circle (Figures 2 and 3, *USGS Topography*, and *Aerial Photograph*, respectively). The project extends across the confluence of the San Jacinto River at the eastern shoreline of Lake Elsinore. The project area is in an unsectioned portion of Township 6 South, Range 4 West, on the US Geological Survey (USGS) 7.5-minute Lake Elsinore quadrangle (Figure 2).

The Elsinore Valley Municipal Water District proposes to construct and operate the Diamond Regional Sewer Lift Station, to be located at 18523 Malaga Road in the City of Lake Elsinore (Figures 2 and 3). The proposed lift station would have an ultimate capacity of 19.9 million gallons per day (mgd) and be located near the existing baseball stadium and planned Summerly Community Park. The project would also include the installation of approximately 3,400 linear feet of dual force main pipelines of 16-inch



and 24-inch diameters (Figure 4, *Site Plan*). Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving affected portions of streets. In addition to trenching operations, microtunneling would be used to install the pipeline where the proposed alignment crosses the San Jacinto River. Jack-and-bore procedures (also known as auger boring) may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore processes for this project would involve digging a pit on each side (an entrance and exit pit) with an excavator, and tunneling or boring under the channel or roadway from the entrance pit to the exit pit on the other side.

The pipeline trench is expected to be less than 10 feet wide and a minimum of 4 feet deep. Construction would be limited to a proposed 40-foot-wide construction easement. A staging area has been identified within an existing paved parking lot (Figure 4). The project was addressed in the District's 2006 Water Distribution System Master Plan and Wastewater Master Plan Program Environmental Impact Report.

The alignment has been slightly modified since the original cultural resources survey was conducted in February 2017. The project name was also changed from Lakeshore Regional Lift Station and Force Mains Project subsequent to the original work. Thus, the records search and Native American correspondence included in the confidential appendices to this report reference Lakeshore Regional Lift Station as the project name.

## ENVIRONMENTAL SETTING

The project area is situated on the eastern shoreline of Lake Elsinore, a natural lake formed by the San Jacinto River. The climate of the area is characterized as semi-arid to subhumid, with warm, dry summers and cool, moist winters (National Cooperative Soil Survey 2006). Elevations within the project area range between approximately 1,244 feet above mean sea level (AMSL) within the San Jacinto outfall and basin of Lake Elsinore and approximately 1,266 to 1,275 feet AMSL at the proposed lift station south of Malaga Road and at the existing facility on East Lakeshore Drive, respectively (Google Earth 2016). Based on the geographic setting of the soils mapped within the project area, average annual temperatures range from 45 degrees Fahrenheit (°F) to 52°F in January and 72 to 82°F in July (National Cooperative Soil Survey 1975, 1997, 1999, and 2003). The San Jacinto River flows into Lake Elsinore just east of the project area; the proposed pipeline alignment crosses a portion of the river outfall's flow line into the basin of Lake Elsinore (Figure 2). Elsinore Peak, situated within the Elsinore Mountain Range and Cleveland National Forest, is the closest mountain peak to the project and is located just over four miles to the southwest. The surrounding foothills terminate into the southern shore of Lake Elsinore.

Geologically, the project area is underlain by late Pleistocene to early Holocene alluvial deposits and late Holocene lacustrine deposits (Morton and Weber 2003). Soils mapped within the project area are: Traver loamy fine sand, eroded, Traver loamy fine sand, saline-alkali, eroded, Grangeville Loamy fine sand, drained, 0 to 5 percent slopes, Soboba stony loamy sand, and Waukena loamy fine sand, saline-alkali (Web Soil Survey 2017). A majority of the mapped soils within the project area are from the Traver, Grangeville, and Soboba series, all of which formed in alluvium derived from granitic bedrock (National Cooperative Soil Survey 1975, 1999, and 2003). The Traver series is generally found on alluvial fans and floodplains and supports salt grass and salt-tolerant weeds (National Cooperative Soil Survey 2003). The Grangeville series is composed of deep, somewhat poorly drained soils that formed in moderate- to coarse-textured alluvium and support annual grasses and forbs, native alkali-tolerant

plants, and a few scattered oaks and cottonwood trees (National Cooperative Soil Survey 1999). The Soboba series consists of deep, excessively-drained soils with an upper stratum of stony, loamy sand and lower strata of cobbly and gravelly loamy sand; soils in the Soboba series support chaparral shrubs and annual grasses and forbs (National Cooperative Soil Survey 1975). The Waukena series of soils is only mapped within the southeastern corner of the proposed lift station location (Web Soil Survey 2017). These soils are composed of fine sandy and clay loams derived from granitic-sourced alluvium, and vegetation consists of salt and alkali tolerant grasses (National Cooperative Soil Survey 1997).

Many of the plant species naturally occurring in the vicinity of the project area are known to have been used by native populations for food, medicine, tools, and ceremonial and other uses (Bean and Shippek 1978; White 1963). Many of the animal species living within these communities (such as rabbits, deer, small mammals, and birds) would have been used by native inhabitants as well. The project's setting on the eastern shore of Lake Elsinore, near tributary drainages and adjacent to the inlet of the San Jacinto River, would have further provided native inhabitants with plentiful food and raw materials. Elsinore Hot Spring, or *Atengvo* (Luiseño), is a naturally-occurring hot spring located just over 1½ miles northwest of the project area; this geological feature is thought to have played an important role in Luiseño and Juaneño prehistory (Bean et al. 1979; Grenda 1997; Lerch and Smith 1984) and remains significant to the Native people, as discussed later in the report.

## CULTURAL SETTING

The culture history presented here (up to the discussion of the Late Prehistoric period) is based on Wallace's (1978) discussion of the Post-Pleistocene for southern California (circa 9000 BC to 2000 BC). The earliest inhabitants of California subsisted mainly by hunting, as attested to by "the finding of projectile points and other stone implements adapted to the chase at ancient campsites" throughout California (Wallace 1978:25). Wallace refers to this early period as Period I: Hunting. It generally equates with the Paleoindian or Lithic stage (Willey and Phillips 1958), in which little diversity of resource exploitation is evident.

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

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

The Late Prehistoric period in southern California is characterized by the incursion of Uto-Aztecan - speaking people who occupied large portions of the Great Basin and an area stretching from southern Arizona and northwest and central Mexico into Nevada, Oregon, and Idaho (Miller 1986). The expansion of the Takic group into southern California is unrefined, but several scholars have hypothesized as to



when and how the so-called “Uto Aztecan wedge” occurred. Sutton (2009) argues that the Takic group expanded into southern California from the San Joaquin Valley about 3,500 years ago. Moratto (1984) also proposes that Takic expansion into the Southern Coast region correlates to the end of the Early Period (Late Archaic) ca. 3,200 to 3,500 years ago, while Golla (2007) suggests an expansion of Uto-Aztecan speakers into southern California at approximately 2,000 years ago. While the exact chronology of Takic-speaking groups’ immigration to southern California remains uncertain, the beginning of the Late Prehistoric Period is marked by evidence of a number of new tool technologies and subsistence shifts in the archaeological record and is characterized by higher population densities and intensification of social, political, and technological systems. The changes include the production of pottery and the use of the bow and arrow for hunting instead of atlatl and dart, a reduction of shellfish gathering in some areas, an increase in the storage of foodstuffs such as acorns, and new traits such as the cremation of the dead (Gallegos 2002; McDonald and Eighmey 2004).

It must be noted that this interpretation by archaeologists and linguistic anthropologists differs from the beliefs and traditional knowledge of the Luiseño people. The creation stories indicate that the Luiseño people have always been here, not migrating from elsewhere. The creation story of the Pechanga Band of the Luiseño (Pechanga) tells that the world was created at Temecula. “The Káamalam [first people] moved to a place called Nachíivo Pomíisavo, but it was too small so they moved to a place called ‘exva Teméeku, this place you now know as Temeku. Here they settled while everything was still in darkness (DuBois 1908)” (Masiel-Zamora 2013:2).

The Late Prehistoric period is represented in northern San Diego County and Riverside County by the San Luis Rey complex, which is the archaeological manifestation of the predecessors of the ethnohistoric Luiseño people.

The San Luis Rey (SLR) complex is divided into two phases, SLR I and SLR II. Elements of the SLR complex include small, triangular, pressure-flaked projectile points (generally Cottonwood series, but Desert side-notched series also occurs); milling implements: mortars and pestles, manos and metates, and bedrock milling features; bone awls; Olivella shell beads; other stone and shell ornaments; and cremations (Meighan 1954; Moratto 1984; True et al. 1974). The later SLR II complex also includes several elements not found in the SLR I complex: “pottery vessels, cremation urns, red and black pictographs, and such nonaboriginal items as metal knives and glass beads (Meighan 1954:223)” (Moratto 1984:154). True noted a greater number of quartz projectile points at SLR sites than at Cuyamaca complex sites (in central and southern San Diego County), which he interpreted as a cultural preference for quartz (True 1966). The general mortuary pattern at San Luis Rey sites is ungathered cremations.

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

The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Indian people associated with the mission. The Luiseño language belongs to the Cupan group of the Takic subfamily, which has also been called Southern California Shoshonean, and is part of the widespread

Uto-Aztecan language family (Bean and Shipek 1978; Sparkman 1908; White 1963). Neighboring groups that speak Cupan languages are Cupeño, Cahuilla, and Gabrielino. The Indian people associated with Mission San Juan Capistrano, called Juaneño by the Spanish, were described by Kroeber and Harrington as a separate group, based on linguistic differences. However, the language, culture, and territory of the Luiseño and Juaneño are so closely related that several other ethnographers have considered them to be a single ethnic nationality (Bean and Shipek 1978; White 1963). Cameron (1987:319-321) noted archaeological differences between the two groups, and the Luiseño and Juaneño people consider themselves to be separate peoples.

The territory of the Luiseño people is generally described as extending along the coast from Agua Hedionda Creek on the southwest to Aliso Creek on the northwest. On the north this boundary extended east beyond Santiago Peak to the eastern side of the Elsinore Fault Valley, continuing southeast to Palomar Mountain, then around the southern slope above the valley of San Jose. The southern boundary follows westerly to Agua Hedionda Creek (Bean and Shipek 1978; White 1963).

