

ALBERT A.

**WEBB**

ASSOCIATES

# ETIWANDA INTERVALLEY WATER QUALITY & WATER RESILIENCY PROJECT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION (CEQA & CEQA-PLUS)

**OCTOBER 2021**

Prepared For



**COMMUNITY SERVICES DISTRICT**

Proudly serving Jurupa Valley and Eastvale

**Albert A. Webb Associates**

3788 McCray Street  
Riverside, CA 92506

[www.webbassociates.com](http://www.webbassociates.com)

**INITIAL STUDY and MITIGATED NEGATIVE DECLARATION**

**FOR**

**Etiwanda Intervalley Water Quality  
and Water Resiliency Project**

*Prepared for:*

**Jurupa Community Services District**

11201 Harrel Street  
Jurupa Valley, CA 91752  
(951) 685-7434

*Prepared by:*

Albert A. Webb Associates  
3788 McCray Street  
Riverside, CA 92506  
(951) 686-1070

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## Acronyms

|                   |   |
|-------------------|---|
| AB 52             | Assembly Bill 52                            |
| ALUCP             | Airport Land Use Compatibility Plan         |
| AQ                | Air Quality                                 |
| AQMD              | Air Quality Management District             |
| AQMP              | Air Quality Management Plan                 |
| BGS               | Below ground surface                        |
| BMP               | Best Management Practices                   |
| BRA               | <i>Biological Resources Assessment</i>      |
| BSA               | Biological Study Area                       |
| CDA               | Chino Desalter Authority                    |
| CDFW              | California Department of Fish & Wildlife    |
| CEQA              | California Environmental Quality Act        |
| CGP               | Construction General Permit                 |
| CH <sub>4</sub>   | Methane                                     |
| CMU               | Concrete masonry unit                       |
| CO                | Carbon monoxide                             |
| CO <sub>2</sub>   | Carbon dioxide                              |
| CO <sub>2</sub> E | Carbon dioxide equivalent                   |
| CRHR              | California Register of Historical Resources |
| CVWD              | Cucamonga Valley Water District             |
| DTSC              | Department of Toxic Substance Control       |
| EIR               | Environmental Impact Report                 |
| EWTF              | Eastside Water Treatment Facility           |
| FEMA              | Federal Emergency Management Agency         |
| FMMP              | Farmland Mapping and Monitoring Program     |
| GAC               | Granular activated charcoal                 |
| GHG               | Greenhouse Gas                              |
| GP                | General Plan                                |
| gpm               | Gallons per minute                          |
| GWP               | Global warming potential                    |
| HCP               | Habitat Conservation Plan                   |
| IEBL              | Inland Empire Brine Line                    |
| IEUA              | Inland Empire Utilities Agency              |
| IS                | Initial Study                               |
| IX                | Ion exchange                                |
| JCSD              | Jurupa Community Services District          |
| LMWTP             | Lloyd W. Michael Water Treatment Plant      |
| LST               | Localized significance threshold            |
| MCL               | Maximum contaminant limit                   |
| MG                | Million gallon                              |
| MM                | Mitigation measure                          |
| MMRP              | Mitigation Monitoring and Reporting Program |
| MND               | Mitigated Negative Declaration              |
| MOPO              | Maintenance of plant operations             |
| MRF               | Materials Recovery Facility                 |
| MRZ-3             | Mineral Resource Zone Three                 |

|                          |  |
|--------------------------|--|
| MTCO <sub>2</sub> E/year | Metric tonnes per year of carbon dioxide equivalents |
| NAHC                     | Native American Heritage Commission                  |
| N <sub>2</sub> O         | Nitrous oxide  |
| NO <sub>2</sub>          | Nitrogen dioxide                                     |
| NO <sub>x</sub>          | Oxides of nitrogen                                   |
| NPDES                    | National Pollutant Discharge Elimination System      |
| NRHP                     | National Register of Historic Places                 |
| PM-10                    | Particulate matter 2.5 to 10 microns in diameter     |
| OES                      | Office of Emergency Services                         |
| OFD                      | Ontario Fire Department                              |
| OPD                      | Ontario Police Department                            |
| PM-2.5                   | Particulate matter 2.5 microns or less in diameter   |
| QSD                      | Qualified SWPPP Developer                            |
| QSP                      | Qualified SWPPP Practitioner                         |
| RMP                      | Resource Management Plan                             |
| RNWTP                    | Royer Nesbit Water Treatment Plant                   |
| RPW                      | Relative permanent water                             |
| RWQCB                    | Regional Water Quality Control Board                 |
| SAWPA                    | Santa Ana Watershed Project Authority                |
| SCAQMD                   | South Coast Air Quality Management District          |
| SCCIC                    | South Central Coastal Information Center             |
| SCE                      | Southern California Edison                           |
| SLF                      | Sacred Lands File                                    |
| SO <sub>2</sub>          | Sulfur dioxide                                       |
| SWPPP                    | Storm Water Pollution Prevention Plan                |
| SWRCB                    | State Water Resources Control Board                  |
| TMP                      | Traffic Management Plan                              |
| USACE                    | Army Corps of Engineers                              |
| USFWS                    | United States Fish and Wildlife Service              |
| VMT                      | Vehicles miles traveled                              |
| VOC                      | Volatile organic compounds                           |
| WEAP                     | Worker Environmental Awareness Program               |

## I. INTRODUCTION

This document has been prepared pursuant to the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 *et seq.*), the *CEQA Guidelines* (California Code of Regulations Sections 15000 *et seq.*), and the Jurupa Community Services District's Local Guidelines for Implementing the California Environmental Quality Act (2021 Revision). Jurupa Community Services District (JCSD) is the lead agency and Cucamonga Valley Water District (CVWD) a responsible agency for CEQA purposes.

Section 15063(c) of the State *CEQA Guidelines* lists the following purposes of an Initial Study:

1. *Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a negative declaration;*
2. *Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;*
3. *Assist in the preparation of an EIR, if one is required;*
4. *Facilitate environmental assessment early in the design of a project;*
5. *Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment;*
6. *Eliminate unnecessary EIRs; and*
7. *Determine whether a previously prepared EIR could be used with the project.*

According to Section 15070 (Decision to prepare a Negative Declaration or Mitigated Negative Declaration) of Article 6 (Negative Declaration Process) of the *CEQA Guidelines*:

*A public agency shall prepare or have prepared a proposed negative or mitigated negative declaration for a project subject to CEQA when:*

- a) *The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, or*
- b) *The initial study identified potentially significant effects, but:*
  - 1) *Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and*
  - 2) *There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.*

The purpose of this Initial Study is to assess at a program level, the potential for any significant environmental effects associated with the adoption of the Etiwanda Valley Water Quality and Water Resiliency Project (the "Resiliency Project") and to assess at a project-level, impacts resulting from the construction and operation of the Etiwanda Pipeline.

This IS/MND is organized as follows:

1. Introduction, which provides the context for review along with applicable citation pursuant to CEQA and the State CEQA Guidelines, discusses the purpose and need for the project

2. Project Description describes the proposed Project.
3. Environmental Checklist Form, which as suggested in Section 15063(d)(3) of the State CEQA Guidelines provides an environmental impact assessment consisting of JCSD's environmental checklist and accompanying analysis for responding to the checklist questions. The Form is used to evaluate whether or not there are any significant environmental effects associated with implementation of the proposed Project.
4. CEQA-Plus Federal Cross-Cutters Analysis (CEQA-Plus), addresses the requirements of CEQA-Plus and provides project analysis per the State Water Resources Control Board (SWRCB) Clean Water SRF Program Evaluation for Environmental Review and Federal Coordination. The SWRCB acts as the "federal clearinghouse" for review of the document by federal agencies due to federal dollars being assigned to the project through the Environmental Protection Agency-funded SRF program.
5. References, which includes a list of reference sources, the location of reference material used in the preparation of this IS/MND, and identifies those responsible for preparation of the IS/MND and other parties contacted during the preparation of the IS/MND.

## **Environmental Process**

The environmental process being undertaken for the proposed Project began with the project's proposal and environmental research. Pursuant to Section 15073 of the State CEQA Guidelines, the Draft IS/MND will be circulated for a 30-day period between October 22, 2021 and November 22, 2021 to the State Clearinghouse, responsible agencies, and interested parties for review and comment. Comments received from the public review period for this project and JCSD's responses to each comment will be included in the Response to Comments document.

## **II. PROJECT DESCRIPTION**

This Initial Study analyzes the Etiwanda Intervalley Water Quality and Water Resiliency Project (the Resiliency Project) and construction and operation of the Etiwanda Pipeline, one of the components identified in the Resiliency Project. This Initial Study analyzes the Resiliency Project at a program level and analyzes the construction and operation of the Etiwanda Pipeline at a project-specific level.

The program-level analysis of the Resiliency Project provides a general discussion of the potential environmental impacts that would be expected with implementation of the various components of the Resiliency Project as described below. Because the Resiliency Project is evaluated at a program-level, one or more subsequent CEQA reviews and documents, such as Notices of Exemption (NOEs), Addendum, and/or Subsequent or Supplemental Mitigated Negative Declarations (MNDs), potentially with supporting technical studies as needed, will be required prior to construction of any Resiliency Project component other than the Etiwanda Pipeline. Because this Initial Study evaluates construction and operation of the Etiwanda Pipeline at a project-level, subsequent CEQA review is not required prior to construction of this facility.

### **Purpose and Need**

The Resiliency Project is a collaborative effort between the Jurupa Community Services District (JCSD) and the Cucamonga Valley Water District (CVWD) to develop a domestic water supply and conveyance project that will benefit both Districts by increasing water supply, improving water quality, enhancing infrastructure resiliency, and promoting sustainability. By working together, both Districts will benefit financially and operationally due to



facilities that can be utilized by either or both Districts depending on needs and availability of the various water supplies. (PDR, pp. 1-1, 2-1.)

According to JCSD's *2020 Urban Water Management Plan*, JCSD's ultimate potable water demand in 2040 is projected to be approximately 36,495 acre-feet per year (AF/YR) or 32.58 million gallons per day (MGD) average daily demand. JCSD's additional demand will be supplied from a portfolio of sources including existing groundwater wells, Chino Desalter Authority (CDA), and imported water. (JCSD UWMP, pp. 1-4, 4-7; PDR pp. 1-2, 2-2.) In 2020, JCSD supplied approximately 27,335 AF of water with existing capacity. In order to meet its ultimate demand of 36,495 AF/YR, JCSD needs to secure additional water supply of approximately 10,800 AF/YR. (PDR, pp. 1-2, 2-2.)

This additional supply is required in the near term because JCSD's existing well field is impacted by water quality issues and JCSD has very little additional supply available to meet increasing near term demand considering 43% of its well field is currently inactive. The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD's long-term water supply deficit. Initial phases of the Project will also meet JCSD's near term needs. Water will be supplied from one of CVWD's surface water treatment plants and new wells to be drilled in the upper portion of the Chino Basin. CVWD owns two surface water treatment plants that are fed water from the Rialto Feeder.<sup>1</sup> CVWD currently operates the Lloyd W. Michael Water Treatment Plant (LMWTP), which has a permitted capacity of 60 MGD with enhanced treatment, monitoring and sampling required above 30 MGD. CVWD also owns the Royer Nesbit Water Treatment Plant (RNWTP), which was permitted at 11.5 MGD but has been taken out of service and not currently operational. It has not been determined yet whether the LMWTP or the RNWTP will be the point of connection on the north end of the project but the southern connection will be at JCSD's 1110 and 980 pressure zone facilities near the Jurupa Hills along Country Village Road, as described, below. The backbone conveyance portion of this project is called the Etiwanda Pipeline and it will be utilized to move water south into JCSD's service area and/or north into CVWD's service area. The Water Resiliency Project will be able to deliver the required imported water and allow JCSD to complete its water portfolio. The Water Resiliency Project will meet approximately 29.6% of JCSD long term needs and approximately 15% of JCSD's short term needs. (PDR, pp. 1-2, 2-2.)

CVWD's long-term (ultimate) water supply will be provided through a combination of SWP water coming through the Rialto Feeder, local surface water captured in the local watershed, and groundwater wells in the Chino and Cucamonga Basins. It is anticipated that these sources are adequate to satisfy CVWD's demands. CVWD will benefit from the Water Resiliency Project through the development of additional groundwater wells required to meet its long-term water supply needs, recharge of the aquifer during times of excess water on the SWP, additional storage facilities, enhanced ability to transfer water to multiple pressure zones, and to generate electricity to offset operating costs. (PDR, pp. 1-2, 2-2.)

## Resiliency Project

The Resiliency Project components include the Etiwanda Pipeline, storage reservoir(s), pressure reducing/flow control station(s), upgrades to existing pumping facilities, new water wells, upgrade/expansion of either CVWD's LMWTP or RNWTP, groundwater treatment of existing JCSD groundwater wells, and hydroelectric generating facilities. (PDR, pp. 1-3, 2-3.) Components of the Resiliency Project will be located within the city of Jurupa Valley, Riverside County and the cities of Fontana and Rancho Cucamonga, and unincorporated

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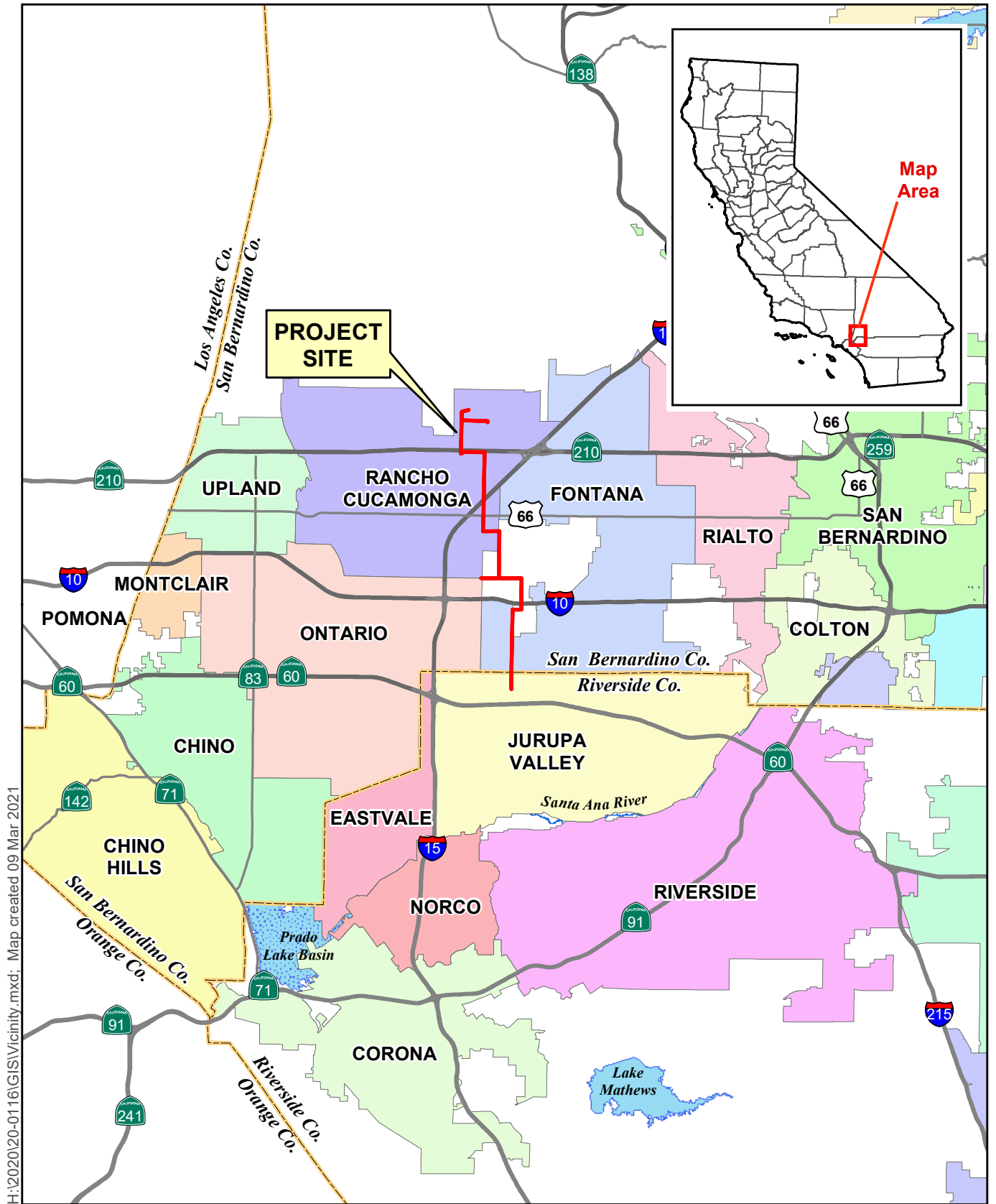
<sup>1</sup> The Rialto Feeder is a large diameter pipeline owned by Metropolitan Water District of Southern California (MWD) that delivers raw water from the State Water Project (SWP) to local water purveyors who treat and deliver SWP water to their customers.

territory in San Bernardino County (**Figure 1 – Regional Vicinity Map, Figure 2 – District Boundaries**). These components, which are described below, will be constructed in multiple phases over a period of several years.

### **Storage Reservoirs**

The Resiliency Project includes additional storage to provide for peaking and operational needs of the water supply system. The recommended storage capacity is 10 million gallon (MG) based on 110% of the average daily supply of 10,000 acre-feet per year (AFY). The storage should be located high enough in elevation to convey the maximum anticipated flows of 19,000 gallons per minute (gpm) to JCSD's 1110 PZ without pumping. No specific location has been identified at this time; however, the storage should be located north of the I-15/Etiwanda Avenue crossing with a base elevation no lower than 1240 feet. Other options include CVWD's Reservoir 2C location, the LMWTP or the RNWTP. The storage tank could be operated in cooperation with CVWD, or as a separate JCSD facility depending upon a final operating agreement between CVWD and JCSD. It is also possible that this storage may be split between two sites. (PDR, p. 7-1.) The exact location and size of the reservoir will be finalized based upon further hydraulic analysis and land availability. (PDR, p. 10-1.)