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

Ethnographic and ethnohistoric studies of the Luiseño people include Bean and Shipek (1978), Boscana (1947), Kroeber (1976), Robinson (1947), Shipek (1977), Sparkman (1908), Talley (1982), and White (1963). Archaeological studies addressing the Late Prehistoric San Luis Rey complex include Meighan (1954), McCown (1955), True et al. (1974), and Wallace (1960). Most of the ethnographic studies, as well as the “classic” archaeological studies of the Luiseño people, have concentrated on the Pauma Valley and the Palomar Mountain area, although Wallace’s (1960) study was an archaeological survey of the Buena Vista Creek watershed. A recent Master’s thesis study by a Pechanga tribal member included an analysis of all the pre-contact cultural material from excavations undertaken at Temeku in 1952 (Masiel-Zamora 2013).

The Juaneno name for Lake Elsinore was *Paayaxtci*, while the version in another Luiseno 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 Juanenos and all Luisenos, 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) [Lerch and Smith 1984:8].

Rancho La Laguna, also known as Laguna Grande and La Laguna de Temecula, was granted by the Mexican government to Julian Manriquez in 1844. “The rancho consisted of three leagues that included the lake bed and the shoreline (Duffield 1987:1)” (Swanson 1991:9). Manriquez’s widow and three sons sold the rancho to Abel Stearns in 1852; Stearns in turn sold the land to Agustin Machado in 1858. Machado built an adobe and lived with his wife and children on the west and southwest side of the lake. The Machado ranch, which included orchards, vineyards, and livestock, was a stop on the Butterfield stage route until the stage line stopped operating around the time of the Civil War. The rancho was sold a few more times before being purchased by a partnership of Franklin Heald, Donald Graham, and William Collier in 1883. Frank Kimball had signed an agreement with the Atchison, Topeka, and Santa Fe Railroad to build a railway line running from San Diego to Barstow that would run adjacent to Lake Elsinore (still known at that time as La Laguna), and the Heald-Graham-Collier partnership planned to develop a town at the lake.

## **REGULATORY FRAMEWORK**

### **National Historic Preservation Act**

Section 106 of the National Historic Preservation Act of 1966 (NHPA) 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.

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 State Historic Preservation Officer (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 that 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

- (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].

### **California Environmental Quality Act**

Under the California Environmental Quality Act (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 an 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, and impacts to them are significant environmental effects under CEQA.

### **Tribal Cultural Resources**

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the cultural sensitivity of the 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 archaeological sites is the category termed Traditional Cultural Properties (TCPs) in discussions of cultural resource studies performed under federal auspices and Tribal Cultural Resources (TCRs) under CEQA. "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance

derived from the role the property plays in a community's historically rooted beliefs, customs, and practices (Parker and King 1998).

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

A TCP or TCR may be considered eligible for the NRHP or the CRHR 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 and TCRs 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 and TCRs 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 or TCR need only be important to community members and not the general outside population as a whole. In this way, a TCP or TCR boundary may be defined based on viewscape, encompassing topographic features, extent of archaeological district or use area, or a community’s sense of its own geographic limits. Regardless of why a TCP or TCR 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.

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

## **METHODS**

A record search of previously recorded archaeological resources, reports, and historic addresses of the project area and a 1-mile radius was conducted by HELIX staff at the Eastern Information Center (EIC) on February 15, 2017. Historic aerial photographs from 1938 to 2012 were reviewed, as were historic topographic maps from 1901 to 2012. The Native American Heritage Commission (NAHC) was contacted

on February 15, 2017 for a SLF search and list of Native American contacts. Letters were sent on March 9, 2017 to the contacts listed by the NAHC.

HELIX archaeologist Kristina Davison and Luiseño tribal cultural monitor Todd Perry from Pechanga surveyed the project alignment and a buffer on either side of it (an approximately 150-foot wide corridor, as shown in Figure 3) for cultural resources on February 23, 2017. The intensive pedestrian survey was conducted in parallel transects spaced 2 meters apart to achieve maximum ground coverage across the survey area. Fenced private yards were not surveyed but were examined from the edge of the road. A portion of the project alignment was revised in 2018; based on this, the alignment was resurveyed by HELIX field director Julie Roy and Pechanga tribal cultural monitor Beth Cordova on October 17, 2018. The survey area included a buffer on each side of the centerline, as shown in Figure 3.

## RECORDS SEARCH RESULTS/PREVIOUS RESEARCH

The EIC has a record of 30 previously conducted cultural resources studies within the 1-mile search radius, several of which were adjacent to or included a portion of the project area, as addressed in further detail below. Only a very small portion of the project area appears to have not been included in previous studies; this portion is located within and adjacent to the existing San Jacinto River channel to the south of the Lake Elsinore Inlet Channel and has been underwater at various points throughout the area's history. The earliest survey that is shown as including the project area was conducted in 1984 for the Lake Elsinore Management Project, and included the portion of the project alignment that crosses the Inlet Channel just south of Elm Street (Lerch and Smith 1984). Another of the studies shown as including a portion of the project area was conducted by Hampson in 1991 and consisted of a cultural resources survey of the perimeter of Lake Elsinore. The study identified four resources, including one (P-33-004042/ CA-RIV-4042) located due east of the project area, on the eastern side of the San Jacinto River channel (Hampson 1991). Another study was conducted in 1992 for the East Lake Specific Plan and included portions of the project alignment and the surrounding area. Two of the resources recorded within a 1-mile radius of the project (P-33-004647/CA-RIV-4647 and P-33-004648/ CA-RIV-4648) were recorded during this study (LeCount and Weber 1992). Another study was conducted in 2003 for the Temecula Valley Regional Water Reclamation Facility Effluent Pipeline project, and is shown as including the northernmost protrusion of the project alignment, where the proposed pipeline would connect to the existing facility north of East Lakeshore Drive and Elm Street (Peak & Associates, Inc. 2003). The most recent study within or adjacent to the project area was for the Vista and Ellis Zones Water System Improvement Project, conducted by CRM Tech in 2012 (Tang, et al. 2012).

The record search results from the EIC indicate that 31 cultural resources have been previously recorded within a 1-mile radius of the project (Table 1, *Previously Recorded Resources within 1 Mile of Project Site*). Of these, several are located within ¼ mile of the project area. One of the resources is Lake Elsinore itself (P-33-011009). The lake and its periphery are ethnographically significant to the Luiseño people; the ethnographic place name for Lake Elsinore is *Paahashan* (Dubois 1908; Grenda 1997; Harrington 1978). One of the resources (P-33-004042/CA-RIV-4042), is a temporary campsite or lithic processing station adjacent to the east of the San Jacinto River, at which burned bone, lithic debitage, and ground stone fragments have been observed (Hampson 1991; Hampson and Schmidt 1990); this site is located approximately 650 feet (200 meters) to the east of the project area and does not appear to have been tested to assess significance (Confidential Attachment A, *Record Search Maps*). Another of the sites (P-33-002765/CA-RIV-2765) is located approximately ¼ mile to the north of the project area



and is recorded as 11 bedrock milling features with a light lithic and ground stone scatter. The site record further notes that the milling features contain possible cupules and that two “test probes” were excavated, but no subsurface deposits were encountered (Desautels and Johnson 1984). Two of the resources within ¼ mile of the project (P-33-014713 and P-33-014714) are isolated ground stone fragments and are both recorded less than 330 feet (100 meters) to the north of the project area (Ballester 2005). In addition to these isolates located nearest to the project area, 12 other isolated artifacts are recorded within the search radius, consisting of ground stone fragments, lithic debitage, tools (P-33-015069 and P-33-015943), and two projectile points (P-33-015946 and P-33-015947) (Table 1). Of the remaining pre-contact archaeological resources, one is a large, four-locus lithic scatter (P-33-004648/CA-RIV-4648), one is a bedrock milling site with a light scatter of basalt artifacts (P-33-004037/CA-RIV-4037), one is a bedrock milling site lacking associated artifacts (P-33-003506/CA-RIV-3506), and one is a sparse lithic scatter (P-33-004647/CA-RIV-4647). Ten of the recorded resources within a 1-mile radius of the project are historic in age, and two of them are located within ¼ mile of the project; these include a bridge spanning the San Jacinto River (P-33-021126/CA-RIV-11690), located 820 feet (250 meters) northeast of the project, and a trash scatter (P-33-014711/CA-RIV-7840) which also includes a concrete foundation, located 300 feet (90 meters) to the northeast of the project on the western bank of the San Jacinto River. The remaining historic resources within the search radius include one historic isolate, two trash scatters and one trash deposit, one vernacular-style residence, and four sites composed of relocated barracks buildings associated with Camp Haan (Table 1). At the time of recordation in 1982, the barracks buildings associated with Camp Haan (P-33-007161, P-33-007162, P-33-007163, and P-33-007164) were located on the northeastern corner of Malaga Road and Mission Trail/East Lakeshore Drive, and the record notes that the buildings were sold as surplus after World War II (Borchard 1982). The buildings have since been demolished and modern buildings occupy their former location (Cotterman and Ballester 2009).