Implementation of storage reservoirs entail site acquisition, site preparation and grading, trenching, soil hauling, and construction of the storage reservoir. Depending on the location ultimately selected, access roads, drainage, and fencing improvements may be required. Assuming the reservoir is constructed at CVWD's existing Reservoir 2C site or the LMWTP, construction of the storage reservoir is anticipated to commence in spring 2026 and take approximately 14 months to complete. (PDR, Section 10.)

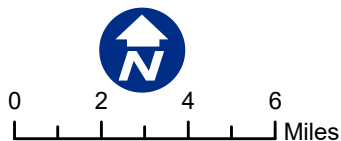


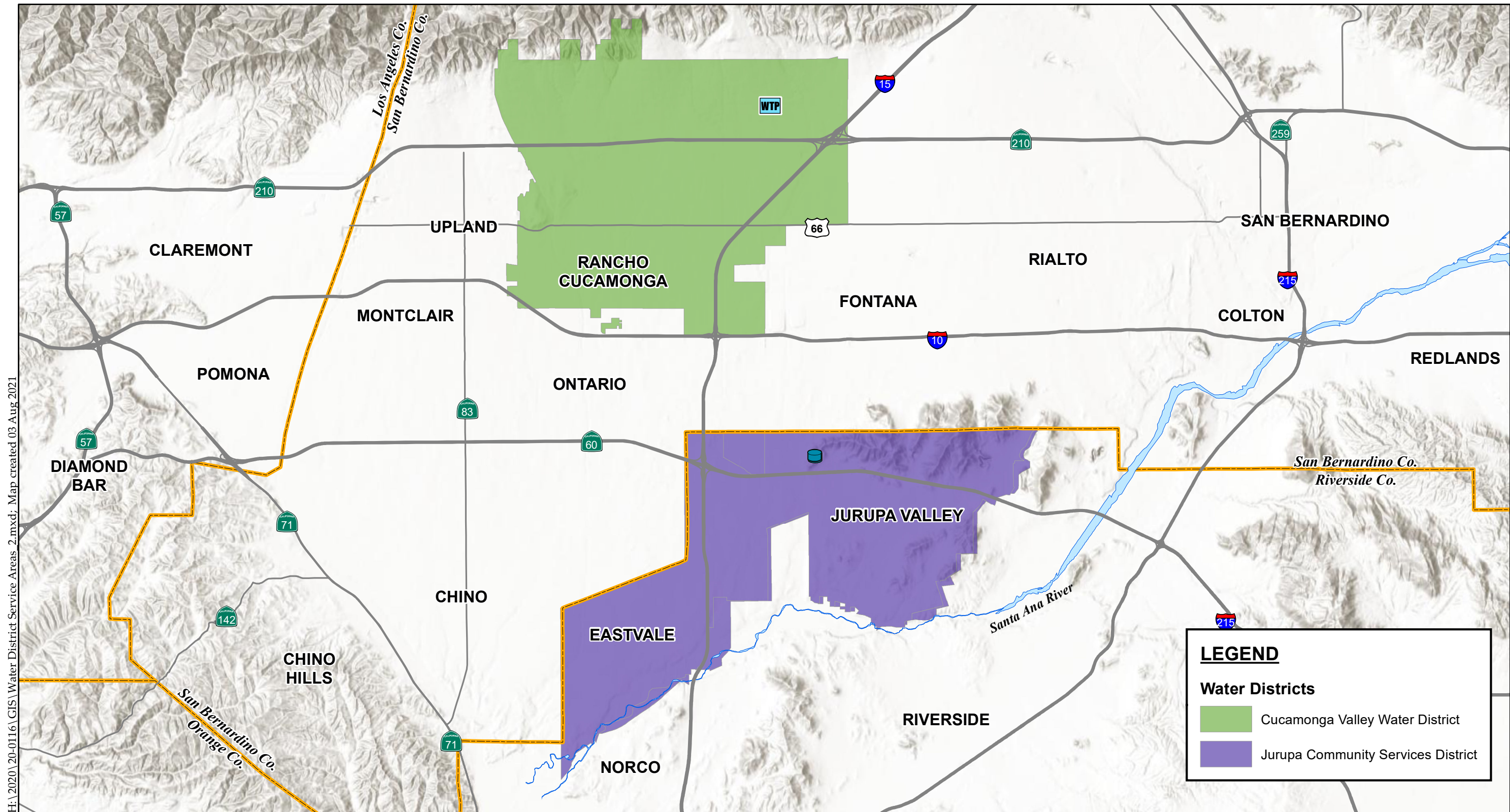
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Sources: San Bernardino Co. GIMS, 2021;  
 Riverside County GIS, 2021

**Figure 1 - Regional Vicinity Map**

Etiwanda Intervalley Water Quality and Water Resiliency Project





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Sources: Riverside Co. GIS, 2019; San Bernardino USDA NAIP, 2020

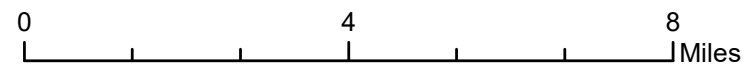
**LEGEND**

**Water Districts**

- Cucamonga Valley Water District
- Jurupa Community Services District

**Figure 2 - District Boundaries**

Etiwanda Intervalley Water Quality and Water Resiliency Project



### **Pressure Reducing/Flow Control Stations**

A pressure reducing station is anticipated to split the hydraulic gradient and lower the pressure of the transmission pipeline at the lower elevations south of I-15. Ideally, the pressure reducing station and the reservoir would be located on the same site; however, land available for a reservoir may not be available at this location. Another pressure reducing station is needed adjacent to JCSD's 1110 PZ 980 PZ tanks to facilitate JCSD's operation of the system. The Resiliency Project also anticipates upgrading CVWD's existing pumping system at the Reservoir 2C site to increasing the ability to move water to CVWD's upper pressure zones during outages of the Rialto Feeder and/or maintenance events at the LMWTP. (PDR, p. 1-4.) Each pressure control facility is recommended to be comprised of two 24-inch diameter valves and one 16-inch valve to provide the full flow capability and a range of smaller flows. The facilities will also include SCADA and telemetry to allow operators to adjust the flow rate, monitor tank levels, monitor valve operation, and allow for a smooth transition as the valves are turned on and off and flowrates are adjusted. A conceptual layout of these facilities is included as Figure 5.3 of the *Project Design Report*. (PDR, pp. 5-4, 10-1.)

### **Upgrade Existing Pumping Facilities at CVWD Reservoir 2C**

The existing pumping facilities at CVWD's Reservoir 2C will be updated to deliver water from this reservoir to CVWD's upper pressure zoned. (PDR, pp. 1-3, 2-3.) Construction of the upgrades at Reservoir 2C are anticipated to commence in fall 2023 and take approximately nine months to complete. (PDR, Section 10.)

### **New Water Wells**

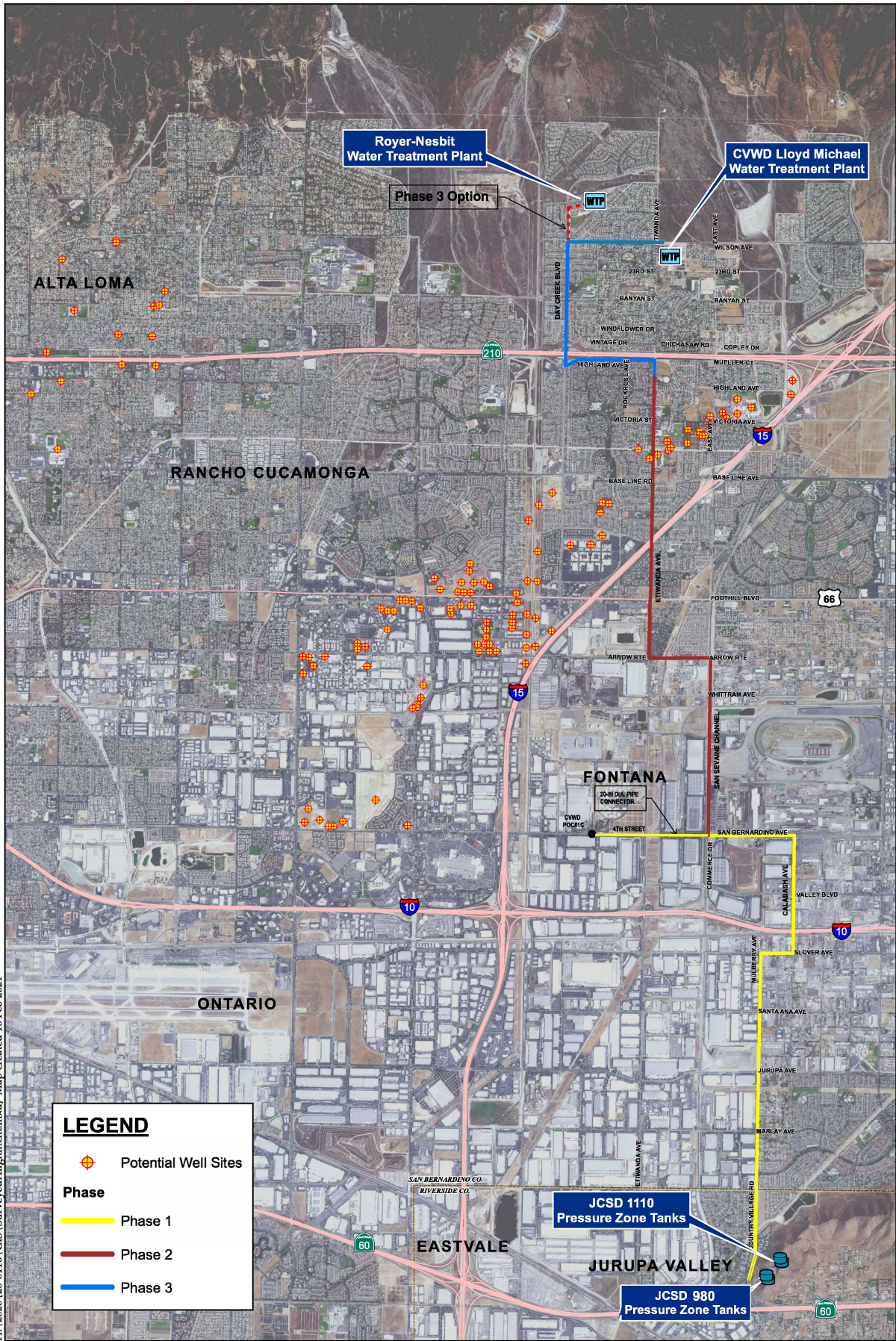
The Resiliency Project proposes five new groundwater wells including appurtenant pumping machinery and conveyance water pipelines in the northern portion of the Chino Basin. Two of these wells are proposed to include aquifer storage recharge (ASR) capabilities. Two wells will be funded, owned, and operated by JCSD and three wells will be funded, owned, and operated by CVWD. Each well is anticipated to produce 2,500 gpm (4,000 AFY). No treatment beyond the addition of chlorination for disinfection is anticipated. (PDR, pp. 1-4, 2-3, 7-1.)

The final locations of the wells have not been selected; however, potential sites are shown on **Figure 3 – Potential Well Sites**. To implement the new wells, specific sites will have to be identified, water quality assessed, site acquisition completed, and the wells drilled and equipped for operation. New pipelines will be required to connect the wells to the Etiwanda Pipeline. Each well will take approximately 24 months to complete. Construction of the first well is anticipated to commence summer 2022 and construction of the fifth well is anticipated to commence summer 2027. (PDR, pp. 1-3, 2-3, 7-1, Section 10.)

### **Upgrade/Expansion of the LMWTP or RNWTP**

The recommended connection point of the Etiwanda Pipeline is the LMWTP. The LMWTP has a current rated maximum capacity of 60 MGD but must operate with additional treatment, monitoring and sampling above 30 MGD. Critical processes, particularly the GAC, washwater recovery, and solids handling processes, are generally designed for an average daily production capacity of 30 MGD. Therefore in order to serve water to JCSD, the LMWTP would require the following upgrades:

- additional filter capacity,
- expansion of the granular activated charcoal (GAC) system,
- mechanical dewatering for backwash sludge management,
- upgrades to chemical feed systems and addition of bulk chemical storage, and
- possible finished water storage reservoir. (PDR, p. 7-2.)

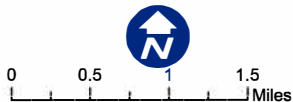


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Sources: Riverside Co. GIS, 2020;  
USDA NAIP, 2018.

**LEGEND**

- Potential Well Sites
- Phase**
- Phase 1
- Phase 2
- Phase 3



**Figure 3 - Potential Well Sites**

Etowanda Intervalley Water Quality and Water Resiliency Project

Although the specific timing of these upgrades has not been determined construction may take 24 months and could commence in summer 2024. (PDR, p. 7-2, Section 10.)

As an alternative to connecting to the LMWTP, the Etiwanda Pipeline could connect to the RNWTP. The RNWTP is currently out of operation and had a rated capacity of 11.5 MGD. In order to serve deliver water to JCSD, the RNWTP would require the following upgrades:

- rehabilitation of all instrumentation,
- new chemical feed systems and chemical storage facilities,
- rehabilitation of the mechanical equipment in the flocculation basins and sedimentation basins,
- retrofit of the gravity filters with surface wash and replacement of filter media,
- mechanical dewatering for backwash sludge management, and
- addition of GAC treatment. (PDR, p. 7-2.)

If the RNWTP is ultimately selected to deliver water to JCSD, construction of upgrades to this facility will need to commence in summer 2024.

#### **Groundwater Treatment of Existing JCSD Wells**

According to the *Draft Updated Geohydrologic Analysis of Future Groundwater Production in JCSD*, April 21, 2020<sup>2</sup> (the Geohydrologic Analysis), JCSD can rely upon an annual groundwater production of 14,000 AFY within its service area, without causing an adverse groundwater decline. Preliminary findings from JCSD's 2020 *Water Master Plan* and an in-process water quality evaluation study indicate that JCSD will eventually need to install treatment on most if not all of JCSD's current wells to lower total dissolved solids (TDS) and nitrates to meet drinking water standards. (PDR, pp. 1-4, 2-1.) Treatment may also be required for PFAS. The types of treatment under consideration is ion exchange (IX), granular activated carbon (GAC), and reverse osmosis.

#### **Hydroelectric Generating Facilities**

The Water Resiliency Project includes hydroelectric generation as a means to offset operating costs incurred by both CVWD and JCSD. By utilizing the hydraulic gradient differences between the Rialto Feeder and the LMWTP and between CVWD's upper pressure zones and JCSD's pressure zones, JCSD and CVWD can generate electricity to be sold into the electric grid.

CVWD investigated hydroelectric power generation at the LMWTP in the *Lloyd W. Michael Water Treatment Plant Regulatory Compliance Upgrade Project Preliminary Design Report*, November 2011, (LMWTP PDR). The LMWTP PDR evaluated three turbine alternatives and recommended a single Francis turbine. In June 2012, CVWD circulated for public review and Initial study for the Lloyd W. Michael Water Treatment Plant Regulatory Compliance Upgrade Project (LMWTP Upgrade Project). Part of the LMWTP Upgrade Project evaluated in this initial study, included a small scale, in-line hydroelectric generation facility at the LMWTP influent control structure. Structures associated with the hydroelectric facility evaluated in the Upgrade Project initial study include a concrete slab, concrete masonry unit (CMU) block wall building or steel canopy structure to house the turbine and generator. (Upgrade Project IS, pp. 2, 5-7, 11.) In August 2012, CVWD's Board of Directors adopted a mitigated negative declaration for the LMWTP Upgrade Project. Since CEQA review has been completed for this facility, unless substantial changes are proposed from the project evaluated in the LMWTP Upgrade Project initial study. No further CEQA analysis is required.

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<sup>2</sup> The Geohydrologic Analysis is included as Appendix D to the PDR.

Regarding hydroelectric generation associated with the Etiwanda Pipeline, because there is 285 feet of static head differential between the high water line (HWL) at CVWD's Reservoir 2C and the HWL of JCSD's 1110 Reservoir it is assumed that hydroelectric generation will be feasible along the Etiwanda Pipeline. The Specific location, sizing, and details of the hydroelectric generating facilities will be determined during final design of the Etiwanda Pipeline. (PDR, p. 10-2.)

## Etiwanda Pipeline

The proposed Etiwanda Pipeline is the first Resiliency Project component that will be constructed and is evaluated at a project-specific level in this IS/MND. Although the Etiwanda Pipeline is a component of the Resiliency Project it will have independent utility. That is, this pipeline will function to move water between JCSD and CVWD without construction any other Resiliency Project component.

The Etiwanda Pipeline entails the construction and operation of 36-inch diameter welded street water transmission pipeline from an existing JCSD 30-inch diameter water pipeline in Country Village Road north of State Route (SR) 60 (in the vicinity of JCSD's 1110 pressure zone (PZ) and 980 PZ tanks) to either CVWD's RNWTP or CVWD's LMWTP. The RNWTP is located at Coyote Drive approximately 1,150 feet northeast of Day Creek Boulevard in Rancho Cucamonga. The LMWTP is located at Etiwanda Avenue and Wilson Avenue in Rancho Cucamonga. (Refer to **Figure 4 – Etiwanda Pipeline (Recommended Alternative)**). This IS/MND evaluates a recommended alignment and several alternative alignments for the Etiwanda Pipeline as described below.

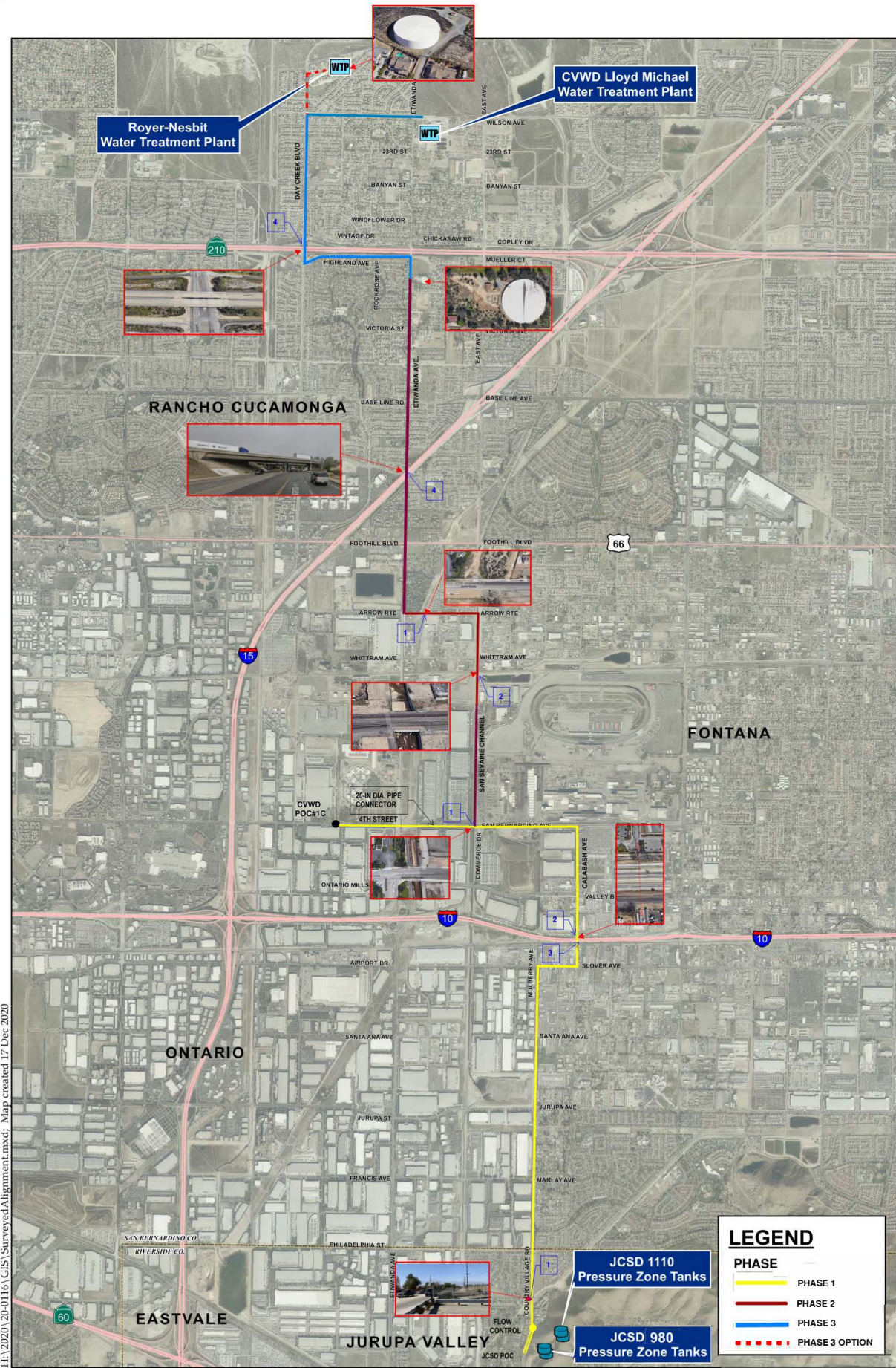
### Recommended Alignment

The estimated length of the Etiwanda Pipeline is approximately 70,420 or 68,600 linear feet (LF) depending on the final alignment and the treatment plant, i.e., LMWTP or RNWTP, ultimately selected. (PDR, p. 2-5.) The Etiwanda Pipeline will be a 36-inch diameter welded steel transmission pipeline, except for the 20-inch diameter segment to Point of Connection (POC) No. 1. The Etiwanda Pipeline is proposed to be constructed in three phases from south to north.

Phase 1 will be approximately 32,000 LF in length commencing at an existing JCSD 30-inch diameter pipeline approximately 1000 LF south of the access road to JCSD's 1110 and 980 PZ tanks located in the Jurupa Hills. The Phase 1 Pipeline will connect to an existing CVWD water pipeline in Fourth Street approximately 2,450 feet west of the intersection of Fourth St./San Bernardino Avenue/Etiwanda Avenue in Rancho Cucamonga (referred to as Point of Connection or POC #1). As shown on **Figure 4**, Phase 1 of the Etiwanda Pipeline will be located within or along Country Village Road, Mulberry Avenue, Slover Avenue, Calabash Avenue, San Bernardino Avenue, and Fourth Street traversing through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga. Phase I construction will require crossing: (i) the Riverside County Flood Control and Water Conservation District (RCFCWCD) Declez Channel at Country Village Road; (ii) I-10 and the Union Pacific Railroad (UPRR) at Calabash Avenue; and (iii) the San Sevaine Channel at Etiwanda Avenue. Construction at these crossings is proposed to be via jack-and-bore. (PDR, pp. 2-5, 2-9, 2-10, 10-1.)

Etiwanda Pipeline Phase 2 will be approximately 23,320 LF and will connect to the Phase 1 Pipeline at the intersection of Fourth St./San Bernardino Avenue/Etiwanda Avenue and continue north along the San Sevaine Channel within San Bernardino County Flood Control (SBCFC right-of-way), west in Arrow Route, north in Etiwanda Avenue to CVWD's Reservoir 2C (POC No. 2) in the city of Rancho Cucamonga. POC No. 2 is located approximately 950 feet south of I-215. Phase II construction will require crossing I-15. Crossing I-15 is proposed to be via jack-and-bore. (PDR, pp. 2-8, 10-1.)





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Sources: Riverside Co. GIS, 2020; USDA NAIP, 2016.

**Figure 4 - Etiwanda Pipeline (Recommended Alignment)**

Etiwanda Intervalley Water Quality and Water Resiliency Project



- 1 - CHANNEL/DRAINAGE CROSSING
- 2 - RAILROAD CROSSING
- 3 - FREEWAY CROSSING
- 4 - OVERPASS CROSSING

**LEGEND**

**PHASE**

- PHASE 1
- PHASE 2
- PHASE 3
- - - PHASE 3 OPTION



Etiwanda Pipeline Phase 3 will be approximately 15,100 LF, assuming connection to the LMWTP. The Pipeline will traverse north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, northwest in Coyote Drive to the LMWTP. If the Etiwanda Pipeline connects to the RNWTP, Phase 3 will be approximately 13,240 LF, with the Pipeline continuing north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, and west in Wilson Avenue to the RNWTP. All of Phase 3 is within Rancho Cucamonga. Regardless of which of the two water treatment plants (LMWTP or RNWTP) is the ultimate POC for the Etiwanda Pipeline, construction will entail crossing State Route (SR) 210 at Day Creek Boulevard. Crossing SR-210 will be either via jack-and-bore or open cut. (PDR, p. 2-10.)

All phases of the Etiwanda Pipeline will include appurtenances and appurtenant structures such as manholes.

Construction will take place within a 25-foot wide construction footprint, in a trench approximately six to seven feet wide. The Etiwanda Pipeline project will require acquisition of ROW along the San Sevaine Channel from SBCFC. All staging areas will be within with the paved road or road shoulder ROW along the pipeline alignment.

### **Alternative Alignments**

After an initial review of right of way width, major crossing, traffic, existing utilities, number of access or entrance roads, and surface features, six (6) alignment alternatives referred to as Alternative A thru Alternative F were selected. All of the alternative alignments commence at JCSD 's existing 30-inch diameter pipeline in Country Village Road approximately 1000 LF south of the access road to JCSD's 1110 and 980 PZ tanks. The alternative alignments are shown on **Figure 5 – Pipeline Alternatives** and described in the following paragraphs.

#### Alternative A

Alternative A is approximately 57,550 LF in length. Alternative A traverses north in Country Village Road from JCSD's existing 30-inch diameter pipeline to Philadelphia Avenue, west in Philadelphia Avenue to Etiwanda Avenue, north in Etiwanda Avenue (crossing UPRR, I-10, I-15, and SR-60) to the LMWTP. (PDR, p. 4-1.)

#### Alternative B

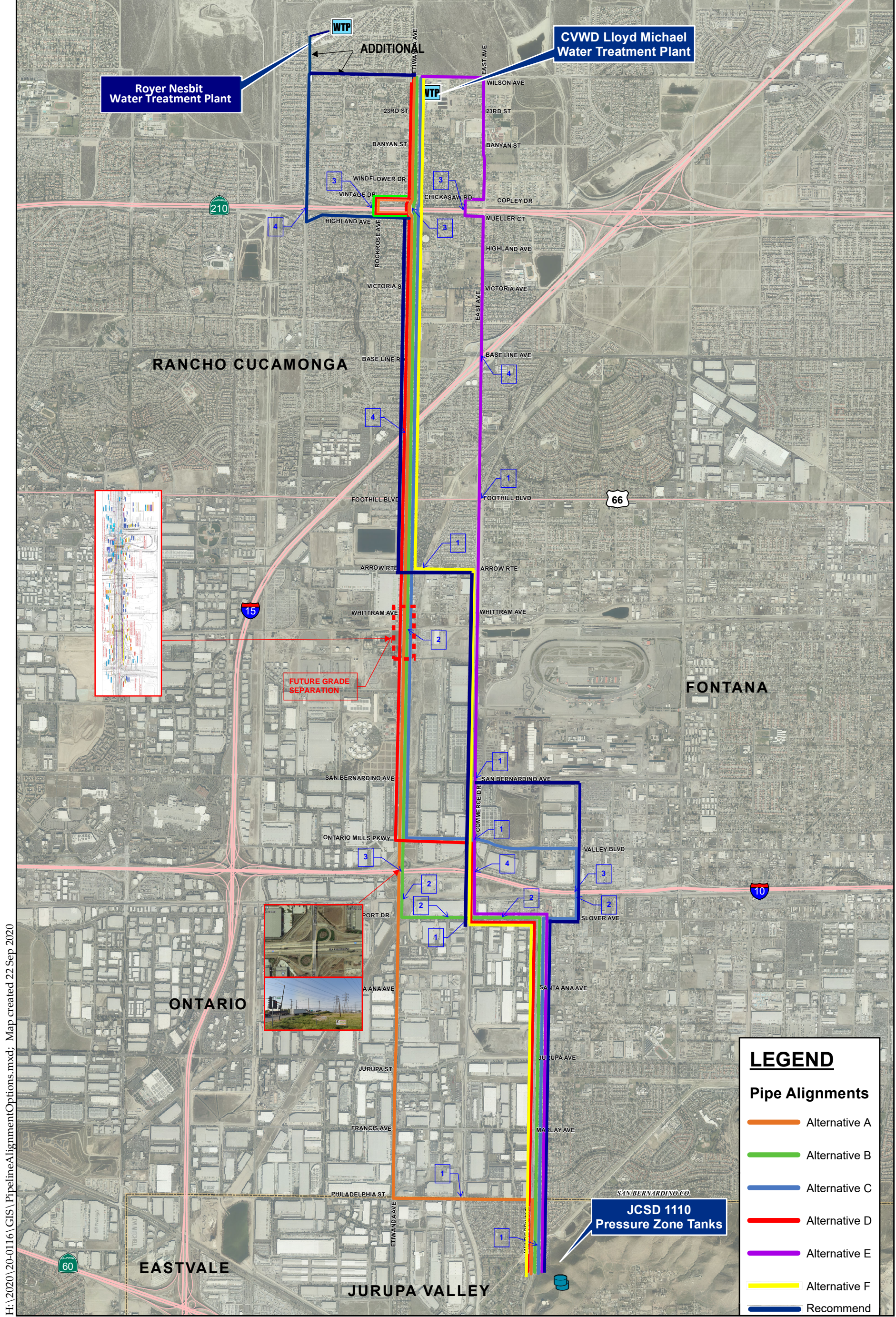
Alternative B is approximately 60,310 LF in length. Alternative B traverses north in Country Village Road (which becomes Mulberry Avenue in San Bernardino County) from JCSD's existing 30-inch diameter pipeline to Slover Avenue, west in Slover Avenue to Etiwanda Avenue, north in Etiwanda Avenue (crossing I-10, UPRR, I-15, and SR-60) to the LMWTP. (PDR, p. 4-1.)

#### Alternative C

Alternative C is approximately 63,990 LF in length. Alternative C traverses north in Country Village Road (which becomes Mulberry Avenue in San Bernardino County) from JCSD's existing 30-inch diameter pipeline to Slover Avenue, east in Slover Avenue to Calabash Avenue, north in Calabash Avenue to Valley Boulevard, west along Valley Boulevard to Etiwanda Avenue, north in Etiwanda Avenue (crossing I-15 and SR-210) to the LMWTP. (PDR, p. 4-1.)

#### Alternative D

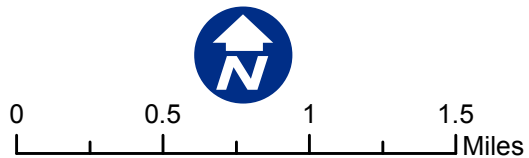
Alternative D is approximately 63,320 LF in length. Alternative D traverses north in Country Village Road (which becomes Mulberry Avenue in San Bernardino County) from JCSD's existing 30-inch diameter pipeline to Slover Avenue, west in Slover Avenue to East Avenue, north in East Avenue (crossing I-10 and UPRR) to Valley Boulevard, west in Valley Boulevard to Etiwanda Avenue, north in Etiwanda Avenue (crossing I-15 and SR-210) to the LMWTP. (PDR, p. 4-2.)



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Sources: Riverside Co. GIS, 2020; USDA NAIP, 2016.

- 1 - CHANNEL CROSSING
- 2 - RAILROAD CROSSING
- 3 - FREEWAY CROSSING
- 4 - OVERPASS CROSSING



**Figure 5 - Pipeline Alternatives**  
Etiwanda Intervalley Water Quality and Water Resiliency Project



#### Alternative E Alignment

Alternative E is approximately 61,133 feet in length. Alternative E traverses north in Country Village Road (which becomes Mulberry Avenue in San Bernardino County) from JCSD's existing 30-inch diameter pipeline to Slover Avenue, west in Slover Avenue to East Avenue, north in East Avenue (crossing I-10, UPRR, and I-15) west to the easterly extension of Mueller Court, north crossing under SR-210 to Chickasaw Road, east in Chickasaw Road to East Avenue, north in East Avenue to Wilson Avenue and west in Wilson Avenue to the LMWTP. (PDR, p. 4-4.)

#### Alternative F Alignment

Alternative F is approximately 59,456 feet in length. Alternative F traverses north in Country Village Road (which becomes Mulberry Avenue in San Bernardino County) from JCSD's existing 30-inch diameter pipeline to Slover Avenue, west in Slover Avenue to East Avenue, north in East Avenue (crossing I-10, UPRR, and I-15) to Arrow Route, west in Arrow Route to Etiwanda Avenue, north in Etiwanda Avenue to (crossing I-15 and SR-210) to the LMWTP.

#### Alternative A through Alternative F Potential Connection to the RNWTP

If it is determined that the Etiwanda Pipeline will connect to the RNWTP, all alternative alignments will include the water pipeline west in Wilson Avenue (from the LMWTP) to Day Creek Boulevard, north in Day Creek boulevard to Coyote Drive, and northeast in Coyote Drive to the RNWTP. This additional pipeline will be approximately 6,500 feet in length.

### III. ENVIRONMENTAL CHECKLIST FORM

1. **Project title:** Etiwanda Intervalley Water Quality and Water Resiliency Project

2. **Lead Agency name and address:**

Jurupa Community Services District  
11201 Harrel Street  
Jurupa Valley, CA 91752  
(951) 685-7434

**Responsible Agency name and address:**

Cucamonga Valley Water District  
10440 Ashford Street  
Rancho Cucamonga, CA 91730  
(855) 654-2893

3. **Contact person email address and phone number:**

Eddie Rhee, Engineering Manager  
ERhee@JCSD.US  
(951) 685-7434 EXT. 118

4. **Project location:**

The Etiwanda Intervalley Water Quality and Water Resiliency Project (Water Resiliency Project) includes facilities within the city of Jurupa Valley (Riverside County) and the cities of Fontana and Rancho Cucamonga, and unincorporated San Bernardino County. Refer to **Section 2 – Project Description** and **Figure 1 – Regional Vicinity Map**, and **Figure 2 – District Boundaries** for more details.

5. **Project sponsor's name and address:**

The proposed Project is a joint endeavor between the Jurupa Community Services District and the Cucamonga Valley Water District.