**Table 1**  
**PREVIOUSLY RECORDED RESOURCES WITHIN 1 MILE OF PROJECT SITE**

Resource Number (P-33-#)	Resource Number (CA-RIV-#)	Description	Recorder, Date
002765	2765	Bedrock milling features (n = 11), some with “possible cupules”; light lithic and ground stone scatter. Two test “probes” were excavated; no subsurface deposit was detected.	D. Desautels and H. Johnson, 1984
003506	3506	Two bedrock milling features on granitic boulders.	M. Davis, S. Hector, C. Bowden, 1988
004037	4037	Two bedrock milling features with a light scatter of lithic (basalt) debitage.	C.E. Drover and D.M. Smith, 1990
004042	4042	Lithic processing/temporary camp site adjacent to the east of the San Jacinto River. Fragments of burned bone, lithic debitage, ground stone fragments, and hammer stones were observed; some of the debitage exhibited evidence of use wear.	R. Paul Hampson and J.A. Schmidt, 1990

**Table 1 (cont.)**  
**PREVIOUSLY RECORDED RESOURCES WITHIN 1 MILE OF PROJECT SITE**

<b>Resource Number (P-33-#)</b>	<b>Resource Number (CA-RIV-#)</b>	<b>Description</b>	<b>Recorder, Date</b>
004647	4647	Sparse lithic scatter (one flake and two pieces of debitage); site was not relocated during a 2008 survey or during construction monitoring of the property.	SWCA Environmental Consultants, 2008; L. LeCount and P. Helvy, 1991
004648	4648	Large lithic and ground stone scatter composed of four areas of artifact concentration on a low sandy terrace; northern half of site was evaluated for significance through test excavations and determined ineligible for CRHR or NRHP listing.	K. Hovland, 2007; L. LeCount and P. Helvy, 1991
007161	--	Barracks building (wooden) associated with Camp Haan; constructed in January 1941, it was used to house the Anti-aircraft Training Center. It was sold as surplus after WWII and moved to its present location and then served as an American Legion Hall. The building has since been demolished or removed, and modern buildings occupy its former location.	C. Cotterman and D. Ballester, 2009; T. Borchard, 1982
007162	--	Five former Camp Haan barracks which were moved to this location and linked together. The building has since been demolished or removed, and modern buildings occupy its former location.	C. Cotterman and D. Ballester, 2009; T. Borchard, 1982
007163	--	Barracks building (wooden) associated with Camp Haan; it was sold as surplus after WWII and moved to its present location. The building has since been demolished or removed, and modern buildings occupy its former location.	C. Cotterman and D. Ballester, 2009; T. Borchard, 1982
007164	--	Barracks building (wooden) associated with Camp Haan; it was sold as surplus after WWII and moved to its present location and then served as an American Legion Hall. The building has since been demolished or removed, and modern buildings occupy its former location.	C. Cotterman and D. Ballester, 2009; T. Borchard, 1982



**Table 1 (cont.)**  
**PREVIOUSLY RECORDED RESOURCES WITHIN 1 MILE OF PROJECT SITE**

Resource Number (P-33-#)	Resource Number (CA-RIV-#)	Description	Recorder, Date
007195	--	Vernacular wood frame residential home constructed in 1924; a garage and wall are also noted within the property; at the time of recordation it still had its original mullioned windows and front door and the recorder notes that "its architectural integrity is intact".	T. Borchard, 1982
008915	--	Isolated lithic debitage.	L. LeCount and P. Helvy, 1991
008916	--	Isolated lithic debitage; parcel in which it was first recorded has since been surveyed, graded, and monitored, and no cultural materials were relocated or discovered.	SWCA Environmental Consultants, 2008; L. LeCount and P. Helvy, 1991
011009	011009	Lake Elsinore (Etengvo Wumoma)	P. Meredith, 1982
014711	007840	Concrete footing and a historic trash scatter; artifacts from the trash scatter date to the 1940s-1950s period; ineligible for NRHP or CRHR listing.	B. Tang, M. Hogan, M. Wetherbee, D. Ballester, 2005
014713	--	Isolated ground stone fragments (n = 2) from a single metate.	D. Ballester, 2005
014714	--	Isolated granitic metate fragment.	D. Ballester, 2005
014872	007927	Historic trash deposit consisting of rusted cans, glass shards, and porcelain sherds dating to the post-1945 era; noted as having some subsurface component.	M. Dahdul, 2006
015068	--	Isolated fine-grained quartzite flake.	N. Harris, 2006
015069	--	Isolated fine-grained quartzite flake with unifacial edge retouching.	N. Harris, 2006
015073	--	Isolated porphyritic basalt flake	N. Harris, 2006
015074	--	Isolated fine-grained metavolcanic hammerstone.	N. Harris, 2006
015943	--	Isolated medium-grained quartzite flake with evidence of microflaking (platform preparation).	R. Schultz and S. Underbrink, 2005
015944	--	Isolated bifacial, shouldered ground stone fragment, composed from a diorite cobble. The fragment was possibly fire-affected.	R. Schultz and S. Underbrink, 2005
015945	--	Isolated whiskey bottle fragment (neck and finish); exhibits sun-purpling suggesting manganese glass and estimated to date between 1904 and 1917.	R. Schultz and S. Underbrink, 2005
015946	--	Isolated projectile point composed of tan chert with white inclusions.	R. Schultz and S. Underbrink, 2005

**Table 1 (cont.)**  
**PREVIOUSLY RECORDED RESOURCES WITHIN 1 MILE OF PROJECT SITE**

Resource Number (P-33-#)	Resource Number (CA-RIV-#)	Description	Recorder, Date
015947	--	Isolated flake and a milky quartz Cottonwood triangular point; the isolated quartzite flake was located 10 meters away from the projectile point.	R. Schultz and S. Underbrink, 2005
016821	--	Isolated block metate fragment composed of quartz diorite.	L. Tift, L. Pick, K. Hovland, B. Welsh, J. Huval, and N. Doose, 2007
016822	--	Isolated fragment of a granodiorite slab metate.	L. Tift, L. Pick, K. Hovland, B. Welsh, J. Huval, and N. Doose, 2007
016823	008801	Historic trash scatter containing glass, ceramics, metal, and bricks; located in an agricultural field between houses constructed sometime from the 1930s to 1950s.	A.C. Noah and K.E. Doose, 2007
021126	11690	Historic bridge spanning the San Jacinto River; constructed of reinforced concrete in 1957. Determined ineligible for the NRHP by Caltrans in 2005.	C. Cotterman, R. Cunningham 2012

## HISTORIC MAPS AND AERIAL PHOTOGRAPHS

No buildings or structures are shown within the project area on historic topographic maps, although there are buildings in proximity to it. Maps reviewed included the 1901 USGS 30-minute Elsinore quadrangle and the 1953 USGS 7.5-minute Elsinore quadrangle. Roadways and buildings are shown in the vicinity by 1901, some of which are adjacent to the project area's northern limits along East Lakeshore Drive. Elm Street is present on the 1953 map, as well as several structures on either side of it; an unimproved roadway is shown in the location of modern-day Malaga Road, and three structures are shown as adjacent to it to the south and east of the proposed lift station location. The 1953 map also shows a landing strip roughly ¼ mile to the west of Elm Street. The San Jacinto River is shown as adjacent to the project area on both the 1901 and 1953 maps; the Southern California Railroad's San Bernardino and Temecula Line is shown along East Lakeshore Drive and crosses the northern portion of the project area.

A review of historic aerial photographs revealed that the San Jacinto River's general alignment has not been drastically altered, despite the channelization of portions of it; the shoreline of Lake Elsinore remained relatively unchanged until sometime in the 1980s to early 1990s, when the portion of the San Jacinto River's outlet within the project area is first shown in a similar state to its current condition (NETR Online 2017). In 1938, the project area was situated within a grassy marshland along the eastern shore of Lake Elsinore; Elm Street is shown as an unimproved dirt road, and two properties along the road have landscaped vegetation, one of which may have a structure present (NETR Online 2017). The

area to the west was beginning to be developed, but a majority of the surrounding area to the north, east, and south appears to be undeveloped or in agricultural uses (NETR Online 2017). By 1967, Elm Street, East Lakeshore Drive, and many other roads appear to have undergone improvements, and the shoreline of Lake Elsinore was drastically different due to the higher water level at the southern outlet of the San Jacinto River and the lack of a channel directly south of Elm Street, as compared to recent aerial imagery (Google Earth 2016; NETR Online 2017). Between 1967 and 1980, the shoreline of the lake and banks of the river widened and expanded, and a portion of the project area was underwater (NETR Online 2017). Several structures are visible on either side of Elm Street in 1967 and are visible on aerial photographs from 1978, 1980, and 1994 (NETR Online 2017).

## **NATIVE AMERICAN OUTREACH**

A SLF search was requested from the NAHC on February 15, 2017. The response, received on February 17, 2017 indicated that a records search of the SLF was completed with negative results. Letters were sent on March 9, 2017 to the contacts listed by the NAHC. Written responses have been received from three Tribes. The Agua Caliente Band of Cahuilla Indians responded on March 17, 2017, indicating that the project site is outside their Traditional Use Area, and they defer to other Tribes closer to the project area. The Rincon Band of Luiseño Indians responded on March 14, 2017 that, while the project area is in the Aboriginal Territory of the Luiseño people, it is outside Rincon's Historic Boundary; they deferred to either Pechanga or the Soboba Band of Luiseño Mission Indians (Soboba). Soboba responded on April 13, 2017, indicating that the project area is within the Tribe's Tribal Traditional Use Area; the area is in proximity to known cultural sites, is a shared use area, and is of cultural sensitivity to the people of Soboba. Therefore, Soboba requested to initiate consultation regarding the project and further requested that a Native American Monitor from the Soboba Cultural Resource Department be present to monitor ground-disturbing activities. Native American correspondence is included as Confidential Attachment B, *Native American Correspondence*. If additional responses are received, they will be forwarded to the District.

The District entered into consultation with Soboba and with Pechanga pursuant to AB 52; both Tribes affirmed that they would like to be included in the consultation process and requested to be kept informed of project developments and planned activities. As none of the recorded resources are anticipated to be adversely impacted as a result of the project, no design alternatives have been proposed. However, Pechanga and Soboba provided input in the development of mitigation measures for the project.

In 2018, modifications were made to the proposed project alignment. Both Pechanga and Soboba were informed of the revised project alignment and offered the opportunity to consult with the District to discuss the new project alignment and any changes in project approach (e.g., the use of microtunneling). Neither Tribe responded that they wished to reopen the consultation. Pechanga provided a Tribal monitor to participate in the field surveys both in February 2017 and in October 2018.

## **SURVEY RESULTS**

As addressed throughout this report, the project area is within an area that is highly sensitive regarding cultural resources; however, none of the resources are located within or directly adjacent to the project area. The cultural resources surveys conducted on February 23, 2017 and on October 17, 2018 did not

identify any cultural resources within the proposed project study area, including the buffer on either side of the pipeline alignment.