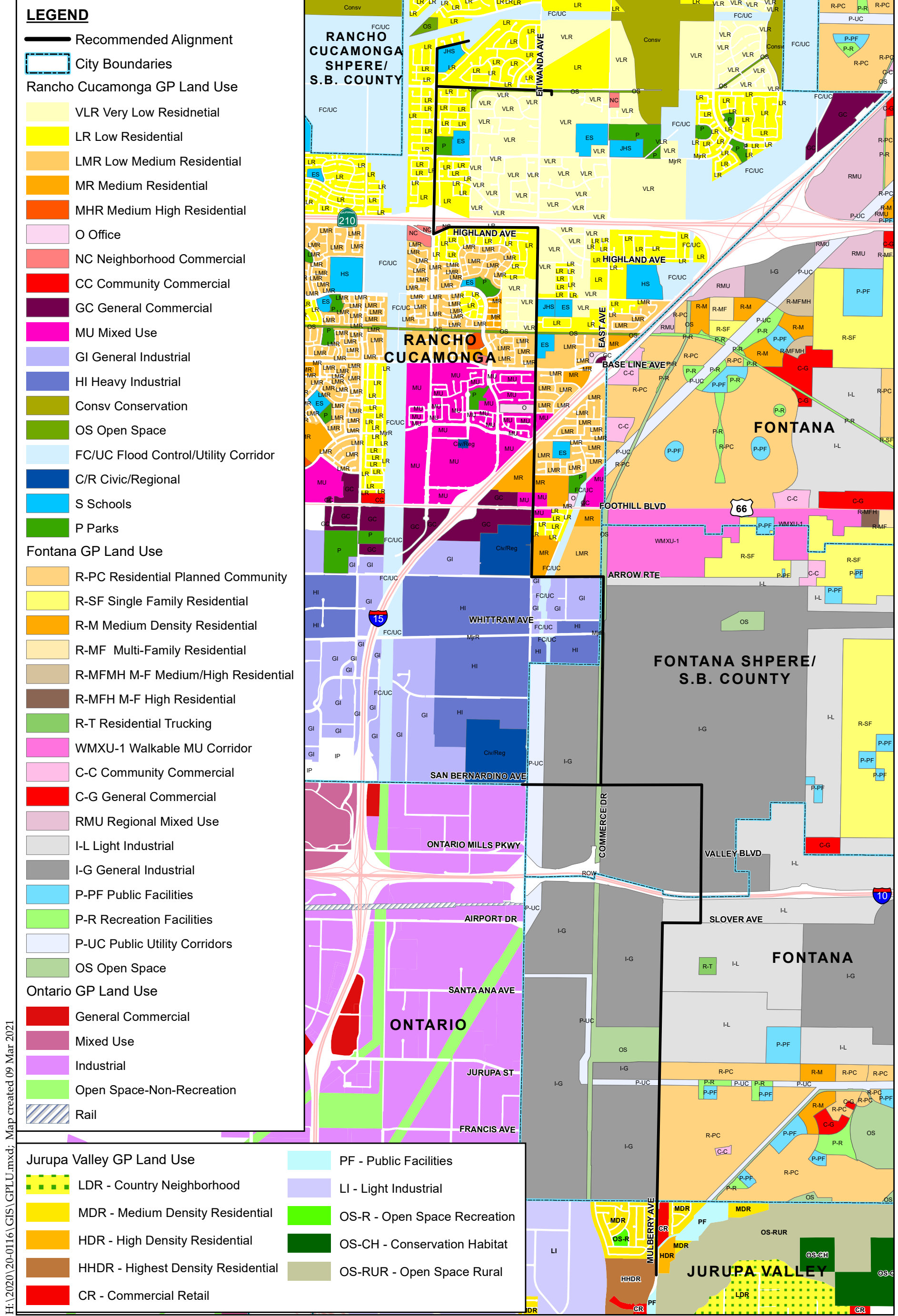
Jurupa Community Services District  
11201 Harrel Street  
Jurupa Valley, CA 91752  
(951) 685-7434

Cucamonga Valley Water District  
10440 Ashford St,  
Rancho Cucamonga, CA 91730  
(855) 654-2893

6. **General Plan Land Use Designation:**

Land use designations of properties adjacent to Etiwanda Pipeline alignment are shown on **Figure 6 – General Plan Land Use Designations** and listed by jurisdiction.

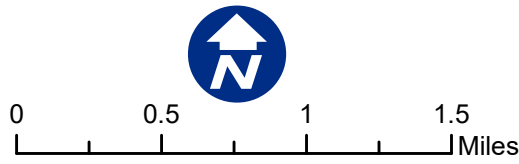
- Jurupa Valley: Commercial Retail (CR), Highest Density Residential (HHDR), High Density Residential (HDR), Medium Density Residential (MDR)
- Fontana and Unincorporated San Bernardino County within Fontana Sphere of Influence): General Industrial (I-G), Open Space (OS), Public Utility Corridors (P-UC), Residential Planned Community (R-PC)
- Rancho Cucamonga: Civic/Regional (C/GR), Flood Control/Utility Corridor (FC/UC), General Commercial (GC), General Industrial (GI), Low Residential (LR), Low Medium Residential (LMR), Medium Residential (MR), Mixed Use (MU), Neighborhood Commercial (NC), Office (O), Park (P), Schools (ES, JHS), Very Low Residential (VLR)



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Sources: City of Rancho Cucamonga, 2020; City of Fontana, 2020; City of Ontario, 2021; City of Jurupa Valley, 2017;

**Figure 6 - General Plan Land Use Designations**  
Etiwanda Intervalley Water Quality and Water Resiliency Project



The LMWTP and RNWTP sites are within the City of Rancho Cucamonga with General Plan Land Use Designations of VLR and FC/UC, respectively.

## 7. Zoning:

The Etiwanda Pipeline will be located mostly within road rights-of-way that are not assigned zoning designations. Zoning of properties adjacent to the Etiwanda Pipeline alignment are shown on **Figure 7 – Zoning** and listed by jurisdiction.

- Jurupa Valley: General Residential (R-3), Manufacturing – Service Commercial (M-SC ), Planned Residential (R-4), Controlled Development Areas (W-2)
- Fontana and Unincorporated San Bernardino County within Fontana Sphere of Influence): General Industrial (M-2), Open Space – Natural (OS-N), Specific Plan (SP)
- Rancho Cucamonga: Most of the proposed Etiwanda Pipeline alignment is adjacent to or within the following specific plans or planned community: Foothill Boulevard Specific Plan, Etiwanda Specific Plan, Etiwanda North Specific Plan, and the Victoria Planned Community. The zoning designations adjacent to the pipeline alignment are: General Industrial (GI), Heavy Industrial (HI), Light Industrial<sup>3</sup> (LI), Regional Commercial<sup>1,2</sup> (RRC)<sup>1</sup>, Very Low Residential<sup>4</sup> (VL), Low Residential<sup>2</sup> (L), Low Medium Residential<sup>2, 5</sup> (LM), Medium Residential<sup>2</sup> (M), Office Professional<sup>2</sup> (OP), School<sup>2,3</sup> (S), Park (P), Village Commercial<sup>6</sup> (VC), Mixed Use<sup>4</sup> (MU)

The LMWTP and RNWTP sites are in Rancho Cucamonga. The LMWTP site is within the Etiwanda Specific Plan and is zoned Very Low Residential (VL). The LMWTP site is also within the Equestrian Overlay area. The RNWTP site is within the Etiwanda North Specific Plan and is zoned Utility (U, UC). The RNWTP site is also within the Hillside Overlay per Rancho Cucamonga Ordinance 628.

## 8. Project Description:

This Initial Study provides a program-level analysis of the Etiwanda Intervalley Water Quality and Water Resiliency Project (hereinafter the “Resiliency Project”) and a project-level analysis for the Etiwanda Pipeline. Refer to Section 2 – Project Description for project details.

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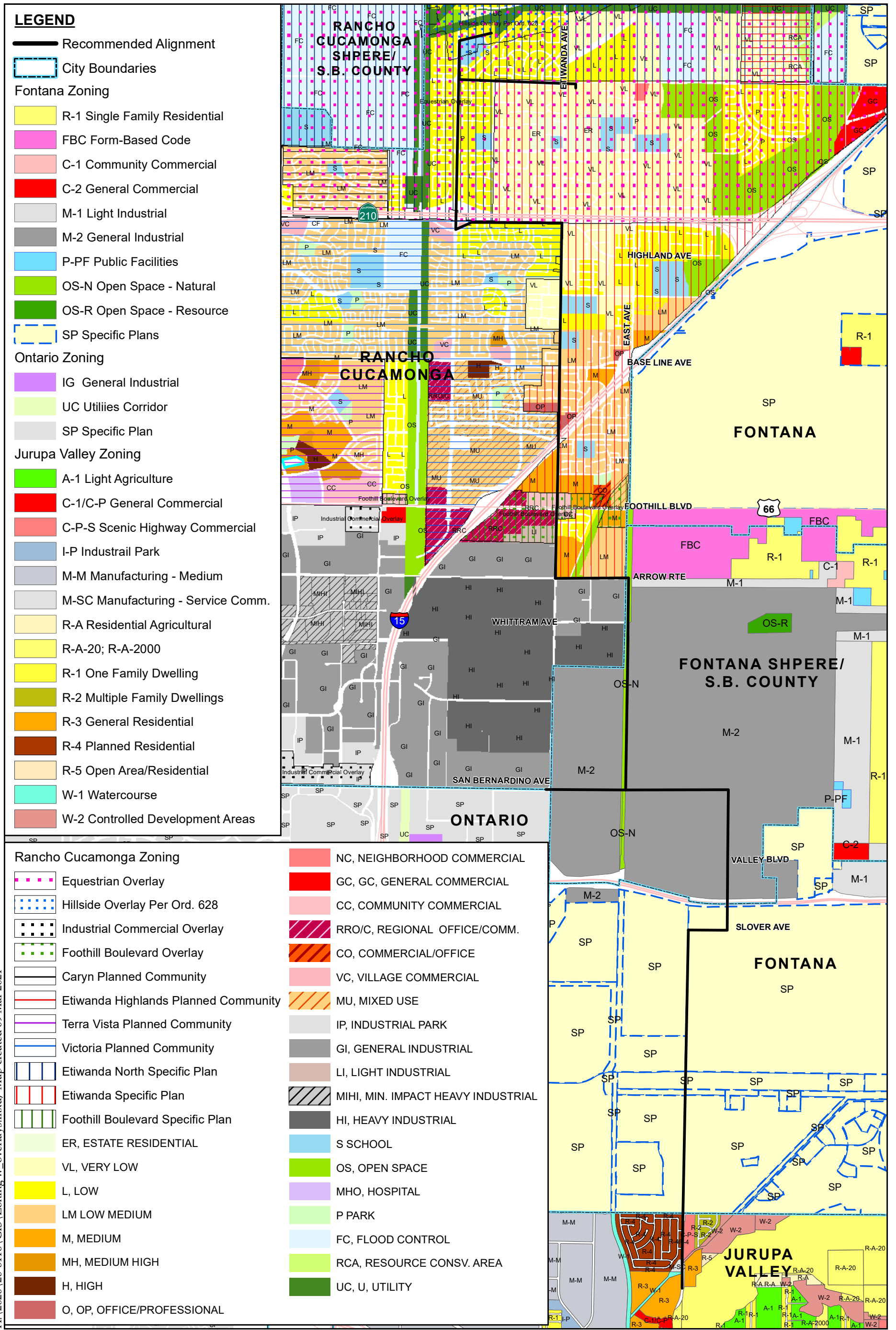
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<sup>3</sup> Zones within the Foothill Boulevard Specific Plan and Foothill Boulevard Overlay

<sup>4</sup> Zones within the Etiwanda Specific Plan

<sup>5</sup> Zones within the Etiwanda North Specific Plan

<sup>6</sup> Zones within the Victoria Planned Community



- LEGEND**
- Recommended Alignment
  - City Boundaries
- Fontana Zoning**
- R-1 Single Family Residential
  - FBC Form-Based Code
  - C-1 Community Commercial
  - C-2 General Commercial
  - M-1 Light Industrial
  - M-2 General Industrial
  - P-PF Public Facilities
  - OS-N Open Space - Natural
  - OS-R Open Space - Resource
  - SP Specific Plans
- Ontario Zoning**
- IG General Industrial
  - UC Utilities Corridor
  - SP Specific Plan
- Jurupa Valley Zoning**
- A-1 Light Agriculture
  - C-1/C-P General Commercial
  - C-P-S Scenic Highway Commercial
  - I-P Industrail Park
  - M-M Manufacturing - Medium
  - M-SC Manufacturing - Service Comm.
  - R-A Residential Agricultural
  - R-A-20; R-A-2000
  - R-1 One Family Dwelling
  - R-2 Multiple Family Dwellings
  - R-3 General Residential
  - R-4 Planned Residential
  - R-5 Open Area/Residential
  - W-1 Watercourse
  - W-2 Controlled Development Areas

- Rancho Cucamonga Zoning**
- Equestrian Overlay
  - Hillside Overlay Per Ord. 628
  - Industrial Commercial Overlay
  - Foothill Boulevard Overlay
  - Caryn Planned Community
  - Etiwanda Highlands Planned Community
  - Terra Vista Planned Community
  - Victoria Planned Community
  - Etiwanda North Specific Plan
  - Etiwanda Specific Plan
  - Foothill Boulevard Specific Plan
  - ER, ESTATE RESIDENTIAL
  - VL, VERY LOW
  - L, LOW
  - LM LOW MEDIUM
  - M, MEDIUM
  - MH, MEDIUM HIGH
  - H, HIGH
  - O, OP, OFFICE/PROFESSIONAL

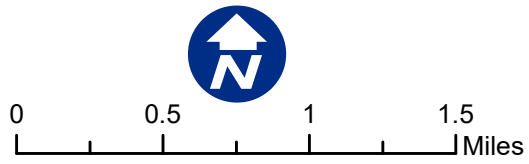
- NC, NEIGHBORHOOD COMMERCIAL
- GC, GC, GENERAL COMMERCIAL
- CC, COMMUNITY COMMERCIAL
- RRO/C, REGIONAL OFFICE/COMM.
- CO, COMMERCIAL/OFFICE
- VC, VILLAGE COMMERCIAL
- MU, MIXED USE
- IP, INDUSTRIAL PARK
- GI, GENERAL INDUSTRIAL
- LI, LIGHT INDUSTRIAL
- MIHI, MIN. IMPACT HEAVY INDUSTRIAL
- HI, HEAVY INDUSTRIAL
- S SCHOOL
- OS, OPEN SPACE
- MHO, HOSPITAL
- P PARK
- FC, FLOOD CONTROL
- RCA, RESOURCE CONSV. AREA
- UC, U, UTILITY

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Sources: City of Rancho Cucamonga, 2020; City of Fontana, 2019; City of Ontario, 2021; City of Jurupa Valley, 2019;

**Figure 7 - Zoning**

Etiwanda Intervalley Water Quality and Water Resiliency Project





**9. Surrounding Land Uses and Setting: Briefly describe the project's surroundings:**

Zoning and Land Use Designations are described above and shown on **Figure 6 – General Plan Land Use Designations** and **Figure 7 – Zoning**. Existing land uses in the Project area include residential, commercial, industrial, manufacturing, public facilities (e.g., schools, water treatment plants, storm drain channels), and agriculture and vacant lots.

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

- Federal Agencies
  - United States Army Corps of Engineers (USACE): Section 404 Permit if the project will impact waters under the jurisdiction of the USACE.
  
- State Agencies
  - California Department of Transportation (Caltrans): Encroachment permit for freeway crossings
  - California Department of Drinking Water: Permit for major transmission pipeline
  - California Department of Fish and Wildlife (CDFW): Lake and Streambed Alteration Agreement if needed
  
- Regional Agencies
  - County of San Bernardino: Encroachment Permit for use of public ROW
  - Riverside County Flood Control and Water Conservation District (RCFCWCD): Easement or Encroachment Permit for crossing RCFCWCD-owned channel
  - San Bernardino County Flood Control District (SBCFCD): Easement or encroachment permit for use of SBCFCD ROW and crossing of San Sevaine Channel
  - Santa Ana Regional Water Quality Control Board: Section 401 water Quality Certification, if the project will impact waters under the jurisdiction of the Regional Board
  - The Metropolitan Water District of Southern California (Metropolitan): Easement or Encroachment Permit for crossing Metropolitan-owned pipeline
  
- Local Agencies
  - City of Fontana: Encroachment Permit for use of public ROW
  - City of Jurupa Valley: Encroachment Permit for use of public ROW
  - City of Rancho Cucamonga: Encroachment Permit for use of public ROW
  - California Department of Drinking Water: Permit for major transmission pipeline
  - California Department of Fish and Wildlife (CDFW): Lake and Streambed Alteration Agreement if needed if the project will impact waters of the state
  
- Other Entities
  - Union Pacific Railroad: Encroachment Permit/license for crossing
  - Southern Regional Rail Authority/BNSF: Encroachment Permit/license for crossing

**11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?<sup>7</sup>**

WEBB Associates, on behalf of JCSD provided “Notification of Tribal Consultation Opportunity” via email on February 22, 2021 pursuant to Assembly Bill 52 (AB 52) to Tribes that have previously requested such a notice from JCSD and to tribes on CVWD’s notification list. Notification was sent to 11 Tribes: Agua Caliente Band of Cahuilla Indians, Gabrielino/Tongva Band of Mission Indians, Gabrielino/Tongva Indians of California, Gabrielino/Tongva Nation, Gabrielino/Tongva Tribe, Gabrieleno Band (Kizh Nation), Morongo Band of Mission Indians, Quechan Tribe of Fort Yuma, San Fernando Band of Mission Indians, San Manuel Band of Mission Indians, and Serrano Nation of Mission Indians.

As of October 1, 2021, the Quechan Tribe of Fort Yuma and San Manuel Band of Mission Indians are the only tribes that responded. On February 23, 2021, the Quechan Tribe Historic Preservation Office responded that the Tribe had no comments on the Project and they are deferring to more local tribes. On February 25, 2021, the San Manuel Band of Mission Indians (SMBMI) indicated they have no concerns regarding the project and provided language for mitigation measures for cultural resources and tribal cultural resources. The SMBMI also requested copies of the final documents and stated no additional consultation is required unless there is an unanticipated discovery of cultural resources during Project implementation.

Refer to the discussions in threshold 5, Cultural Resources and threshold 18, Tribal Cultural Resources for additional information.

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<sup>7</sup> Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission’s Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

#### IV. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

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

**V. DETERMINATION** (TO BE COMPLETED BY THE LEAD AGENCY)

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 on an attached sheet have been added to the 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 “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project.

Signature Eddie Rhee

Date 10/20/2021

Eddie Rhee, P.E. , Engineering Manager

Printed Name

**EVALUATION OF ENVIRONMENTAL IMPACTS:**

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

## VI. ENVIRONMENTAL CHECKLIST

Note to reader: Each mitigation measure is identified as to whether it is applicable to the Water Resiliency Project or the Etiwanda Pipeline. Mitigation measures applicable to the Water Resiliency Project are identified as RP MM and measures applicable to the Etiwanda Pipeline are identified as EP MM.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>1. AESTHETICS.</b> Would the project:   |                                |  |                                     |                                     |
| a. Have a substantial adverse effect on a scenic vista?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input 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 type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from public 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 checked="" type="checkbox"/>                | <input 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"/>            |

(Sources: Caltrans Scenic Highways, County Scenic Highway, DOF, FFGP DEIR, JVGP, Project Description, RCGP, RCMC)

### 1.a Would the Project have a substantial adverse effect on a scenic vista?

A scenic vista is a distant and picturesque view of a natural landscape. On a clear day there are views of the San Gabriel Mountains (north), San Bernardino Mountains (northeast), San Jacinto Mountains (southeast), and the Santa Ana Mountains (south) from the Project area. Public views of these mountains are considered a scenic resource in the general plans of Jurupa Valley, Fontana, and Rancho Cucamonga. The Project area is generally located on the valley floor between these mountains, which are visible from different vantage points throughout the Project area.

#### Resiliency Project

**Less than significant with mitigation incorporated.** The storage reservoirs, wells, improvements to the LMWTP and RNWTP, and hydroelectric generating facilities proposed by the Resiliency Project would include above ground facilities. Although the specific location of these components have not been identified, much of the Project area is developed with residential, non-residential, and institutional uses. The specific location and design of the storage reservoirs has not been determined; however, they may be located on property or hillsides at a higher elevation than the surrounding areas. Due to their potential height, the proposed storage reservoirs have the potential to affect scenic vistas from certain public vantage points. Therefore, mitigation measure **RP MM AES-1**, which requires design measures to shield the reservoirs from views, shall be implemented to reduce impacts to a less than significant level.

Wells proposed by the Resiliency Project would likely include a perimeter fence or block wall surrounding the well site, a building to house pumping equipment, a standby generator, and in some instances may include

above ground piping and security lighting. Small buildings associated with future wells and pump stations typically range in size from approximately 10 x 12 feet to 20 x 40 feet and may be up to 10–12 feet tall. The potential well site locations (**Figure 3 – Potential Well Sites**) are primarily located in areas previously developed with industrial buildings. Due to the small size and expected location of structures associated with Resiliency Project wells and pump stations, these components would not significantly impact scenic vistas and no mitigation is needed for these facilities.

Improvements at CVWD Reservoir 2C, the LMWTP, and RNWTP may change the quantity and density of above-ground structures at these sites; however, these changes are not expected to have a substantial adverse impact on scenic vistas.

Groundwater treatment at existing JCSD wells may consist of a granular activated charcoal (GAC), resin, or ion exchange (IX) system. These systems may entail the installation of above and below ground piping and treatment vessels that range in size from 6–12 feet in diameter and may be up to 16 feet tall. Due to their placement at existing well sites and small size, these structures are not expected to have a substantial adverse impact on scenic vistas.

### ***Etiwanda Pipeline***

**Less than significant impact.** The Recommended and Alternative Alignments traverse through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga, and unincorporated San Bernardino County within Fontana’s Sphere of Influence, through areas developed with residential, non-residential, and institutional uses. The Rancho Cucamonga General Plan identifies Etiwanda Avenue as a view corridor because of the prominent views of the San Gabriel Mountains. The Etiwanda Pipeline would be located underground within public streets or street rights-of-way. (ROW), except for the portion of the Pipeline that would traverse adjacent to the San Sevaine Channel in SBCFC ROW. In addition, all adjoining features that are required with the pipeline would also be located at or below grade, including manholes, air valves, and drains.

Construction of the pipelines may create a temporary aesthetic nuisance for motorists and residents in proximity to the segment being constructed. Exposed surfaces, construction debris, and construction equipment may temporarily impact the aesthetic quality of the immediate areas. Construction of the pipeline would be temporary and the construction equipment would move as construction proceeds along the Pipeline alignment. Because the Pipeline and appurtenant structures would be at or below grade and construction impacts are temporary, impacts regarding a substantial adverse effect on a scenic vista associated with the Etiwanda Pipeline are less than significant and no mitigation is required.

### **1.b Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?**

#### ***Resiliency Project***

**No impact.** There are no state designated, state eligible, or county eligible scenic highways within the Project Area. (Caltrans Scenic Highways, County Scenic Highways.) Therefore, no impacts would occur in this regard.

#### ***Etiwanda Pipeline***

**No impact.** There are no state designated or state eligible scenic highways in Riverside or San Bernardino Counties in proximity to the Recommended or Alternative Alignments of the Etiwanda Pipeline. (Caltrans Scenic Highways.) There are no county eligible scenic highways within Riverside or San Bernardino Counties. (County Scenic Highways).

As discussed in response to threshold 1.a, the Rancho California General Plan identifies Etiwanda Avenue as a view corridor. However, because the Pipeline and appurtenant structures would be underground or at grade within existing road and SBCFC ROW, there would be no impact with regard to substantially damaging scenic resources.

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

According to CEQA Statue Section 21071(a), Jurupa Valley, Fontana, and Rancho Cucamonga meet the definition of an urbanized area, which is an incorporated city with a population of at least 100,000 persons. As of January 2021, the California Department of Finance population estimates for Jurupa Valley, Fontana, and Rancho Cucamonga are 108,097, 213,944, and 175,131, respectively. (DOF.) Therefore, the below discussion is regarding the potential for the Project to conflict with applicable zoning and other regulations governing scenic quality.

**Resiliency Project**

**Less than significant with mitigation incorporated.** Resiliency Project components are located within the Cities of Jurupa Valley, Fontana, Rancho Cucamonga, and unincorporated San Bernardino County within Fontana's sphere of influence. The Jurupa Valley General Plan designates Country Village Road as a scenic roadway and includes the following policies to maintain views to and from scenic corridors.

*COS 9.3 Urban development. Implement the following aesthetic principles and encourage other agencies with jurisdiction to do so:*

1. *[...]*
2. *Utilities and Signs. In and near public streets, public spaces and parks, and important scenic resources, features that clutter, degrade, intrude on, or obstruct views should be avoided. Necessary features, such as utility and communication equipment, and traffic equipment and signs should be designed and placed so as to not impinge upon or degrade scenic views, consistent with the primary objective of safety. Billboard and electronic signs within scenic corridors shall require City Council approval.*

*COS 9.5 Views to and from Public Places, Including Scenic Corridors. The City will preserve and improve views of important scenic resources from public places, and encourage other agencies with jurisdiction to do so. Public places include parks, plazas, the grounds of civic buildings, streets and roads, and publicly accessible open space. In particular, the route segments shown in Figure 4-23 of the Jurupa Valley General Plan are designated as local scenic corridors.*

In addition to the above General Plan policies, Jurupa Valley Municipal Code Chapter 15.20 – Wells provides minimum standards for construction, reconstruction, abandonment, and destruction of all wells in order to protect underground water resources; and provide safe water to persons within the City. (JVMC, section 15.20.010.) Since Jurupa Valley Municipal Code Chapter 15.202 does not govern the protection of scenic resources it is not applicable to the Resiliency Project.

The Fontana General Plan does not designate any local scenic corridors. (FFGP DEIR.) Fontana Municipal Code Chapter 31 – Water Service applies only to those areas of Fontana where the City of Fontana supplies retail



domestic water service and does not apply to water service provided by other special water districts, private, and mutual water companies. (FMC, section 31-1.) Therefore there are no regulations or policies within Fontana that are applicable to the proposed Project.

The Rancho Cucamonga General Plan does not designate any local scenic corridors. (Plan RC DEIR.) Rancho Cucamonga sets forth development requirements for potable water storage facilities and treatment plants in its Municipal Code. Regarding potable water storage facilities, section 17.98.040 C of the Rancho Cucamonga Municipal Code states:

*Potable water storage facilities shall observe all development standards of the underlying zoning district. Additionally, such facilities shall be screened consistent with the provisions of section 17.48 (Fences, Walls, and Screening).*

Regarding treatment plants, section 17.98.040 D of the Rancho Cucamonga Municipal Code states:

*Treatment plants shall observe all development standards of the underlying zoning district, except that any treatment ponds or other structures that may emit an odor shall be located a minimum of 200 feet from a residential zoning district or residential use. The use shall also provide landscaping along the perimeter of the use, including a minimum 25-foot wide landscape area and trees planted 30 feet on center. Landscaping for treatment plants located in wildland-urban interface fire areas shall comply with the vegetation management requirements of the Rancho Cucamonga Fire District.*

Because the Resiliency Project does not propose any new treatment plants, Rancho Cucamonga Municipal Code section 17.98.040 D is not applicable to the proposed Project.

As discussed in the response to threshold 1.a, the Resiliency Project would implement mitigation measure **RP MM AES-1**, which requires design measures to shield any new reservoirs from views. Therefore, impacts regarding the Resiliency Project conflicting with applicable zoning and other regulations governing scenic quality would be reduced to less than significant.

### ***Etiwanda Pipeline***

**Less than significant impact.** The Recommended and Alternative Alignments for the Pipeline would be located underground and once construction is complete the ground surface would be returned to its previous condition. For these reasons, the proposed Etiwanda Pipeline would not substantially degrade the visual character of its alignment or surrounding area, and impacts would be less than significant.

#### **1.d Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

### ***Resiliency Project***

**Less than significant impact.** The Resiliency Project facilities would not provide new significant sources of light. Underground facilities would not have any lighting. Storage reservoirs and structures associated with wells would likely have nighttime security lighting on a timed switch, photo cell controlled, and/or motion detection activated. New security lighting would provide low level lighting for the immediate area only and would not be directed toward adjacent properties. Any lighting used during construction would be temporary and directed towards the construction site. Thus, the Resiliency Project facilities would not create a new source of substantial light or glare and potential impacts would be less than significant.

***Etiwanda Pipeline***

**Less than significant impact.** Temporary nighttime lighting may be used for security purposes during the construction phase. However, any security lighting would be directed downward and not onto adjacent properties. The proposed Etiwanda Pipeline would be underground and would not create a new source of light or glare that would adversely affect day or nighttime views in the area. Because any temporary lighting would be directed downward and not onto adjacent properties, such lighting would not substantially affect views, and impacts would be less than significant.

**Aesthetics Mitigation Measures**

Implementation of the following mitigation measures would reduce to aesthetic impacts to less than significant.

***Resiliency Project Mitigation Measures***

**RP MM AES-1: Reservoir Siting Review.** To reduce impacts to scenic resources resulting from reservoir construction, as part of the site selection process and prior to future Resiliency Plan storage reservoir approvals, the agency responsible for the future reservoir (JCSD or CVWD) shall determine if the location of the storage reservoir(s) will negatively affect views of the San Gabriel Mountains, San Bernardino Mountains, San Jacinto Mountains, or the Santa Ana Mountains. If it is determined that these views will be affected, the agency responsible for the reservoir, shall implement design measures such as, but not limited to, camouflage paint color, screening, landscaping, and/or partial undergrounding of a portion of the storage reservoir, in such a way as to minimize the view of the storage reservoirs from public vantage points.

***Etiwanda Pipeline Mitigation Measures***

Aesthetic impacts resulting from the Etiwanda Pipeline are less than significant; therefore no mitigation is required.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| <p><b>2. AGRICULTURAL and FORESTRY RESOURCES.</b> 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 Department 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:</p> |                                |  |                              |                                     |
| a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| d. Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

(Source: California Department of Conservation “California Important Farmland Finder” © 2021, Williamson Act Maps, Riverside County (west) and San Bernardino County (south) California Dept. of Conservation Division of Land Resource Protection 2016, San Bernardino General Plan Draft EIR, Project Description, Site Visit)

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

**Resiliency Project**

**No impact.** According to the California Department of Conservation, the general location of Resiliency Project components is within areas designated as Urban and Built Up Land. Because the Resiliency Project components are not located within areas designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, the implementation of Resiliency Project would not convert Farmland and there would be no impacts in this regard.

**Etiwanda Pipeline**

**No impact.** The Recommended Alignment for the Etiwanda Pipeline passes through land designated by the California Department of Conservation as Farmland of Local Importance, Other Land, and Urban and Built Up Land. (See **Figure 8 – Important Farmland.**) Portions of Alternative Alignment E in East Avenue passes by land

designated Grazing Land. Because the Recommended Alignment and none of the Alternative Alignments pass through or adjacent to areas designated as Prime Farmland, Unique Farmland, or Farmland of Local Importance, implementation of the Etiwanda Pipeline would not convert Farmland. There would be no impacts in this regard.

**2.b Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?**

***Resiliency Project***

**No impact.** The Resiliency Project facilities, with the exception of groundwater treatment at existing JCSD wells, are located within Rancho Cucamonga in areas zoned for residential, office, or industrial uses. As shown on **Figure 7 – Zoning**, there is no agriculturally zoned property in this portion of Rancho Cucamonga. Further, the historic agriculture businesses in Rancho Cucamonga are largely gone. (Plan RC, p. 132.) JCSD's existing wells are located in the northwest portion of Jurupa Valley in areas that are zoned light industrial. Additionally, there are no Williamson Act contracted lands in the areas of Rancho Cucamonga or Jurupa Valley in which Resiliency Project facilities would likely be located. For these reasons, there would be no impact in this regard.

***Etiwanda Pipeline***

**No impact.** As shown on **Figure 7**, there is no agriculturally zoned property along or adjacent to the Recommended and Alternative Alignments for the Etiwanda Pipeline. Additionally, based on a review of current data available from the state Department of Conservation, the Recommended and Alternative Alignments are not located within, or adjacent to, any Williamson Act contracted lands. For these reasons there would be no impact in this regard.

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

Forest land, as defined in Public Resources Code (PRC) section 12220(g) is land that can support 10 percent of native tree cover of any species under natural conditions and that allows for the management of one or more forest resources. Timberland, as defined in PRC section 4526, means land other than land owned by the federal government and land designated as experimental forest land, which is capable of growing a crop of trees for any commercial species, including Christmas trees.

***Resiliency Project and Etiwanda Pipeline***

**No impact.** There are no properties zoned for forest land, timberland, or Timberland Production within Riverside County, other than Christmas tree farms (cultivated, not farmed), and such farms are not known along the pipeline alignment. Within San Bernardino County, forest land, timberland, or Timberland Production are located at a much higher elevation, typically 5,000 feet. Because the Resiliency Project facilities, including the Etiwanda Pipeline, does not traverse through or adjacent to areas zoned for forest land, timberland, or Timberland Production there would be no impact in this regard.

**2.d Result in the loss of forest land or conversion of forest land to non-forest use?**

***Resiliency Project and Etiwanda Pipeline***

**No impact.** There is no forest land in proximity to Resiliency Project facilities, including the Etiwanda Pipeline. Implementation of the Resiliency Project and Etiwanda Pipeline would not result in the loss or conversion of forest land; thus, there would be no impact in this regard.

- 2.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?**

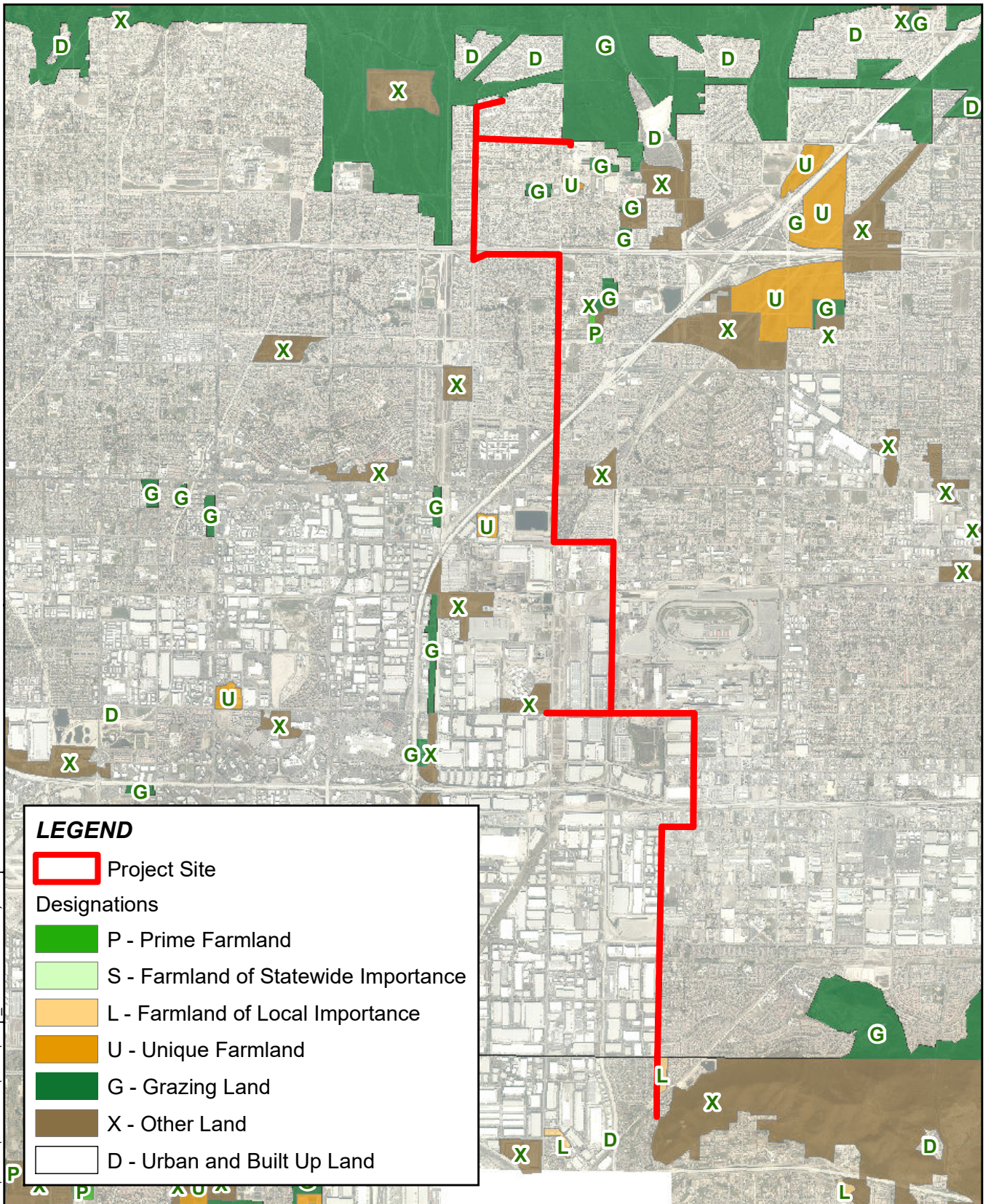
***Resiliency Project and Etiwanda Pipeline***

**No impact.** The potential locations of Resiliency Project facilities, including the Etiwanda Pipeline, are used for non-agricultural purposes; thus, implementation of the Resiliency Project would not result in the conversion of Farmland to non-agricultural use. No other changes in the existing environment from that which have been described in the Project Description are proposed. As stated in response to threshold 2.d, there is no forest land in the likely locations of the Resiliency Project components or along the Recommended and Alternative Alignments of the Etiwanda Pipeline. There would be no impacts.