The study area is mostly flat within Elm Street and within the portion of the project south of the Lake Elsinore Inlet Channel; the Inlet Channel is approximately 18 to 20 feet lower in elevation than the portions of the project within Elm Street and adjacent to the west of Diamond Circle and Malaga Road (Figure 2). Most of the ground surface within the portion of the project area within Elm Street was not visible at the time of survey; Elm Street itself is paved, with aggregate gravel and dense grasses covering the shoulders of the road. One parcel located east of Elm Street was covered in dense grasses, and another was being used as a gravel parking area and was moderately disturbed as a result. In general, ground visibility within the portion of the project study area south of Elm Street ranged from 50 percent to 100 percent; cobbly sand with some gravel was observed throughout the Inlet Channel and to the south of it. A manufactured berm located along the western pipeline alignment buffer, west of Diamond Circle, would have been along the eastern bank of the San Jacinto River's southern outlet into Lake Elsinore prior to the construction of the Inlet Channel. Malaga Road had recently been paved, and the ground surface was not visible within this portion of the project area. Similarly, the proposed lift station area was underwater and appeared to have been in use as a retention or desilting basin; only the outer banks of the basin were surveyed. The portion of the project area on the north side of East Lakeshore Drive was not accessed, as it was fenced; this area was examined from the street and appeared to be built up with imported soil. The observed soil over most of the survey area matched the various soil series mapped within the project area; ground visibility was fair to good, due to the overall lack of dense vegetation throughout most of this portion of the project site.

## CONCLUSIONS

A cultural resources survey was conducted by HELIX for the Diamond Regional Sewer Lift Station and Pipeline project, including a record search, review of previous reports available for the project site and surrounding area, SLF search, Native American outreach, review of historic maps and aerial photographs, intensive field survey, and this letter report. The record search revealed 31 previously recorded cultural resources within a 1-mile radius of the project study area, several of which are located within ¼ mile. Lake Elsinore is also a significant ethnohistoric resource and is located in the vicinity of the project area, though the shoreline located near the project has been altered in recent times. No resources were identified during the cultural resources survey, and none have been recorded within the project area during previous studies. The ground surface within the proposed project area has been subjected to past disturbances, but several resources have been recorded within the immediate vicinity of the project area. Therefore, it is recommended that a cultural resources monitoring program be implemented for the project, as described below.

## MITIGATION MEASURES

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

- CR-2 Tribal Monitoring Agreements.** At least 30 days prior to grading, excavation, and/or other ground-disturbing activities the District shall contact both the Pechanga Band of Luiseño Indians and Soboba Band of Luiseño Indians to notify each Tribe of excavation activities and coordinate with the Tribes to develop Monitoring Agreements. The Agreements shall address the designation, responsibilities, and participation of Native American tribal monitors during excavation and other ground disturbing activities and construction scheduling.
- CR-3 Develop a Cultural Resources Monitoring Plan.** The Project Archaeologist, in consultation with the Monitoring Tribe(s) and the District, shall develop a Cultural Resources Monitoring Plan (CRMP) to address the details, timing and responsibility of archaeological and cultural activities that will occur on the project site. Details in the Plan shall include:
- a. Project grading and development scheduling;
  - b. The coordination of a monitoring schedule as agreed upon by the Monitoring Tribe(s), the Project archaeologist, and the District); and
  - c. The protocols and stipulations that the District, the Monitoring Tribe(s) and the Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including newly discovered cultural resources.
- CR-4 Cultural Resources Sensitivity Training.** Prior to grading, excavation and/or other ground-disturbing activities on the Project site, the Project archaeologist and the Monitoring Tribe(s) shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel shall be informed of the types of archaeological resources that may be encountered, and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The District's construction manager shall ensure that construction personnel are made available for and attend the training and shall retain documentation demonstrating attendance.
- CR-5 Authority to Stop and Redirect Excavation.** In accordance with the agreement required in CR-2, the Project archaeologist and designated tribal monitor(s) assigned to the project by the Luiseño 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.

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

- CR-7 Inadvertent Discovery of Resources.** If inadvertent discoveries of subsurface archaeological/cultural resources are discovered during grading, the District 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 District requirements and shall include at a minimum: a discussion of monitoring methods and techniques used, the results of the monitoring program including artifacts recovered, an inventory of resources recovered, updated DPR forms, if any, and any other site(s) identified, final disposition of the resources, and any additional recommendations. A final copy shall be submitted to the District, EIC, and the Monitoring Tribe(s).
- CR-10 Human Remains.** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the coroner shall contact the NAHC within 24 hours. Subsequently, the NAHC shall identify the person or persons it believes to be the “most likely descendant.” The most likely descendant may then make recommendations and engage in consultations concerning the treatment of the remains as provided in Public Resources Code 5097.98.

If you have any questions, please contact Mary Robbins-Wade at (619) 462-1515.



Mary Robbins-Wade, RPA  
Director of Cultural Resources  
Southern California



Kristina Davison  
Staff Archaeologist

Enclosures:

Figure 1 Regional Location

Figure 2 USGS Topography

Figure 3 Aerial Photograph

Figure 4 Site Plan

Confidential Attachments:

A Records Search Map

B Native American Correspondence



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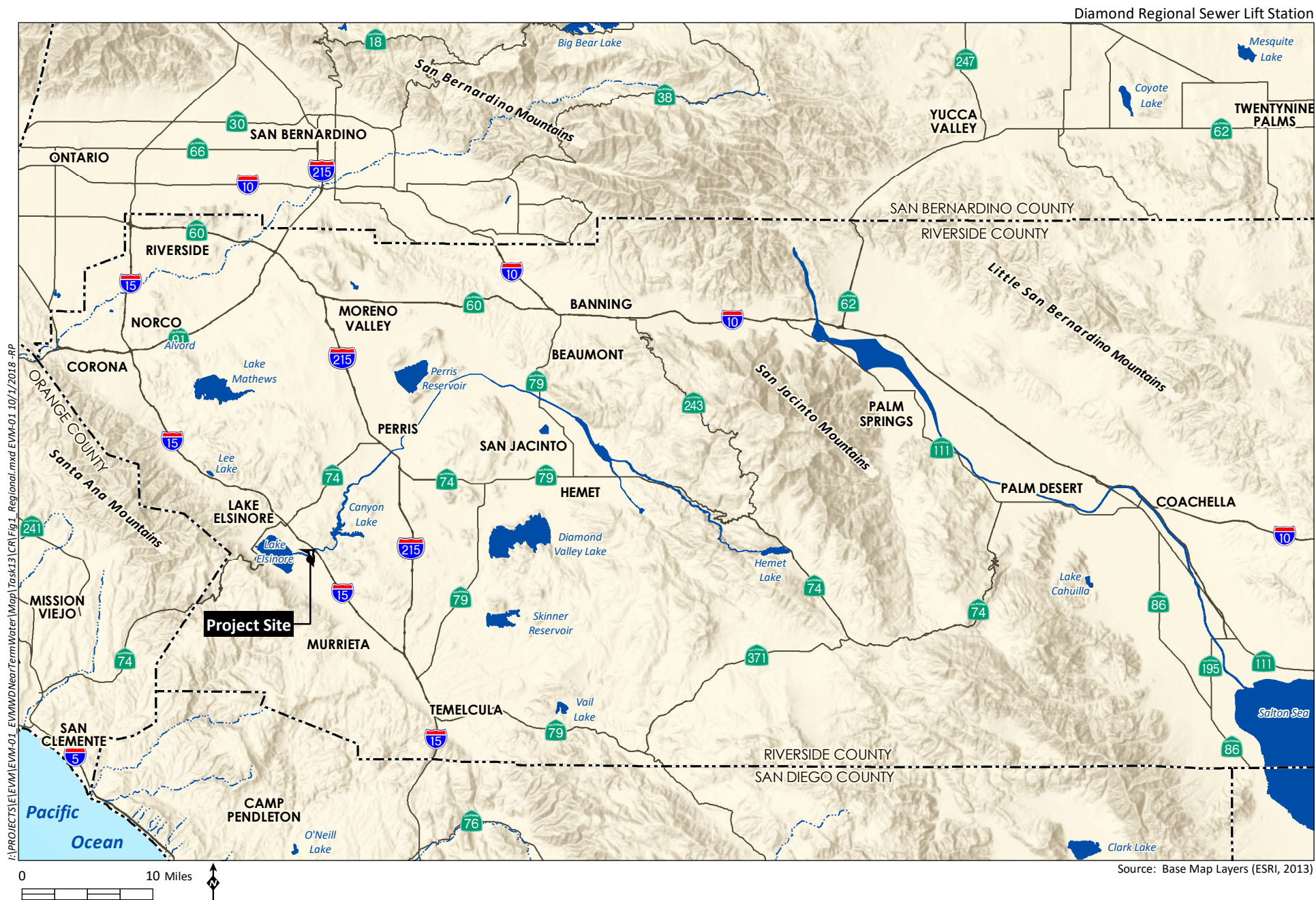
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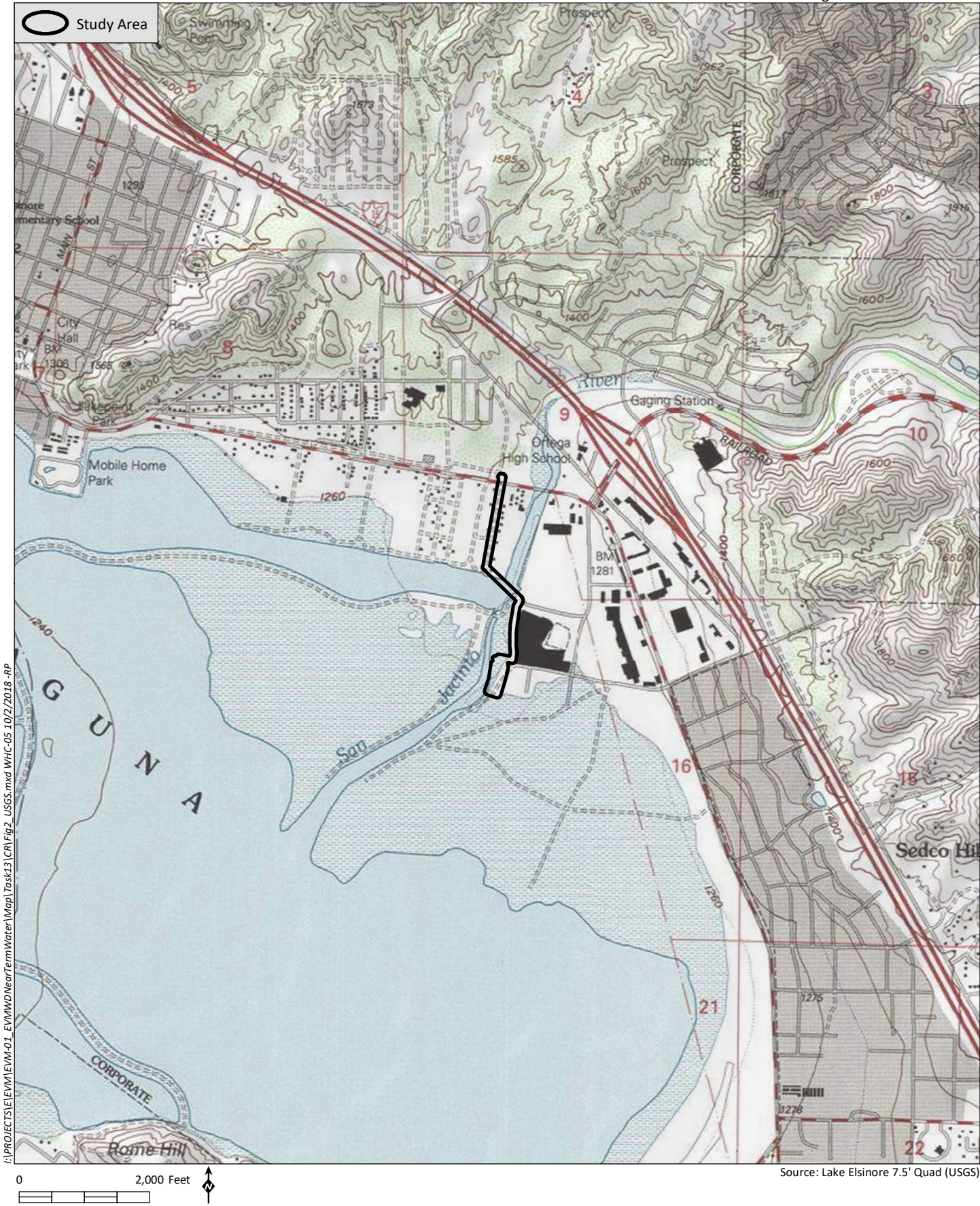
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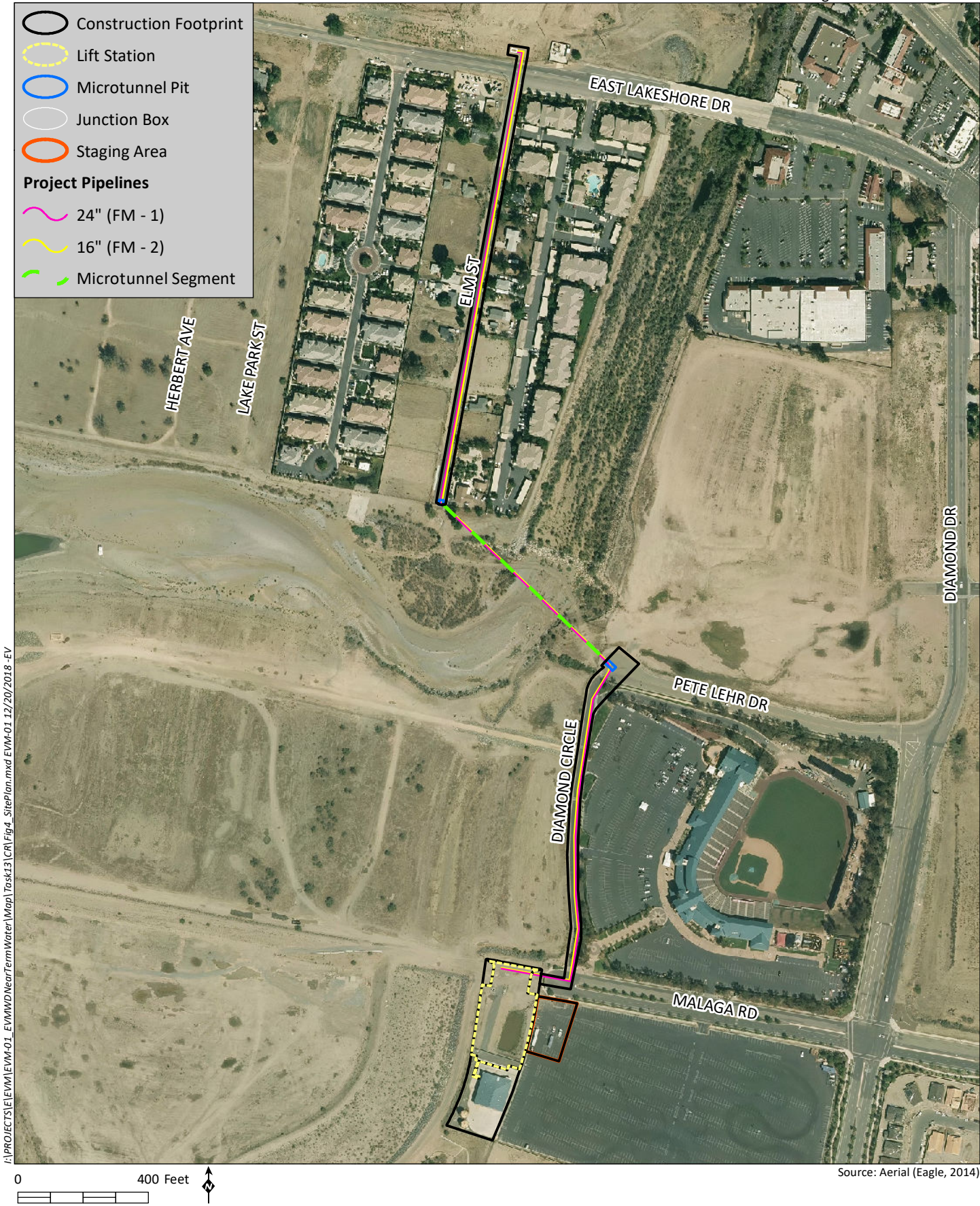