**Agriculture and Forestry Resources Mitigation Measures**

There are no impacts to agricultural and forestry resources; therefore, no mitigation is required.

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Sources: CA Dept. of Conservation, FFMP, 2016; San Bernadion Co. GIMS, 2020.

**Figure 8 - Important Farmland**

Etiwanda Intervalley Water Quality and Water Resiliency Project



0 4,000 8,000 12,000 Feet

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>3. AIR QUALITY.</b> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project: |                                |  |                                     |                                     |
| a. Conflict with or obstruct implementation of the applicable air quality plan?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input 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 an applicable federal or state ambient air quality standard?                                    | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Expose sensitive receptors to substantial pollutant concentrations?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

(Sources: CARB 2019, SCAQMD 1993, SCAQMD 2003, SCAQMD 2016, WEBB-A, Project Description)

**3.a Conflict with or obstruct implementation of the applicable air quality plan?**

The Project is located in the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) prepares the Air Quality Management Plan (AQMP) for the Basin. The SCAQMD sets forth a comprehensive program that would lead the Basin into compliance with all federal and state air quality standards. The AQMP’s control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, if a project demonstrates compliance with local land use plans and/or population projections, then the AQMP would have taken into account such uses when it was developed. The SCAQMD is required to update its plans on a regular basis; the 2016 AQMP is the most recent plan (SCAQMD 2016).

**Water Resiliency Project**

**No impact.** The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD’s long-term water supply deficit and to develop a domestic water supply and conveyance project that would benefit both JCSD and CVWD. Initial phases of the Project would also meet JCSD’s near term needs. Water would be supplied from one of CVWD’s surface water treatment plants and new wells to be drilled in the upper portion of the Chino Basin. Additionally, the proposed Project does not propose any new housing or businesses and would not cause a substantial increase in population. Therefore, the proposed Project would not conflict with or obstruct implementation of the AQMP and no impacts would occur.

**Etiwanda Pipeline**

**No Impact.** The Etiwanda Pipeline would not conflict with any land use plan of the jurisdictions along the alignment by virtue of its underground nature and location in proximity to roadways. Since the Pipeline would not in and of itself result in any changes to the existing land use patterns in the Project area, the proposed Pipeline does not conflict with or obstruct implementation of the AQMP and no impacts would occur.

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

The portion of the Basin within which the proposed Resiliency Project facilities, including the Etiwanda Pipeline are located is designated as a non-attainment area for ozone, particulate matter less than 10 microns in diameter (PM-10), and particulate matter less than 2.5 microns in diameter (PM-2.5) under the State standards

and for ozone and PM-2.5 under Federal standards. (CARB 2019.) The SCAQMD considers the thresholds for project-specific impacts and cumulative impacts to be the same. (SCAQMD 2003.) Therefore, projects that exceed project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. Based on SCAQMD's regulatory jurisdiction over regional air quality, it is reasonable to rely on its thresholds to determine whether there is a cumulative air quality impact.

The air quality impacts can be described in short- and long-term perspectives. Short-term impacts are anticipated to occur during site preparation and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts would occur once the Project is in operation.

All active operations (any activity capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement) within the Basin would be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions, which is established in SCAQMD Rule 403. Compliance with this rule would be achieved through application of standard best management practices in construction and operation activities, such as the application of water or chemical stabilizers to disturbed soils, reducing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres of soil, or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD.

### ***Water Resiliency Project***

**Less than significant impact.** The individual components proposed under the Water Resiliency Project would be required to comply with existing SCAQMD rules, including but not limited to Rule 403 for fugitive dust, treatment plant operating permits, and emergency generator permits. The SCAQMD permitting process would ensure that the individual components meet regulatory requirements through the application review process and by placing specific operating conditions on the new and/or modified permits.

The Water Resiliency Project does not entail the details of construction and operation of specific components contemplated (other than the Etiwanda Pipeline). However, adoption of the Water Resiliency Project would not result in a cumulatively considerable net increase of any criteria pollutant. Future implementation of individual components would require subsequent environmental review for potential air quality impacts resulting from construction and operation of proposed facilities.

### ***Etiwanda Pipeline***

**Less than significant impact.** Air quality impacts from the Etiwanda Pipeline were evaluated in the Air Quality and Greenhouse Gas (AQ/GHG) Analysis prepared for the Project (WEBB-A) and provided in Appendix A.

Construction of the Etiwanda Pipeline would be required to comply with SCAQMD Rule 403 for fugitive dust. Based on the area of disturbance, a Fugitive Dust Control Plan or a Large Operation Notification Form would not be required.

Short-term emissions from Project construction were evaluated using the CalEEMod program. Operational emissions related to the water transmission pipeline would be primarily from the infrequent visits by vehicles driven by maintenance personnel and are considered negligible; therefore, only short-term impacts were evaluated.



The estimated construction period for the proposed Project is approximately one year and 10 months and would be constructed in three phases (see WEBB-A for further details). The results of the analysis of short-term construction emissions from each phase are presented in **Table A – Unmitigated Maximum Daily Construction Emissions**.

**Table A – Unmitigated Maximum Daily Construction Emissions**

| Activity                                    | Peak Daily Emissions (lb/day) |                 |              |                 |             |             |
|---|-------------------------------|-----------------|--------------|-----------------|-------------|-------------|
|   | VOC                           | NO <sub>x</sub> | CO           | SO <sub>2</sub> | PM-10       | PM-2.5      |
| <b>SCAQMD Daily Construction Thresholds</b> | <b>75</b>                     | <b>100</b>      | <b>550</b>   | <b>150</b>      | <b>150</b>  | <b>55</b>   |
| <b>Phase 1</b>                              |                               |                 |              |                 |             |             |
| Pipeline Installation 2022                  | <b>4.04</b>                   | <b>36.90</b>    | <b>32.34</b> | <b>0.07</b>     | <b>2.18</b> | <b>1.73</b> |
| Pipeline Installation 2023                  | 3.56                          | 31.72           | 31.20        | 0.07            | 1.87        | 1.43        |
| Paving 2022                                 | <b>1.35</b>                   | <b>11.36</b>    | <b>15.21</b> | <b>0.03</b>     | <b>0.76</b> | <b>0.58</b> |
| Paving 2023                                 | 1.27                          | 10.38           | 15.16        | 0.03            | 0.71        | 0.52        |
| <b>Maximum</b>                              | <b>5.39</b>                   | <b>48.26</b>    | <b>47.55</b> | <b>0.10</b>     | <b>2.94</b> | <b>2.31</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |
| <b>Phase 2</b>                              |                               |                 |              |                 |             |             |
| Pipeline Installation 2022                  | <b>4.04</b>                   | <b>36.90</b>    | <b>32.34</b> | <b>0.07</b>     | <b>2.18</b> | <b>1.73</b> |
| Pipeline Installation 2023                  | 3.56                          | 31.72           | 31.20        | 0.07            | 1.87        | 1.43        |
| Paving 2022                                 | <b>1.31</b>                   | <b>11.36</b>    | <b>15.21</b> | <b>0.03</b>     | <b>0.76</b> | <b>0.58</b> |
| Paving 2023                                 | 1.24                          | 10.38           | 15.16        | 0.03            | 0.71        | 0.52        |
| <b>Maximum</b>                              | <b>5.35</b>                   | <b>48.26</b>    | <b>47.55</b> | <b>0.10</b>     | <b>2.94</b> | <b>2.31</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |
| <b>Phase 3</b>                              |                               |                 |              |                 |             |             |
| Paving 2023                                 | <b>1.27</b>                   | <b>10.38</b>    | <b>15.16</b> | <b>0.03</b>     | <b>0.71</b> | <b>0.52</b> |
| <b>Maximum</b>                              | <b>4.83</b>                   | <b>42.11</b>    | <b>46.37</b> | <b>0.10</b>     | <b>2.58</b> | <b>1.96</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |

Source: WEBB-A, Table 2

Note: Maximum emissions for each Phase are the sum of Pipeline Installation and Paving in 2022 or 2023 because these activities overlap. Maximum emissions are shown in bold.

Since the construction schedule of each Project Phase indicates the possibility that Phases would overlap, the maximum daily emissions from these overlapping construction schedules are provided in **Table B – Unmitigated Maximum Daily Construction Emissions by Year**.

**Table B – Unmitigated Maximum Daily Construction Emissions by Year**

| Activity                                    | Peak Daily Emissions (lb/day) |                 |              |                 |             |             |
|---|-------------------------------|-----------------|--------------|-----------------|-------------|-------------|
|   | VOC                           | NO <sub>x</sub> | CO           | SO <sub>2</sub> | PM-10       | PM-2.5      |
| <b>SCAQMD Daily Construction Thresholds</b> | <b>75</b>                     | <b>100</b>      | <b>550</b>   | <b>150</b>      | <b>150</b>  | <b>55</b>   |
| <b>2022<sup>1</sup></b>                     |                               |                 |              |                 |             |             |
| Phase 1 Pipeline Installation               | 4.04                          | 36.90           | 32.34        | 0.07            | 2.18        | 1.73        |
| Phase 1 Paving                              | 1.35                          | 11.36           | 15.21        | 0.03            | 0.76        | 0.58        |
| Phase 2 Pipeline Installation               | 4.04                          | 36.90           | 32.34        | 0.07            | 2.18        | 1.73        |
| Phase 2 Paving                              | 1.31                          | 11.36           | 15.21        | 0.03            | 0.76        | 0.58        |
| <b>Maximum<sup>1</sup></b>                  | <b>10.74</b>                  | <b>96.52</b>    | <b>95.10</b> | <b>0.20</b>     | <b>5.88</b> | <b>4.62</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |
| <b>2023<sup>2</sup></b>                     |                               |                 |              |                 |             |             |
| Phase 1 Pipeline Installation               | <b>3.56</b>                   | 31.72           | 31.20        | <b>0.07</b>     | <b>1.87</b> | 1.43        |
| Phase 1 Paving                              | <b>1.27</b>                   | 10.38           | 15.16        | <b>0.03</b>     | <b>0.71</b> | 0.52        |
| Phase 2 Pipeline Installation               | <b>3.56</b>                   | <b>31.72</b>    | <b>31.20</b> | <b>0.07</b>     | <b>1.87</b> | <b>1.43</b> |
| Phase 2 Paving                              | <b>1.24</b>                   | <b>10.38</b>    | <b>15.16</b> | <b>0.03</b>     | <b>0.71</b> | <b>0.52</b> |
| Phase 3 Pipeline Installation               | 3.56                          | <b>31.73</b>    | <b>31.21</b> | 0.07            | 1.87        | <b>1.44</b> |
| Phase 3 Paving                              | 1.27                          | <b>10.38</b>    | <b>15.16</b> | 0.03            | 0.71        | <b>0.52</b> |
| <b>Maximum<sup>2</sup></b>                  | <b>9.63</b>                   | <b>84.21</b>    | <b>92.73</b> | <b>0.20</b>     | <b>5.16</b> | <b>3.91</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |

Source: WEBB-A, Table 3

Note: <sup>1</sup>Maximum emissions in 2022 are the sum of all Phase 1 and Phase 2 activities because they overlap.

<sup>2</sup>Maximum emissions in 2023 are the greater of either: 1) the sum of all Phase 1 and Phase 2 activity; or 2) the sum of all Phase 2 and Phase 3 activities because they overlap. Maximum emissions are shown in bold. For overlapping activities generating the same amount emissions, the emissions from the earlier Phase was used in the total.

As shown in **Table A** and **Table B** above, the estimated emissions from construction of the Project are less than the SCAQMD daily construction thresholds for all the criteria pollutants in 2022 and 2023. In addition, the short-term estimated emissions do not exceed SCAQMD's localized significance thresholds (LST) for Etiwanda Pipeline construction. (WEBB-A, Table 4.) Therefore, construction-related air quality impacts would be less than significant. No mitigation is required.

The long-term emissions from operation of the Etiwanda Pipeline, as discussed previously, are primarily in the form of mobile source emissions, with no stationary sources of emissions present. According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or on-site mobile equipment generating on-site emissions. The proposed Etiwanda Pipeline does not include such uses. Therefore, no long-term LST analysis is needed and operational emissions would be less than significant. No mitigation is required.

### 3.c Expose sensitive receptors to substantial pollutant concentrations?

A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant including children, the elderly, and persons with pre-existing respiratory and/or cardiovascular illness. SCAQMD defines a "sensitive receptor" as a land use or facility such as residences,

schools, child care centers, athletic facilities, playgrounds, retirement homes, and convalescent homes where these persons are typically located. (SCAQMD 1993.)

### ***Water Resiliency Project***

**Less than significant impact.** Sensitive receptors such as homes or schools are located in proximity to individual components proposed by the Water Resiliency Project.

Adoption of the Water Resiliency Project would not expose sensitive receptors to substantial pollutant concentrations. Future implementation of individual components would require subsequent environmental review for potential localized air quality impacts resulting from construction and operation of proposed facilities.

### ***Etiwanda Pipeline***

**Less than significant impact.** There are several sensitive receptors located adjacent to the nearly 14-miles of Pipeline, which include housing tracks and scattered residential area lots adjacent to the Recommended and Alternative Alignments along Country Village Road, Etiwanda Avenue, Highland Avenue, Day Creek Boulevard, and 24th Street/Wilson Avenue in the cities of Jurupa Valley, Fontana, and Rancho Cucamonga; schools, churches, and parks are also adjacent to portions of the Pipeline alignment.

The most conservative sensitive receptor distance of 25 meters was evaluated and the localized analysis demonstrated short-term emissions generated in the Project area during construction of the Etiwanda Pipeline were below the applicable thresholds established by SCAQMD. (WEBB-A). Operational emissions were also found to be less than significant, as indicated above. Therefore, the proposed Project would not expose sensitive receptors to substantial pollutant concentrations and impacts are considered less than significant. No mitigation is required.

## **3.d Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

### ***Water Resiliency Project***

**Less than significant impact.** Construction of the individual components of the Water Resiliency Project presents the potential for generation of odors in the form of diesel exhaust during construction in the immediate vicinity of the facility under construction. Odors generated during construction would be short-term and would be localized; thus, construction of future facilities would not result in the long-term creation of odors.

Operation of the individual components proposed with the Water Resiliency Project are not expected to generate other emissions (such as those leading to odors) that would adversely affect a substantial number of people because the facilities are either existing uses that do not propose substantial increases in operations or are in areas without a substantial number of people present (i.e., industrial areas).

For the reasons stated above, impacts with regard to the other emissions affecting a substantial number of people would be less than significant.

### ***Etiwanda Pipeline***

Water does not generate other emissions such as those leading to odors. Therefore, the pressure relief valves that are required along the Pipeline alignment would not be a source of other emissions during operation of the Pipeline. Construction of the Pipeline presents the potential for generation of odors in the form of diesel exhaust during construction in the immediate vicinity of the segment of Pipeline under construction. Odors generated during construction would be short-term and would move along the alignment of the Pipeline as construction takes place; thus, construction of the Pipeline would not result in the long-term creation of other emissions or odors. Recognizing the short-term duration and quantity of construction emissions in the proposed Project

area, impacts with regard to other emissions such as odors affecting a substantial number of people is **less than significant**.

**Air Quality Mitigation Measures**

Air quality impacts are less than significant; therefore, no mitigation is required.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| <b>4. BIOLOGICAL RESOURCES.</b> 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 Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game 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 federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?   | <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 checked="" type="checkbox"/> | <input type="checkbox"/> |
| f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>            | <input type="checkbox"/> |

(Sources: CNPS, FMC, JVMC, RCMC, Wood-A, Wood-B, Wood)

**4.a 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

**Water Resiliency Project**

**Less than significant with mitigation.** Adoption of the Resiliency Project would not have a substantial adverse effect on sensitive species. Construction of the individual components of the Resiliency Project could result in direct and indirect impacts to sensitive biological resources occurring within the Project area. Potential impacts may include disturbance or removal of habitat, displacement of wildlife species, removal of plant species and disturbance of normal nesting and breeding activities of wildlife.

Other than the Etiwanda Pipeline, the specific locations, preliminary design, and size of construction footprints are not yet known. Although sensitive plant and animal species may exist in or near the locations of some proposed Resiliency Project components, the exact impacts to these species would need to be addressed at the time a specific component is proposed. Therefore, mitigation measure **RP MM BIO-1**, which requires general biological resource assessments and incorporation of any identified mitigation measures, shall be implemented.

Additionally, there is a potential for short-term indirect impacts to birds protected by the Migratory Bird Treaty Act (MBTA) due to construction noise or habitat disturbance if construction takes place during avian breeding season. Breeding activity within the Project area is expected to occur between February 1 and August 31, if work on Resiliency Project components must be done during the breeding season, mitigation measure **RP MM BIO-2**, which requires preconstruction survey(s) seven (7) days prior to disturbance, shall be implemented.

With implementation of mitigation measures **RP MM BIO-1** and **RP MM BIO-2**, impacts to sensitive biological resources would be reduced to less than significant.

### ***Etiwanda Pipeline***

**Less than significant with mitigation.** A Biological Resources Assessment (BRAR) was prepared for the Project by Wood Environment and Infrastructure (Wood) to review and assess the biological resources that have been reported from the vicinity of, or have the potential to occur, on and adjacent to the Recommended and Alternative Alignments of the Etiwanda Pipeline plus a 500-foot buffer (the biological study area or BSA). The BSA is shown on **Figure 9**. The BRAR identifies the conservation status of special status species, suitable habitat for these species, and the potential for each to occur on or near the Pipeline alignments. The BRAR consisted of a review of pertinent literature, consultation with biologists having experience on, or in close proximity to the site, and a field reconnaissance survey to perform a general inventory of flora and fauna and determine habitat suitability for special status flora and fauna. The BSA was surveyed by vehicle with frequent stops for photographs and assessment. Areas of the survey where potential habitat was present were surveyed on foot and with binoculars. All flora and fauna detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) within the Pipeline alignment during the course of the survey were recorded in field notes and are included in Appendix A of the BRAR. Wood biologists conducted the habitat assessment site surveys within the BSA on August 19, 2020. (Wood-A, pp. 1, 8.)

A literature review was conducted by Wood to identify biological resources known from the vicinity (within an approximate five-mile radius) of the BSA. This included review of literature and searches of CDFW's California Natural Diversity Data Base (CNDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California, Soil Survey data, vegetation mapping, National Wetlands Inventory, the Critical Habitat portal, and pertinent documents from the Wood library and project files. (Wood-A, p. 8.)

The literature review identified a total of 68 special status biological resources known within the five-mile radius of the BSA. These include 38 plants, five vegetation communities one invertebrate, two amphibians, four fish, four reptiles, six birds, and seven mammals, which are discussed below. (Wood-A, p. 12.)

*Plants* - Of the 68 special status plant species known from the five-mile radius of the BSA, all but two, the slender-horned spineflower (*Dodecahema leptoceras*) and Southern California black walnut (*Juglans californica*) are assumed to be absent due to lack of suitable habitat. The slender horned spineflower was not observed but has a low potential<sup>8</sup> to occur within sandy soils of the wash north of I-10 and east of Etiwanda Avenue. Slender-horned spineflower is state and federally listed as endangered and has a CNPS rank of 1B.1.<sup>9</sup> The Southern California black walnut was observed within the BSA; however, no habitat is present within the Recommended or Alternative Alignments for the Etiwanda Pipeline. Southern California black walnut is not federally listed, is a

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<sup>8</sup> "Low" potential means the BSA is within the known range of the species but habitat within the BSA is rarely occupied by the species.

<sup>9</sup> CNPS Rank 1B.1 means *Plants rare, threatened, or endangered in California and elsewhere, seriously threatened in California*. (CNPS.)

state species of special concern, and has a CNPS rank of 4.2.<sup>10</sup> Because construction of the Etiwanda Pipeline would not impact Southern California black walnut trees, there would be no impacts to special status plants. (Wood-A, pp. 13, 31, Table 1.)

*Vegetation Communities* – Of the five special status vegetation communities known from the five-mile radius of the BSA, only the Riversidean Alluvial Fan Sage Scrub community is present. This plant community is not state or federally listed and has CNPS state rank of S1.1.<sup>11</sup> The Riversidean Alluvial Fan Sage Scrub community is intermittently present in areas along Etiwanda Avenue. (Wood-A, Table 2.) Although, construction of the Etiwanda Pipeline is not anticipated to impact the Riversidean Alluvial Fan Sage Scrub community, because a special status vegetation community has the potential to occur within the BSA, a worker environmental awareness program (WEAP) prepared by a qualified biologist shall be presented to field crews prior to any work to outline biological issues and the biological mitigation measures. Pursuant to mitigation measure **EP MM BIO-1**, all construction personnel assigned to the Etiwanda Pipeline project must go through the WEAP training prior to starting any work within the BSA. The WEAP will discuss other standard best management practices (BMPs) that shall be implemented to avoid impacts to biological resources. These shall include trash management and speed limits.

*Insects* - Delhi series soils are mapped along on the southern Pipeline alignment, and the Recommended and Alternative Pipelines are located within the currently known range of the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSFLF). However, the portion of the Pipeline alignment between the intersection of Etiwanda Avenue/Philadelphia Avenue east to the intersection of Philadelphia Avenue/Country Village Avenue is now developed, except for the southeast corner of the intersection. The Delhi fine sand soils that are mapped within this vacant lot shows signs of weed abatement activities. This area has been regularly disked and no longer contains areas of unconsolidated and aeolian deposits of Delhi sands. Additional mapped Delhi fine sand soils occur along south Country Village Ave. Most of this area is also developed and therefore unlikely to provide habitat for the DSFLF. Thus, there would be no impacts to special-status insects. (Wood-A, p. 22.)

*Reptiles and Amphibians* – Of the six special status reptile or amphibian species known from the five-mile radius of the BSA, there is no suitable habitat present for the San Gabriel slender salamander (*Batrachoseps gabrieli*), western spadefoot (*Spea hammondi*), and two-striped gartersnake (*Thamnophis hammondi*). The southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), and coast (San Diego) horned lizard (*Phrynosoma blainvillii*) were not observed and have a low potential<sup>12</sup> to occur within sandy soils of the wash north of I-10 and east of Etiwanda Avenue. Further, given the pipeline footprint, these species would not be impacted by Pipeline construction. (Wood-A, pp. 22–23, 32, Table 3.)

*Fish* - No waterways capable of supporting the federally listed as threatened Santa Ana sucker (*Catostomus santaanae*), arroyo chub (*Gila orcutti*), or Santa Ana speckled dace (*Rhinichthys osulus*) are present in the BSA. Therefore, no impacts to special status fish species would occur. (Wood-A, p. 22.)

*Birds* – Six special status bird species were identified to be of potential occurrence in the five-mile radius of the BSA. Five of these species, tricolored blackbird (*Agelaius tricolor*), Bell's sage sparrow (*Artemisiospiza belli*

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<sup>10</sup> CNPS Rank 4.2 means *Watch list: Plants of limited distribution, moderately threatened in California, moderately threatened in California.* (CNPS.)

<sup>11</sup> CNPS State Rank S.1.1 means *Very threatened.*

<sup>12</sup> "Low" potential means the BSA is within the known range of the species but habitat within the BSA is rarely occupied by the species.

*bellii*), California black rail (*Laterallus jamaicensis coturniculus*), coastal California gnatcatcher (*Poliophtila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*) have no suitable habitat and are not expected to occur.

Virtually all native bird species are protected by the federal Migratory Bird Treaty Act (MBTA) and by the state Fish and Game code. Direct and indirect impacts to nesting birds can be minimized or eliminated by conducting work outside of the local breeding season. Within the BSA, breeding activity is expected to occur between February 1 and August 31. If work must be done during the breeding season, potential nesting areas shall be surveyed by a qualified biologist within seven (7) days prior to disturbance as required by mitigation measure **EP MM BIO-2**. If active nests are found, the nests shall be avoided, and a no disturbance buffer zone established and observed until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted, the California Department of Fish and Wildlife (CDFW) generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case-by-case basis by the biological monitor and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the biological monitor with CDFW concurrence.

One special status bird, burrowing owl (*Athene cunicularia*) has a low potential for occurring within the BSA. This special status species is unlisted however, burrowing owls are treated differently than most unlisted birds because they are uniquely vulnerable to ground disturbance. Because California ground squirrel burrows, drainpipes, riprap, and debris suitable for burrowing owl use were detected and mapped within the BSA focused surveys were conducted. (Wood-A, p. 23 and Table 3.)

A burrow search of the entire alignment was conducted on April 13, 2021 along the Recommended and Alternative Alignments and immediately adjacent undeveloped areas within a 500-foot buffer zone. A total of four focused (Protocol) surveys were conducted after completion of the burrow search and mapping in accordance with protocol established by the *Staff Report on Burrowing Owl Mitigation*. Surveys commenced on April 14 2021, with follow-up surveys on May 4, June 4, and July 2, 2021. Burrow locations are shown Figures 3a through 3c in the *Focused Survey for the Burrowing Owl*, included in Appendix B.2. No burrowing owls or owl sign (i.e., whitewash, pellets, feathers, bones, tracks, and/or burrow adornments) were observed on or adjacent to the Pipeline Alignments. (Wood-B, pp. 2–4.) Although not detected along the Recommended or Alternative Alignments during the protocol level surveys, burrowing owls are highly mobile, and suitable habitat is present throughout portions of the Pipeline alignments and on some of the adjacent lands. For this reason, burrowing owls have the potential to colonize the suitable areas of the site and adjacent areas at any time. To avoid impacts to burrowing owls and as required by the *Staff Report on Burrowing Owl Mitigation*, pre-construction take surveys shall be performed as required by mitigation measure **EP MM BIO-3**.

**Mammals** – One of seven of the special status mammal species known to have occurred in the BSA, the western yellow bat (*Lasiurus xanthinus*), has a low potential to occur within the Pipeline alignments. It is neither state or federally listed as threatened or endangered. Marginally suitable habitat in the form of untrimmed palm trees are scattered throughout the Pipeline alignments. The Pipeline alignments are not located within the currently understood range of the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and suitable habitat is not present for this species or the other special status mammal species known to occur within the vicinity of the BSA. There is no suitable habitat for the northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Stephen's kangaroo rat (*Dipodomys stephensi*), Western mastiff bat (*Eumops perotis*), or the San Diego jackrabbit (*Lepus californicus bennettii*).



(Wood-A, p. 24, Table 3.) To avoid impacts to the western yellow bat, if tree-removal is required a pre-construction survey shall be conducted per mitigation measure **EP MM BIO-4**.

No federally designated critical habitat is present within the BSA, (Wood-A, p. 9.)

For the reasons set forth in the above paragraphs, with implementation of mitigation measures **EP MM BIO-1 through EP MM BIO-4**, impacts to special status species are reduced to less than significant.

**4.b Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?**

***Water Resiliency Project***

**Less than significant with mitigation incorporated.** Refer to the response to threshold 4.a, above. Adoption of the Resiliency Project would not have a substantial adverse effect on riparian habitat or other sensitive natural communities. Construction of Resiliency Project components may, depending upon their final locations, result in the modification or removal of riparian habitat, “waters of the US,” and/or streambeds occurring in the Project area. However, potential impacts to these habitats would be less than significant with the implementation of mitigation measures, **RP MM BIO-1** and **RP MM BIO-3**, which requires avoidance or preparation of a jurisdictional delineation and obtaining any needed regulatory permits.

***Etiwanda Pipeline***

**No impact.** According to the BRAR there is no riparian habitat or federally designated critical habitat present within the BSA for the Recommended or Alternative Alignments for the Etiwanda Pipeline. (BRAR, pp. 21, 27.) There would be no impacts in this regard.

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

***Wastewater Treatment Plant***

**Less than significant with mitigation.** Refer to the responses to thresholds 4.a and 4.b, above. Adoption of the Resiliency Project would not have a substantial adverse effect on federally protected wetlands. Construction of Resiliency Project components may, depending upon their final locations, effect federally protected wetlands. However, potential impacts to wetlands would be less than significant with implementation of mitigation measures **RP MM BIO-1** and **RP MM BIO-3**, which requires avoidance or preparation of a jurisdictional delineation and obtaining any needed regulatory permits.

***Etiwanda Pipeline***

**Less than significant with mitigation.** A *Delineation of Jurisdictional Waters* (JD) was prepared for the Etiwanda Pipeline by Wood to determine the extent of state and federal jurisdiction within the BSA potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA, and Porter Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code. The majority of drainages observed within the BSA consist of urban engineered concrete channels, with the exception of a section of Etiwanda Creek that flows from north to southeast of Etiwanda Avenue and north of I-10. The drainage in this section is dry and sandy bottomed. There are no wetland soils and wetlands were not observed within the BSA.

A total of four (4) jurisdictional drainages and three (3) detention basins are located within the BSA. (Refer to **Figures 10a, 10b, and 10c.**) The drainages all generally flow north to south and are part of the San Bernardino County, Riverside County, and Caltrans flood control systems. The trapezoidal channels within the BSA were determined to have CDFW jurisdiction to the top of the bank, and USACE jurisdiction at the base of the channel. The box channels with vertical sides contain the same jurisdiction for USACE and CDFW. (Wood-C, pp. 4-1, 4-3, 6-1.) To avoid impacts to these jurisdictional features, trenchless construction methods such as jack-and-bore or horizontal directional drilling would be used. Although construction of the Etiwanda Pipeline is intended to avoid impacts to jurisdictional areas, mitigation measure **EP MM BIO-5** has been incorporated to provide the appropriate notices and requests for permission from the regulatory agencies in the event construction activities within non-wetland jurisdictional waters is needed. With implementation of mitigation measure **EP MM BIO-5**, impacts related to wetlands and jurisdictional areas are reduced to less than significant.

**4.d 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 wildlife corridors, or impede the use of native wildlife nursery sites?**

***Water Resiliency Project***

**Less than significant with mitigation.** Adoption of the Resiliency Project would not interfere 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. Regarding construction of Resiliency Project components, the majority of the general area in which the Resiliency Project components could be located is developed. With the exception of the northern area of the City of Rancho Cucamonga, in proximity to the LMWTP, there is little natural open space and few wildlife movement corridors. The San Gabriel-San Bernardino Linkage is at the divide of the San Gabriel and San Bernardino Mountains and includes the mountains and foothills north of the Resiliency Project area. Creeks and open drainage canals, which connect wildlife to the mountains to the north may also serve as a wildlife corridor. (Plan RC, DEIR, pp. 5.4-63–5.4-64.)

There are no migratory fish species or native wildlife nursery sites within the Resiliency Project area. Because the Resiliency Project components would be constructed within largely developed areas or consist of improvements to existing water facilities, the Resiliency Project components would not block “corridors” (flyways) for birds or bats that may utilize the area. Therefore, impacts regarding interfering with movement of wildlife species or wildlife corridors would be less than significant.

***Etiwanda Pipeline***

**Less than significant.** Because the Etiwanda Pipeline BSA is completely altered by development and agriculture, it does not act as a wildlife corridor for terrestrial animals; that is, no terrestrial corridor exists in the Pipeline BSA. To a limited degree, it acts as a corridor (flyway) for birds, especially those associated with water, which use agricultural ponds and marshes for foraging, etc. Since the Etiwanda Pipeline entails installation of an underground water pipeline, once completed the Etiwanda Pipeline would not block any “corridors” (flyways) for birds or bats that may utilize the area, and impacts are less than significant. (Wood-A, pp. 29, 32.)

**4.e Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

***Resiliency Project***

Adoption of the Resiliency Project would not conflict with any local policies or ordinances protecting biological resources. Although the location of many of the proposed Resiliency Project components, other than the Etiwanda Pipeline and any improvements to the LMWTP and RNWTP, has not been determined, it is likely that

these components would be located within JCSD's or CVWD's service areas, which encompasses the cities of Eastvale, Jurupa Valley, and Rancho Cucamonga. Jurupa Valley and Rancho Cucamonga have provisions in their municipal codes regarding tree removal.

Jurupa Valley Municipal Code section 13.10.050 – Tree Removal states:

*No person, firm, corporation, public district, public agency or political subdivision shall remove or severely trim any tree planted in the right-of-way of any city highway without first obtaining a permit from the Public Works Director to do so. Such permit shall be issued without fee, if the Public Works Director is satisfied that such removal or trimming is in the public interest or is necessary for the improvement of the right-of-way or the construction of improvements on adjacent land. He or she may impose such conditions as he or she deems reasonable or necessary, including requirements for the work to be done only by a qualified tree surgeon or tree trimmer actually engaged in that business, and for bond, insurance or other security to protect person and property from injury or damage. The provisions limiting trimming of trees shall not apply to any public utility maintaining overhead power of communication lines pursuant to franchise, where necessary to prevent interference of a tree with such installation. A permit for removal of a tree may be conditioned upon its relocation or replacement by one or more other trees of a kind or type to be specified in the permit.*

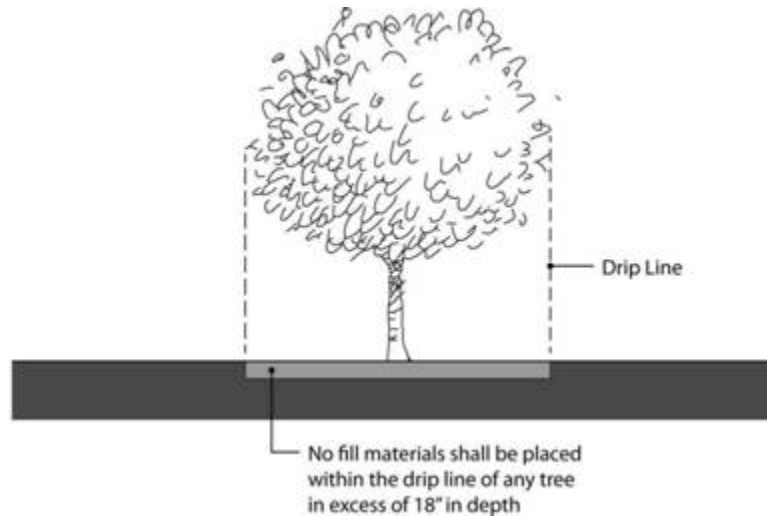
The purpose of Rancho Cucamonga Municipal Code Chapter 17.80 – Tree Preservation, is to protect trees, considered to be a community resource, from indiscriminate cutting or removal. The provisions of Chapter 17.80 are specifically intended to protect and expand the eucalyptus windrows, which provide a cumulative value as a windbreak system. The intent of Chapter 17.80 is to perpetuate the windbreak system through protection of selected blue gum eucalyptus windrows and expansion of the system through planting of new spotted gum eucalyptus windrows along the established grid pattern, as development occurs. (RCMC, section 17.80.010.) Regarding the protection of existing trees, Rancho Cucamonga Municipal Code section 17.080.040 – Protection of Existing Trees states:

*Care shall be exercised by all individuals, developers, and contractors working near preserved trees so that no damage occurs to such trees. All construction shall preserve and protect the health of trees to remain, relocated trees, and new trees planted to replace those removed in accordance with the following measures:*

- A. All trees to be saved shall be enclosed by an appropriate construction barrier, such as chain-link fence or other means acceptable to the planning director, prior to the issuance of any grading permit or building permit and prior to commencement of work. Fences are to remain in place during all phases of construction and may not be removed without the written consent of the planning director until construction is complete.*
- B. No substantial disruption or removal of the structural or absorptive roots of any tree shall be performed.*
- C. No fill material shall be placed within six feet from the outer trunk circumference of any tree.*
- D. No fill materials shall be placed within the drip line of any tree in excess of eight inches in depth. This is a guideline and is subject to modification to meet the needs of individual tree species as determined by an arborist or landscape architect.*

- E. No substantial compaction of the soil within the drip line of any tree shall be undertaken.