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# Confidential Attachments

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Bound separately  
(NOT FOR PUBLIC REVIEW)

## Appendix D

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### Noise Impact Analysis

# Diamond Regional Sewer Lift Station and Dual Force Mains Project

## Noise Impact Analysis

January 2019 | EVM-01 Task 13

*Prepared for:*

**Elsinore Valley Municipal Water District**

31315 Chaney Street  
Lake Elsinore, CA 92530

*Prepared by:*

**HELIX Environmental Planning, Inc.**

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# Diamond Regional Sewer Lift Station and Dual Force Mains Project

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January 2019 | EVM-01 Task 13



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## EXECUTIVE SUMMARY

This report presents an assessment of potential construction and operational noise impacts associated with the proposed Diamond Regional Sewer Lift Station and Dual Force Mains Project (project), located in the City of Lake Elsinore. The project would construct a dual force main pipeline and pump station.

Anticipated construction noise from pipeline construction would generate significant noise levels for nearby residences. Mitigation Measure NOI-2 would attenuate construction noise with a temporary and moveable 12-foot wall. Construction noise levels would be less than significant with mitigation. See Table ES-1, *Summary of Noise Mitigation Measures*, for more information on the proposed project's impacts and mitigation.

Operational noise sources include the use of a generator at the proposed pump station location. Noise associated with operation of the generator would likely result in significant noise impacts to the adjacent commercial properties. Implementation of mitigation measure NOI-1 would require additional noise attenuation for the future pump station generator. Operational noise levels would be less than significant with mitigation (see Table ES-1).

**Table ES-1**  
**SUMMARY OF NOISE MITIGATION MEASURES**

Impact	Proposed Mitigation	Level of Significance After Mitigation
Issue 1: Excessive noise levels	<b>NOI-1 Pump Station Generator Attenuation.</b> A generator associated with operation of the pump station shall comply with the commercial nighttime standards of 55 dBA at the nearest property line to the east. To adequately reduce noise levels, acoustical shielding or other equipment noise reduction measures shall be incorporated into project design. Prior to building plan approval, planning for the pump station noise sources shall be required to show noise compliance with the 55 dBA $L_{EQ}$ limit at the eastern property line and a 50 dBA $L_{EQ}$ with the pump station power supplied by the backup generator in full time operation. A final operational test shall be required with the pumps in operation and the station power supplied by the generator to ensure noise levels are below the required standards.	Less than significant

**Table ES-1 (cont.)**  
**SUMMARY OF NOISE MITIGATION MEASURES**

Impact	Proposed Mitigation	Level of Significance After Mitigation
Issue 4: Temporary increase in ambient noise	<p><b>NOI-2 Pipeline Excavation Barriers.</b> Short-term excavation activity lasting less than 10 days shall be limited to noise levels of 75 dBA at single-family residences, 80 dBA at multi-family residences, and 85 dBA at commercial zones.</p> <p>Trenching activity requiring the use of a concrete saw within 100 feet shall require the use of a temporary movable 6-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.</p> <p>Excavation requiring the use of an excavator within 60 feet of single-family residences shall require the use of a temporary movable 12-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.</p> <p>All barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square-foot. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation.</p>	Less than significant

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# 1.0 INTRODUCTION

This report addresses the potential impacts that would be associated with construction and operational noise for the proposed Diamond Regional Sewer Lift Station and Dual Force Mains Project (project).

## 1.1 PROJECT LOCATION

The project is located east of Lake Elsinore approximately 0.7 mile west of Interstate (I-) 15, in the City of Lake Elsinore (City). The project alignment is generally located south of East Lakeshore Drive, along Elm Street in the north and Diamond Circle in the southern portion of the proposed alignment. The project site includes portions of Assessor's Parcel Numbers 371-030-053, 371-030-052, 363-130-087, 373-210-030, 373-320-002, 373-320-003, 373-320-004, 373-320-005, 373-320-007. Portions of the alignment are within the Elm Street and Malaga Road right-of-way (ROW). Refer to Figure 1, *Regional Location*, Figure 2, *Aerial Photograph*, and Figure 3, *Site Plan*.

## 1.2 PROJECT DESCRIPTION

The proposed project would replace the existing B-Series Interceptor sewer system, including two lift stations (B1 and B2). The project would collect raw wastewater and then pump the sewage through parallel 24-inch diameter and 16-inch diameter force mains to a junction structure at the corner of East Lakeshore Drive and Elm Street.

The construction of the Diamond Regional Sewer Lift Station would include approximately 3,400 feet of a parallel 24-inch diameter and 16-inch diameter force mains. The proposed alignment would connect at the north end of the proposed lift station, head east and then north along Diamond Circle into Peter Lehr Drive, cross the San Jacinto River, continue along Elm Street, and proceed to the North Reach connection point at Elm Street and East Lakeshore Drive.

Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving affected portions of streets. In addition to trenching operations, microtunneling procedures would be used to install the pipeline where the proposed alignment crosses the San Jacinto River. Jack-and-bore procedures (also known as auger boring) may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore processes for this project would involve digging a pit on each side (an entrance and exit pit) with an excavator, and tunneling or boring under the channel or roadway from the entrance pit to the exit pit on the other side.

The pipeline trench is expected to be approximately 8-feet wide (width of one 24-inch diameter pipe and one 16-inch diameter pipe with 24 inches of separation plus 12 inches each side to the trench walls) and 6-foot depth (pipes with 48 inches of cover).

The proposed lift station would serve as a main wastewater lift station and would have the capability of pumping up to 19.9 million gallons per day (MGD). The anticipated initial average inflow would be 3.0 MGD with a peak hour inflow of 9.0 MGD. The project would consist of a new below grade sewage lift station with wet well, diesel generator, odor control system, chemical feed equipment, electrical building, grinding (pre-treatment facility), pigging station, flow metering vault, and all associated site yard piping and site grading.

## 2.0 ENVIRONMENTAL SETTING

### 2.1 NOISE AND SOUND LEVEL DESCRIPTORS AND TERMINOLOGY

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels of one hour are expressed by the symbol  $L_{EQ}$ , unless specified with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level ( $L_{DN}$ ), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

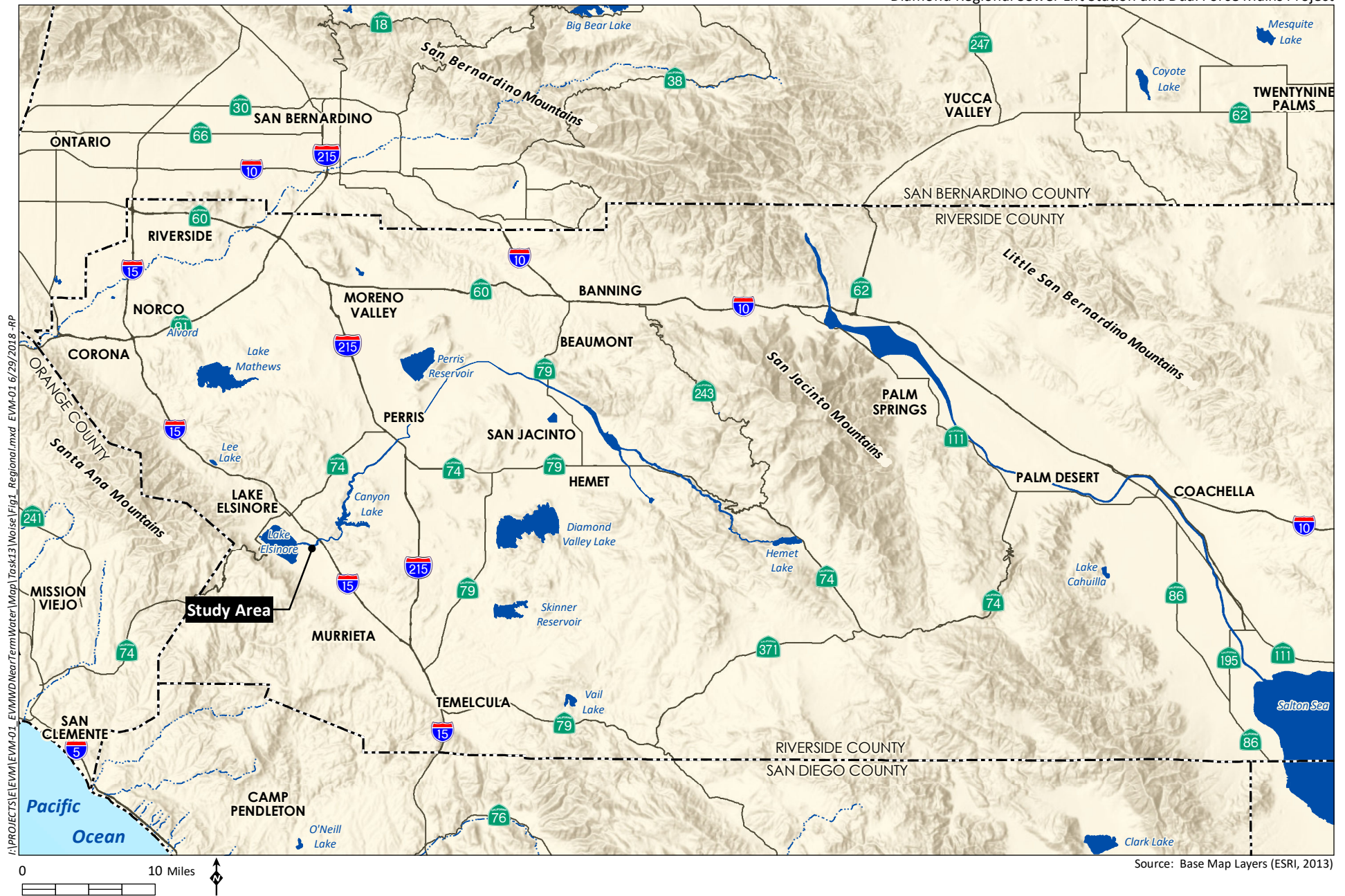
Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 micro Pascals (mPa).

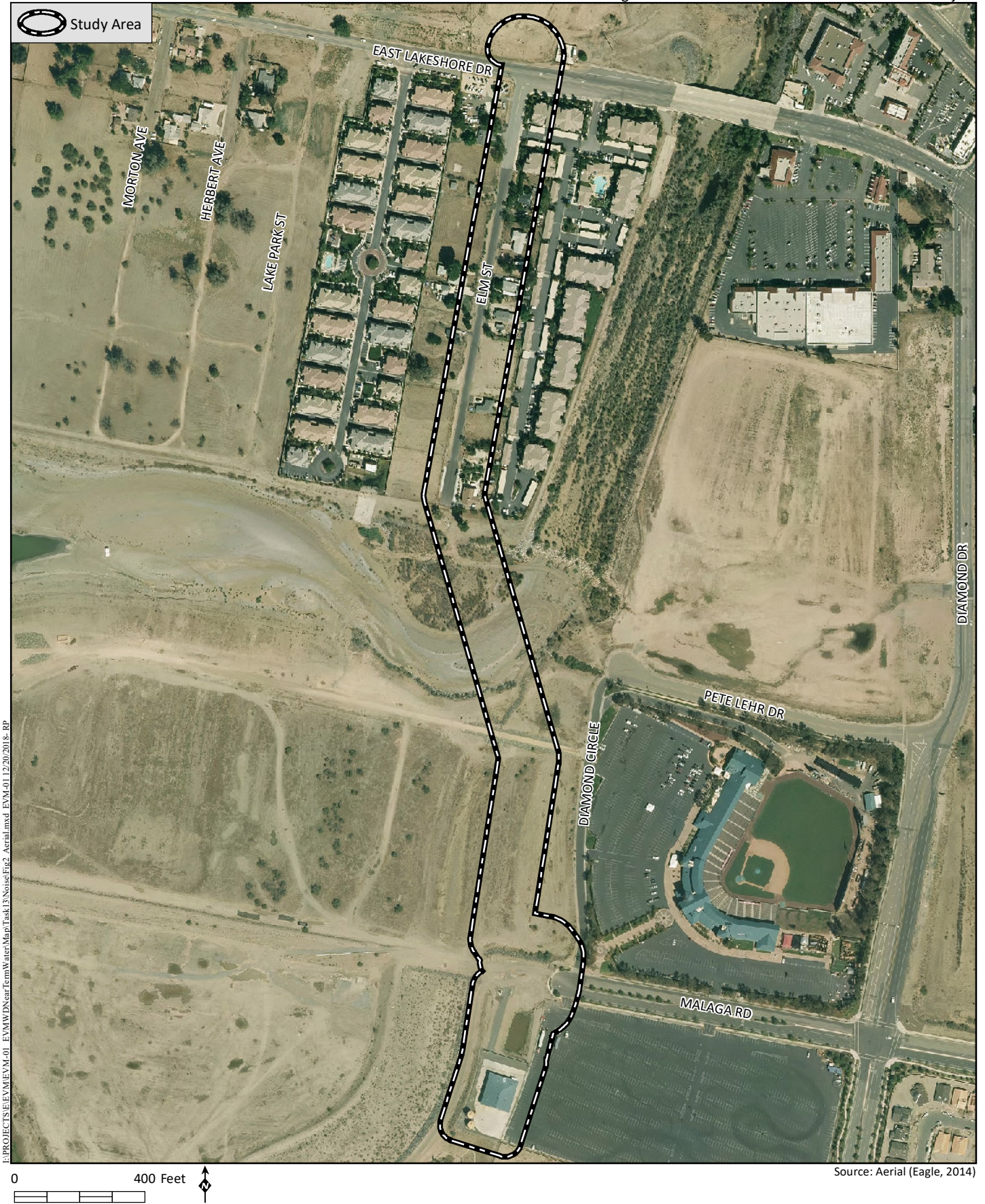
Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

### 2.2 NOISE-SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. NSLUs in the project area include single-family residences in the northern part of the alignment (refer to Figures 2 and 3).













## 2.3 REGULATORY FRAMEWORK

### 2.3.1 City of Lake Elsinore Municipal Code, Chapter 17.176, Section 17.176.060 Exterior Noise Limits

#### A. Maximum Permissible Sound Levels by Receiving Land Use.

1. The noise standards for the various categories of land use identified by the Noise Control Office(r) as presented in Table 1, *Exterior Noise Limits*, shall, unless otherwise specifically indicated, apply to all such property within a designated zone.
2. No person shall operate, or cause to be operated, any source of sound at any location within the incorporated City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, either incorporated or unincorporated, to exceed:
  - a. The noise standard for that land use as specified in Table 1 for a cumulative period of more than 30 minutes in any hour; or
  - b. The noise standard plus 5 dB for a cumulative period of more than 15 minutes in any hour; or
  - c. The noise standard plus 10 dB for a cumulative period of more than five minutes in any hour; or
  - d. The noise standard plus 15 dB for a cumulative period of more than one minute in any hour; or
  - e. The noise standard plus 20 dB or the maximum measured ambient level, for any period of time.
3. If the measured ambient level differs from that permissible within any of the first four noise limit categories above, the allowable noise exposure standard shall be adjusted in 5 dB increments in each category as appropriate to encompass or reflect said ambient noise level.

In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level

4. If the measurement location is on a boundary between two different zones, the noise level limit applicable to the lower noise zone plus 6 dB shall apply.
5. If possible, the ambient noise shall be measured at the same location along the property line utilized in subsection (A)(2) of this section with the alleged offending noise source inoperative. If, for any reason, the alleged offending noise source cannot be shut down, the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such that the noise from the source is at least 10 dB below the ambient in order that only the ambient level be measured. If the difference between the ambient and the

noise source is 5 to 10 dB, then the level of the ambient itself can be reasonably determined by subtracting a one-decibel correction to account for the contribution of the source.

- B. Correction for Character of Sound. In the event the alleged offensive noise, as judged by the Noise Control Officer, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in Table 1 shall be reduced by 5 dBA.

**Table 1**  
**EXTERIOR NOISE LIMITS**

Receiving Land Use Category	Time Period	Noise Level (dBA) <sup>1</sup>
Single-Family Residential	10:00 p.m. to 7:00 a.m.	45
	7:00 a.m. to 10:00 p.m.	50
Multiple Dwelling Residential	10:00 p.m. to 7:00 a.m.	45
	7:00 a.m. to 10:00 p.m.	50
Limited Commercial and Office	10:00 p.m. to 7:00 a.m.	55
	7:00 a.m. to 10:00 p.m.	60
General Commercial	10:00 p.m. to 7:00 a.m.	60
	7:00 a.m. to 10:00 p.m.	65
Light Industrial	Anytime	70
Heavy Industrial	Anytime	75

<sup>1</sup> Noise levels not to be exceeded more than 30 minutes in any hour.

### 2.3.2 City of Lake Elsinore Municipal Code, Chapter 17.176, Section 17.176.070 Interior Noise Standards.

- A. Maximum Permissible Dwelling Interior Sound Levels.

1. The interior noise standards for multi-family residential dwellings as presented in Table 2, *Interior Noise Limits*, shall apply, unless otherwise specifically indicated, within all such dwellings with windows in their normal seasonal configuration.

**Table 2**  
**INTERIOR NOISE LIMITS**

Noise Zone	Type of Land Use	Time Internal	Allowable Interior Noise Level (dBA)
All	Multi-family Residential	10:00 p.m. to 7:00 a.m.	35
		7:00 a.m. to 10:00 p.m.	45

2. No person shall operate or cause to be operated within a dwelling unit, any source of sound or allow the creation of any noise which causes the noise level when measured inside a neighboring receiving dwelling unit to exceed:
  - a. The noise standard as specified in Table 2 for a cumulative period of more than five minutes in any hour; or

- b. The noise standard plus five dB for a cumulative period of more than one minute in any hour; or
  - c. The noise standard plus 10 dB or the maximum measured ambient, for any period of time.
- 3. If the measured ambient level differs from that permissible within any of the noise limit categories above, the allowable noise exposure standard shall be adjusted in 5 dB increments in each category as appropriate to reflect said ambient noise level.
- B. Correction for Character of Sound. In the event the alleged offensive noise, as judged by the Noise Control Officer, contains a steady, audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying informational content, the standard limits set forth in Table 2 shall be reduced by 5 dB. [Ord. 772 §17.78.070, 1986. Code 1987 §17.78.070].

### 2.3.3 City of Lake Elsinore Municipal Code, Chapter 17.176, Section 17.176.080 Prohibited Acts

#### F. Construction/Demolition.

- 1. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the City.
- 2. Noise Restrictions at Affected Properties. Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum noise levels at affected properties will not exceed those listed in the schedule depicted in Table 3, *Construction Noise Restrictions*.

**Table 3**  
**CONSTRUCTION NOISE RESTRICTIONS AT RESIDENTIAL PROPERTIES**

	Type I Areas Single-Family Residential	Type II Areas Multi-family Residential	Type III Areas Semi- Residential/ Commercial
Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:			
Daily, except Sundays and Legal Holidays 7:00 a.m. to 7:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	60 dBA	65 dBA	70 dBA
Maximum noise levels for repetitively scheduled and relatively long-term operation (period of 10 days or more) of stationary equipment:			

**Table 3 (cont.)**  
**CONSTRUCTION NOISE RESTRICTIONS AT RESIDENTIAL PROPERTIES**

	<b>Type I Areas Single-Family Residential</b>	<b>Type II Areas Multi-family Residential</b>	<b>Type III Areas Semi- Residential/ Commercial</b>
Daily, except Sundays and Legal Holidays 7:00 a.m. to 7:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 7:00 p.m. to 7:00 a.m. and all day Sunday and Legal Holidays	50 dBA	55 dBA	60 dBA

City of Lake Elsinore Municipal Code, Section 17.176.070

3. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with suitable exhaust and air intake silencers in proper working order.
- G. Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property or at 150 feet (46 meters) from the source if on a public space or public right-of-way.

## 2.4 EXISTING CONDITIONS

### 2.4.1 Surrounding Land Uses

Surrounding land uses include residences along Elm Street within the northern portion of the project. The remaining portion of the alignment is largely through undeveloped land. The alignment crosses a flood channel between Elm Street and Diamond Circle. A minor league baseball stadium is located to the east of the project, east of Diamond Circle, and the southernmost portion of the alignment prior to its connection to the pump station site is adjacent to an overflow parking lot. The southern end of the pump station site is developed with an arsenic removal facility.

### 2.4.2 Existing Noise Conditions

An on-site inspection was conducted on March 23, 2017 from approximately 2:00 p.m. to 4:00 p.m. Four measurements were taken, including two traffic measurements and two ambient measurements (refer to Figure 4, *Noise Measurement Locations*). The first traffic measurement was taken on the north side of East Lakeshore Drive and Elm Street, near the north reach connection point of the proposed project. This location was across the street from an apartment building (River's Edge Apartments) and due to ongoing landscaping noise, the measurement had to be terminated before completion. The second traffic noise measurement was taken along East Lakeshore Drive, approximately 0.15 mile west of the first location. The primary observed noise source at this location was traffic along East Lakeshore Drive.

One ambient measurement was taken on the north bank of the San Jacinto River/Lake Elsinore Inlet Channel, just west of the end of Elm Street. A second ambient measurement was taken at the proposed lift station site. The noise measurement at this location had to be paused several times due to high winds and dump trucks passing by to a nearby construction site. The measured noise levels and related weather conditions are shown in Table 4, *Noise Measurement Results*.





**Table 4**  
**NOISE MEASUREMENT RESULTS**

Measurement	Location	Conditions	Time	dBA L <sub>EQ</sub>	Notes
M1 (Traffic)	2001-2157 East Lakeshore Drive, across the street from River's Edge Apartments	65°F, 6.7 max miles per hour (mph) wind, 45 percent humidity, partially cloudy	2:17-2:40 p.m.	70.3	Measured at 5 feet east of fenced junction structure. Stopped measurement at 8 minutes due to landscaping noise.
M2 (Traffic)	1687-1721 East Lakeshore Drive	65°F, 6.4 max mph wind, 42 percent humidity, partially cloudy	2:50-3:06 p.m.	68.9	Across from driveway to undeveloped land.
M3 (Ambient)	54 Elm Street	64°F, 3.3 average mph wind, 42 percent humidity, partially cloudy	3:16-3:26	46.1	Adjacent and north of the San Jacinto River, and west of Elm Street.
M4 (Ambient)	Proposed Lift Station site	64°F, 14 max mph wind, 42 percent humidity, partially cloudy	3:46-3:56	47.2	Stopped measurement during high winds.

## 3.0 ANALYSIS METHODOLOGY AND ASSUMPTIONS

### 3.1 METHODOLOGY AND EQUIPMENT

The following equipment was used to measure existing noise levels at the project site:

- Larson Davis System LxT Integrating Sound Level Meters
- Larson Davis Model CAL150 Calibrator
- Windscreen and tripod for the sound level meter
- Digital camera

On-site noise levels were recorded using a sound level meter conforming to the American National Standards Institute (ANSI) specifications for sound level meters, ANSI S1.4-1983 (R2006). The meter was field-calibrated immediately prior to the noise measurement to ensure accuracy, with all instruments maintained with National Institute of Standards and Technology traceable calibration, per the manufacturers' standards.

Modeling of the non-traffic outdoor noise environment was accomplished using Computer-Aided Noise Abatement (CadnaA) Version 2017. CadnaA is a model-based computer program developed by DataKustik for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed model,



and uses the most up-to-date calculation standards to predict outdoor noise impacts. Input variables included elevation, area topography, and project features.

Project construction noise was analyzed using the Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

## 4.0 IMPACTS

### 4.1 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, implementation of the project would result in a significant adverse impact if it would:

***Threshold 1:*** *Expose persons to or generate noise levels in excess of standards established in the City General Plan or noise ordinance.*

Impacts would be significant if the project's operational uses generate noise levels exceeding 60 dBA  $L_{EQ}$  during the daytime hours of 7:00 a.m. to 10:00 p.m., and 55 dBA  $L_{EQ}$  during the nighttime hours of 10:00 p.m. to 7:00 a.m. at the property line adjacent to commercial zones, or 50 dBA  $L_{EQ}$  for property lines adjacent to single-family residences or Preservation/Mitigation zones.

***Threshold 2:*** *Expose persons to or generation of excessive ground-borne vibration or ground-borne noise levels.*

Excessive ground-borne vibration is defined as vibration operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if originating on private property or at 150 feet from the source if originating on a public space or public right-of-way.

***Threshold 3:*** *Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.*

Refer to Threshold 1 for operational noise limits.

***Threshold 4:*** *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.*

Short-term construction activity (less than 10 days) would be considered significant for nearby residences if it exceeds 75 dBA at single-family residences, 80 dBA at multi-family residences, or 85 dBA at commercial zones. For long-term construction activity (10 days or more), construction activity would be considered significant if it exceeds 60 dBA for single-family residences, 65 dBA for multi-family residences, or 70 for commercial zones. The ordinance prohibits construction and building work on Sundays and legal holidays, and between the hours of 7:00 p.m. and 7:00 a.m. of the next day.

## 5.0 IMPACTS

### 5.1 ISSUE 1: EXCESSIVE NOISE LEVELS

*Would the project expose persons to or generate noise levels in excess of standards established in the City of Lake Elsinore General Plan or noise ordinance?*

The proposed project would generate elevated noise levels for surrounding sensitive noise receptors as a result of the operation of system pumps, cooling & ventilation systems, power transformer, and the back-up generator. Specific design plans are not available to provide data or analysis. However, a discussion of typical equipment and noise for pump station equipment would include:

- Interior to exterior noise from the pumps;
- Interior to exterior noise from the ventilator/odor control systems;
- Exterior noise from the pump room ventilation system;
- Exterior noise from the Packaged Air Conditioner (PAC) unit;
- Exterior noise from the diesel generator; and
- Exterior noise from the site power transformer.

The noise analysis assumes typical pumps rated from 100-horsepower to 250-horsepower, 440-volt, 3-phase pump motors and a typical 1-megawatt backup power generator. The base data for these sources used in the site noise impact planning is presented as Sound Power ( $S_{WL}$ ) in Table 5, *Pump Noise Source Data*.

**Table 5**  
**PUMP NOISE SOURCE DATA**

Equipment Noise Source	Octave Band Center Frequency (Hz)								dBA $L_{EQ}$
	63Hz	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz	
Pump Motor	86.3	92	92.2	90.1	90.7	98.4	90.8	79.7	101
Engine Block Noise	119.9	127.9	119.9	114.9	113.9	113.9	106.9	97.9	120.3
Engine Exhaust Noise	115.9	124.9	119.9	119.9	114.9	113.9	113.9	105.9	122.2
Air Handler	94	93	97	96	95	86	83	79	98.2
HVAC	84	90.4	85.9	85.3	82.9	79	71.4	66.5	87.5
Transformer Noise	52.6	52.2	61.9	65.4	49.9	42.3	44.1	46.9	63.2
Ventilator Noise	92	97	96	93	89	86	82	76	95

Hz = Hertz; KHz = Kilohertz

No noise control planning information is currently available, but a typical design may utilize 12-inch thick louvers to control interior equipment noise. A typical generator may be equipped with a Residential Grade engine exhaust silencer. Examples of the noise control provided by these units are provided in Table 6, *Vibro Acoustics 12-Inch Thick Louver and Residential Chamber Exhaust Silencer*.



**Table 6**  
**VIBRO ACOUSTICS 12-INCH THICK LOUVER**  
**AND RESIDENTIAL CHAMBER EXHAUST SILENCER**

Octave Band Center Frequency (Hz)							
63Hz	125Hz	250Hz	500Hz	1KHz	2KHz	4KHz	8KHz
6	10	12	16	23	26	20	22
10	22	30	30	22	18	17	16

Note: Referenced equipment are a Model ALV LV-12 louver and Maximum M22 Residential Chamber Exhaust Silencer.

Hz = Hertz; KHz = Kilohertz

With generator noise control provided by these noise control elements the generator noise would be between 75 and 80 dBA at 50 feet, which is approximately the closest property line distance. Noise levels would exceed the allowable commercial daytime standards of 60 dBA and the nighttime standards of 55 dBA, resulting in a potentially significant impact. Mitigation Measure NOI-1 would be required to reduce noise to below a level of significance.

**NOI-1 Pump Station Generator Attenuation.** A generator associated with operation of the pump station shall comply with the commercial nighttime standards of 55 dBA at the nearest property line to the east. To adequately reduce noise levels, acoustical shielding or other equipment noise reduction measures shall be incorporated into project design. Prior to building plan approval, planning for the pump station noise sources shall be required to show noise compliance with the 55 dBA  $L_{EQ}$  limit at the eastern property line and a 50 dBA  $L_{EQ}$  with the pump station power supplied by the backup generator in full time operation. A final operational test shall be required with the pumps in operation and the station power supplied by the generator to ensure noise levels are below the required standards.

## 5.2 ISSUE 2: EXCESSIVE VIBRATION

*Would the project expose persons to or generate excessive ground-borne vibration or noise levels?*

The operational vibration sources for the site would include electric motors, pump drive shafts, and the planned backup power generator. None of these sources have the potential to induce structural vibration into the ground that would be perceptible to a human at over 25 feet from the source.

## 5.3 ISSUE 3: PERMANENT INCREASE IN AMBIENT NOISE LEVELS

*Would the project cause a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

The project would not result in any additional traffic on nearby roadways, except for occasional maintenance trips. For discussion of the project's stationary operational noise, refer to Section 5.1, Issue 1.

## 5.4 ISSUE 4: TEMPORARY INCREASE IN AMBIENT NOISE

*Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

### 5.4.1 Pipeline Construction

Pipeline construction activities would include trenching, installation of pipes, backfilling, and repaving along affected portions. In addition to trenching operations, microtunneling procedures would be used where the proposed pipeline alignment crosses the San Jacinto River, and jack-and-bore procedures may be used to cross East Lakeshore Drive. Both the microtunneling and jack-and-bore processes for this project would involve digging a pit on each side (an entrance and exit pit) with an excavator, and tunneling or boring under the channel or roadway from the entrance pit to the exit pit on the other side.

#### 5.4.1.1 Excavation

The loudest activity associated with pipeline construction would be from a concrete saw removing existing pavement, and from the excavator digging the trenches and pits for the microtunneling and jack-and-bore procedures. Most portions of the pipeline construction would be considered short-term construction and would not occur at any one location for a period lasting 10 days or more. Although the trench would be open along the alignment longer than 10 days, the actual work on the pipeline adjacent any individual residence or business would not exceed a cumulative 10-day time period.

A concrete saw would be in use to remove existing asphalt within paved ROW. A concrete saw would generate noise levels of 82.6 dBA  $L_{EQ}$  at 50 feet. Impacts from a concrete saw would be potentially significant without mitigation.

The pipeline trench is expected to be approximately 8 feet wide (width of one 24-inch-diameter pipe and one 16-inch diameter pipe with 24-inches separation plus 12-inches each side to the trench walls) and 6-feet deep (pipes with 48-inches of cover). The trench excavation is assumed to take about one day for a given 100-foot segment.

Noise from an excavator has an  $L_{MAX}$  level of 85 dBA at 50 feet with the hourly operations for an excavator unit assumed to be only about 40 percent (USDOT 2008). For a single day of the mobile trench/pit excavation adjacent to a single location (such as an adjacent residential property line), the expected noise levels would be up to approximately 78 dBA  $L_{EQ}$ . Some variations would occur due to the exact location of the trench or pit in the roadway. This would be in excess of the allowable short-term noise limit for single-family residences and the mitigation/preservation area across from the pump station if developed as a park by the time of construction. Impacts would be potentially significant without mitigation. Mitigation measure NOI-2 would be required to reduce noise levels from pipeline construction at nearby residences and the potential future park. Pipeline construction would be in compliance with the commercial limits. No other portion of the trench or pipelaying construction operations would be in excess of the noise limits.

**NOI-2 Pipeline Excavation Barriers.** Short-term excavation activity lasting less than 10 days shall be limited to noise levels of 75 dBA at single-family residences, 80 dBA at multi-family residences, and 85 dBA at commercial zones.

Trenching activity requiring the use of a concrete saw within 100 feet shall require the use of a temporary movable 6-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.

Excavation requiring the use of an excavator within 60 feet of single-family residences shall require the use of a temporary movable 12-foot noise barrier in front of the home for the timeframe when excavation is in front of the home.

All barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square-foot. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation.

#### **5.4.1.2 Microtunneling and Jack-and-Bore Excavation**

The microtunneling and jack-and-bore pit excavation would require fewer than 10 days of construction and is analyzed above in Section 5.4.1.1. Microtunneling drilling operations following pit excavation would exceed the 10-day limit considered for short-term construction. Jack-and-bore drilling operations following pit excavation would not exceed the 10-day limit considered for short-term construction. Drilling operations are expected to install approximately 80 to 100 feet of pipe per day (note that two parallel pipes are required).

The potential jack-and-bore excavation sites would be approximately 50 feet from the nearest NSLUs or potential NSLUs at the northern end of Elm Street, if jack-and-bore procedures are used to cross East Lakeshore Drive. The typical noise level of an engine used for the jack-and-bore power head is modeled at between 75 and 80 dBA at a distance of 50 feet. This unit would operate in the pit, which would provide attenuation due to the break in the line-of-sight between the equipment and any receivers. This would reduce noise by at least 5 dBA. Noise levels at nearby multi-family residences or commercial facilities are modeled at up to 80 dBA at a distance of 50 feet. This would be at or below the 80-dBA limit for short-term construction at multi-family residences, and impacts would be less than significant.

The engine used for the microtunneling procedure would be located above-ground and would therefore generate unattenuated noise; however, the engine and associated equipment would be located in the cul-de-sac area of Peter Lehr Drive, approximately 700 feet from the nearest NSLU, which is the single-family residence located at the southern end of Elm Street. At this distance the noise from the microtunneling engine would not exceed the 60-dBA limit for single-family residences for construction occurring for greater than 10 days. Therefore, impacts would be less than significant.

#### **5.4.1.3 Construction Traffic**

Traffic noise would be generated from haul trucks and construction worker vehicles. However, at the low speeds posted on the residential streets the noise impacts from the small number of construction vehicles is significantly less than the normal construction noise limits.

### 5.4.2 Pump Station Construction

Construction of the pump station would require the use of some heavy equipment throughout the site for the full term of construction. This construction would be considered long-term, with a construction period exceeding 10 days or more. Construction activities can be roughly divided into several phases, with these phases potentially exhibiting some overlap depending on specific locations and timing. These include foundation and pump well excavation, foundation and pump well pour, building construction, utilities installation, pump and support equipment installation, finish grading and paving.

The loudest construction work would be during the initial site excavation. Work would be conducted with an excavator, loader, and dump trucks. Combined, these pieces of equipment would generate noise levels of up to 85 dBA at the adjacent commercially zoned parking lot for the baseball stadium. For the short-term excavation work this would not be considered a significant impact.

## 6.0 REPORT PREPARERS

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## 7.0 REFERENCES

U.S. Department of Transportation (USDOT). 2008. Roadway Construction Noise Model.

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