FIGURE 17.80.050-1 TREE DRIP LINE



- F. No construction, including structures and walls, that disrupts the root system shall be permitted. As a guideline, no cutting of roots should occur within a distance equal to  $3\frac{1}{2}$  times the trunk diameter, as determined in DBH inches at a height of 4.5 feet. Actual setback may vary to meet the needs of individual tree species as determined by an arborist or landscape architect. Where some root removal is necessary, the tree crown may require thinning to prevent wind damage.
- G. Eucalyptus windrows to be preserved shall have adequate provisions for deep watering and limit surface watering within 15 feet of trunks.
- H. The planning director may impose such additional measures determined necessary to preserve and protect the health of trees to remain, relocated trees, and new trees planted to replace those removed.

Rancho Cucamonga Municipal Code section 17.080.050 – Tree Replacement Policy sets for the following provisions for tree replacement:

- A. Where existing eucalyptus windrows are to be removed, they shall be replaced with *Eucalyptus maculata* (spotted gum), *Eucalyptus nicholii*, or other eucalyptus species as approved by the planning director along the established grid pattern in 15-gallon size minimum spaced at eight feet on center and properly staked, unless otherwise specified by a specific plan or community plan or the fire code.
- B. All other heritage tree removal shall require replacement with the largest nursery-grown tree(s) available as determined by the planning director or planning commission. Heritage tree relocation to another location on the site is the preferred alternative to replacement subject to a written report by a landscape architect or arborist on the feasibility of transplanting the tree.
- C. To assist the planning director in making a determination, the applicant for a tree removal permit may be required to submit an independent appraisal prepared by an

*horticulturist, arborist, or licensed landscape architect to determine the replacement value of the tree(s) to be removed. Such appraisal shall be based upon the most recent edition of the "Guide for Establishing Values of Trees and Other Plants," prepared by the Council of Tree Landscape Appraisers.*

Through compliance with the applicable provisions of the Jurupa Valley and Rancho Cucamonga Municipal Codes, impacts regarding conflict with local policies to protect biological resources would be less than significant.

### ***Etiwanda Pipeline***

The Recommended and Alternative Alignments of the Etiwanda Pipeline begins in the city of Jurupa Valley and traverses through the cities of Fontana, and Rancho Cucamonga. Refer to the above discussion under the Water Resiliency Project subheading regarding the tree preservation and removal provisions of the Jurupa Valley and Rancho Cucamonga Municipal Codes.

Fontana Municipal Code Article III – Reservation of Heritage, Significant and Specimen Trees establishes regulations for the preservation and protection of heritage, significant and/or specimen trees within Fontana located on both private and public property. (FMC, section 28-61.) No person shall remove or cause the removal of any heritage, significant or specimen tree unless a tree removal permit is first obtained, except under the following circumstances as set forth in Fontana Municipal Code section 28-65:

- (1) *Removal of trees planted, grown and/or held for sale by licensed nurseries and/or tree farms or the removal or transplanting of such trees pursuant to the operation of a licensed nursery and/or tree farm.*
- (2) *Emergency or routine trimming or pruning to protect or maintain overhead public utility lines, existing subsurface water lines, sewer or utility lines.*
- (3) *Removal of damage parts of a heritage, significant or specimen tree which has sustain an injured trunk, broken limbs, or uprooting as a result of storm damage or other acts of God, which create a hazard to life or property.*
- (4) *Removal of trees which are determined to be diseased and/or dead by a certified arborist and approved by the staff.*
- (5) *Removal of trees which are determined to be hindering the safe application or installation of traffic control devices or roadway improvements in the public right-of-way or trees which hinder the line of site as determined by the city engineer.*
- (6) *Removal of trees which are determined to be within the ultimate right-of-way as shown within the circulation element of the city's general plan.*

Through compliance with the applicable provisions of the Fontana, Jurupa Valley and Rancho Cucamonga Municipal Codes, impacts regarding conflict with local policies to protect biological resources would be less than significant.

#### **4.f Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?**

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in western Riverside County. All of JCSD's service area is located within the boundaries of the MSHCP. Although

JCSD is not a Permittee, coverage under the MSHCP (and therefore, take authorization under the MSHCP can be obtained by seeking “Third Party Take Authorization” through the Western Riverside County Regional Conservation Authority. As impacts to biological resources would be avoided through mitigation measures, coverage would not likely be sought. Although JCSD is not a Permittee to the MSHCP, the proposed Project would not conflict with the MSHCP as discussed below.

The city of Rancho Cucamonga has adopted the Etiwanda Heights Neighborhood Conservation Plan (EHNCP). The EHNCP is located in the northern area of Rancho Cucamonga. (RC GP DEIR, p. 4.) (Refer to **Figure 11 EHNCP**.) The intent of the EHNCP is to create a regulatory and management framework for the conservation of the alluvial fan and foothills between Rancho Cucamonga’s northern most neighborhoods and the National Forest. Portions of CVWD’s service area is within the boundaries of the EHNCP.

### ***Water Resiliency Project***

**Less than significant with mitigation.** Adoption of the Resiliency Project would not conflict with the MSHCP or EHNCP. Depending on their locations, certain Resiliency Project components may be located within the boundaries of the MSHCP or EHNCP. The relationship between a given Resiliency Project component and the MSHCP or EHNCP shall be evaluated in the general biological resources assessments required by mitigation measure **RP MM BIO-1**. With implementation of mitigation measures identified in the general biological resources assessment, conflicts with the MSHCP or EHNCP would be less than significant.

### ***Etiwanda Pipeline***

**Less than significant impact.** The MSHCP identifies a series of Criteria Cells and identifies the conservation goals for each Criteria Cell. The segment of the Etiwanda Pipeline within Riverside County is located within the Jurupa Area Plan of the MSHCP Subunit 2 Jurupa Mountains, Cell Group B, within or adjacent to Criteria Cells 10 and 42. Both of these Criteria Cells are located in the western portion of Cell Group B. Conservation within this Cell Group would range from 15%-25% of the Cell Group focusing in the northeastern portion of the Cell Group. (MSHCP, pp. 3-186, 3-189.) Since the Etiwanda Pipeline is not located within areas designated for conservation, construction of the Pipeline would not conflict with the MSHCP reserve design and conservation goals for Criteria Cell 10, Criteria Cell 42, Cell Group B, or Proposed Noncontiguous Habitat Block 2. Consistency of the MSHCP is determined through compliance with Sections 6.1.2, 6.1.3, 6.1.4, and 6.3.2 of the MSHCP.

Section 6.1.2 of the MSHCP requires assessment of riparian, riverine, fairy shrimp, and vernal pool habitats. None of these features, habitats or vegetation communities are present within the Etiwanda Pipeline BSA. Therefore, the Pipeline would not conflict with Section 6.1.2 of the MSHCP.

Section 6.1.3 requires assessment of sites in a designed survey area for narrow endemic plants to be completed. Although the Etiwanda BSA is within a narrow endemic plant survey area it does not contain suitable habitat and is therefore not required to survey for any narrow endemic plants. Because there is no suitable habitat, the Pipeline would not conflict with Section 6.1.3 of the MSHCP.

Section 6.1.4 requires projects located adjacent or near MSHCP conservation areas to consider edge effects or conditions of their urban/wildlife interface into the project design. Since the BSA is not located near any lands identified for MSHCP conservation, this section of the MSHCP does not apply. Therefore, the Etiwanda Pipeline would not conflict with Section 6.1.4 of the MSHCP.

Section 6.3.2 requires assessments for particular species in designated survey areas. The BSA is within designated survey areas for burrowing owl and Delhi sands flower-loving fly. Since the BSA

contained ground squirrel burrows, drainpipes, riprap and debris piles suitable for burrowing owls, focused burrowing owl surveys were conducted. Because there was not suitable habitat for Delhi sands flower loving fly, focused surveys are not needed for this species. Thus, the Etiwanda Pipeline would not conflict with Section 6.3.2 of the MSHCP.

For the reasons set forth above, the Etiwanda Pipeline would not conflict with the MSHCP.

### **Biological Resources Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts to biological resources to less than significant.

#### ***Resiliency Project Mitigation Measures***

**RP MM BIO-1: Resiliency Project Biological Resources Assessments.** To reduce impacts to sensitive biological resources resulting from construction of Resiliency Project components evaluated at a program level in this Initial Study, general biological resources assessments shall be conducted by a qualified biologist retained by the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD). The general biological resources assessments shall be conducted prior to approval of any proposed Resiliency Project component evaluated at a program level in this Initial Study, for which a previous general biological resources assessment has not been prepared. These general biological resources assessment(s) shall include an identification of: sensitive plant or animal species that occur or may occur on site, other protected natural resources including sensitive vegetation communities, streams, rivers, vernal pools and wetlands, potential impacts to these sensitive resources resulting from implementation of the Resiliency Project component or components being evaluated, and mitigation measures that must be implemented to reduce potential impacts to less than significant. The Resiliency Project component(s) being evaluated per this mitigation measure shall implement the mitigation measures identified in the general biological resources assessment(s).

**RP MM BIO-2: Preconstruction Nesting Bird Survey(s).** To avoid direct and indirect impacts to nesting birds, if construction of any resiliency Project component takes place between February 1 and August 31 a qualified biologist (the "Project Biologist") shall be retained by the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD) and shall conduct preconstruction nesting bird survey(s) no sooner than seven (7) days prior to initiation of ground disturbing activities, to document the presence or absence of nesting birds within or directly adjacent to (within 100 feet) of the construction zone. If no active nests are found during the survey, construction activities may proceed. The Project Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts to these nests occur.

If active nests are found, the nests shall be avoided, and a no disturbance buffer zone established and observed until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted the California Department of Fish and Wildlife (CDFW) generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case-by-case basis by the Project Biologist and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the Project

Biologist with CDFW concurrence. Any nest permanently vacated for the season would not require monitoring or protection.

**RP MM BIO-3: Jurisdictional Resources and Regulatory Permits.** To reduce potential impacts to riparian habitat, streambeds regulated by the California Department of Fish and Wildlife, “waters of the United States,” and wetlands regulated by the U.S. Army Corps of Engineers, if the biological resources assessment(s) prepared under mitigation measure

**RP MM BIO-1** identifies that riparian habitat, streambeds regulated by the California Department of Fish and Wildlife, and “waters of the U.S.,” and wetlands regulated by the U.S. Army Corps of Engineers may be affected by construction of a Resiliency Project component (other than the Etiwanda Pipeline), prior to construction of such Resiliency Project component that would traverse land where riparian or wetland habitat occurs or is likely to occur, the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD), shall obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional resources, as applicable. These component(s)-specific delineation(s) may be required to determine the limits of the U.S. Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction. Impacts to jurisdictional waters shall require authorization by the corresponding regulatory agency. Authorizations may include, but are not limited to, a Section 404 permit from the ACOE, a Section 401 Water Quality Certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement from CDFW. Resiliency Project component-specific impacts to jurisdictional waters shall be mitigated at the component level through the permitting process in a manner approved by the ACOE, CDFW, and the RWQCB, where applicable.

### ***Etiwanda Pipeline Mitigation Measures***

**EP MM BIO-1: Biological Resources Worker Environmental Awareness Program.** To educate construction crews about sensitive biological resources along the selected Etiwanda Pipeline Alternate, prior to construction a qualified biologist (the “Project Biologist”) shall be retained by JCSD to prepare a Worker Environmental Awareness Program (WEAP) that will outline pertinent biological issues and avoidance measures related to the selected Etiwanda Pipeline alignment (i.e., the Recommended or one of the Alternate Alignments). Such measures shall include making sure construction workers and equipment stay out of sensitive vegetation communities. The Project Biologist or designee(s) shall present the WEAP to the construction contractor and each of the construction crews working on the Etiwanda Pipeline project during a preconstruction meeting. The WEAP shall be taped and presented to any construction crew members not present at the preconstruction meeting during which it was initially presented prior to such crew members working on the Etiwanda Pipeline.

**EP MM BIO-2: Preconstruction Nesting Bird Survey.** To avoid direct and indirect impacts to nesting birds if construction takes place between February 1 and August 31, a qualified biologist (the “Project Biologist”) shall be retained by JCSD and conduct preconstruction nesting bird survey(s) no sooner than seven (7) days prior to initiation of ground disturbing activities, to document the presence or absence of nesting birds within or directly adjacent to (within 100 feet) of the construction zone. If no active nests are found during the survey, construction activities may proceed. The Project Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

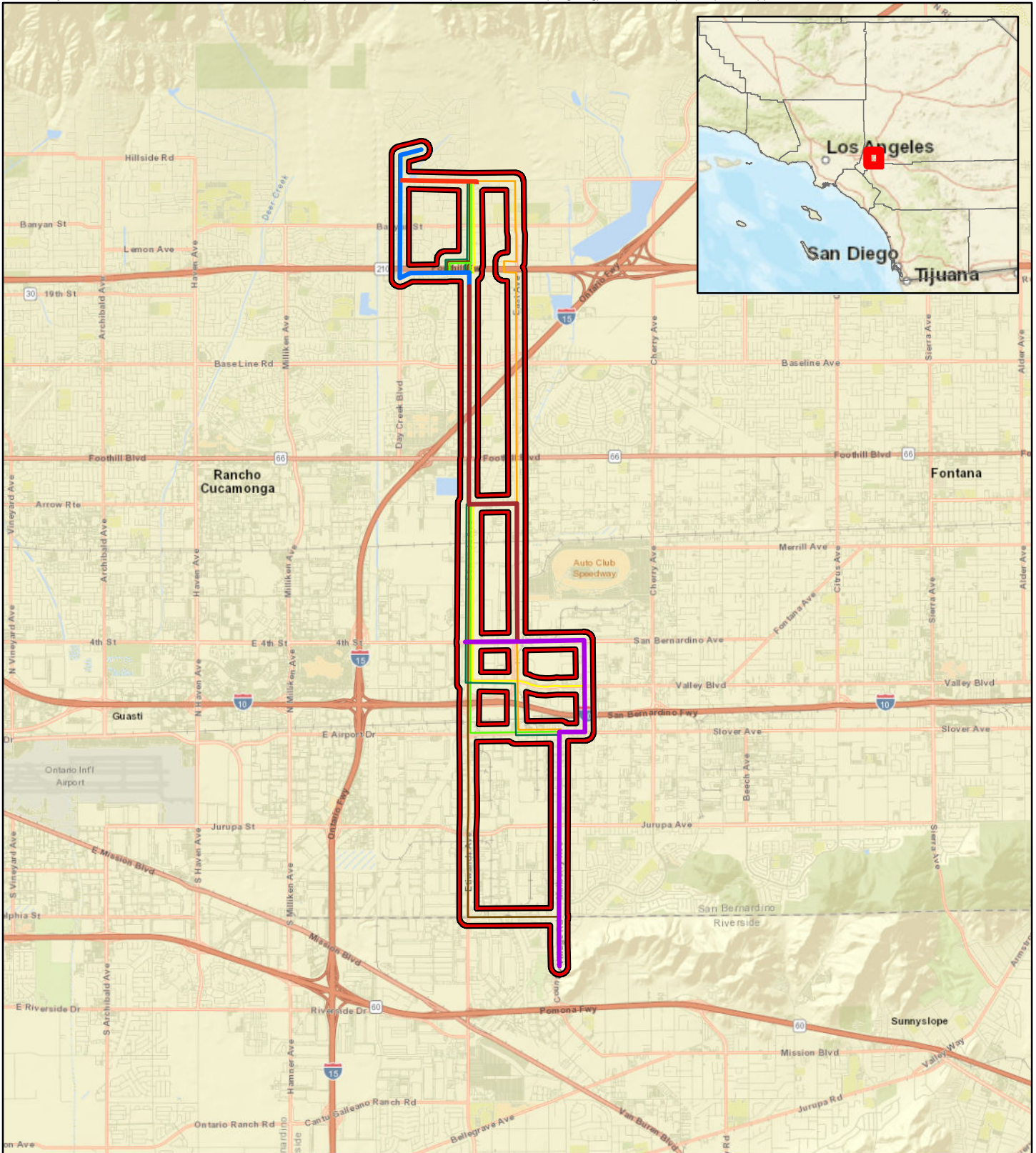


If active nests are found, the nests shall be avoided, and a no disturbance buffer zone established and observed until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted, the California Department of Fish and Wildlife (CDFW) generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case-by-case basis by the biological monitor and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the Project Biologist with CDFW concurrence. Any nest permanently vacated for the season will not require monitoring or protection.

**EP MM BIO-3: Preconstruction Burrowing Owl Surveys.** To avoid direct and indirect impacts to burrowing owls, the Project Biologist shall conduct take avoidance surveys prior to any vegetation removal or soil disturbance to those portions of the Etiwanda Pipeline Alignment with suitable habitat as shown on **Figure 3a through Figure 3c – Burrowing Owl Survey Results** of the *JCSD Northern Feeder Pipeline Project Focused Surveys for Burrowing Owl* (Appendix B.2 of the Initial Study). The first survey shall take place no sooner than 14 days prior to initiating ground disturbance and a second survey shall take place within 24 hours prior to ground disturbance. If burrowing owls are present, the Project Biologist shall consult with the California Department of Fish and Wildlife to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls and if avoidance of the area is not feasible, mitigation options may range from passive relocation to habitat replacement.

**EP MM BIO-4: Preconstruction Surveys for Western Yellow Bat.** To minimize or avoid impacts to the western yellow bat, prior to the disturbance (e.g., branch trimming or removal) of any trees along the Brine Pipeline alignment, the Project Biologist shall conduct a preconstruction survey no sooner than seven (7) days prior to disturbance or removal to determine if bat roosts are present. If bat roosts are present and disturbance or removal cannot be avoided, the Project Biologist shall consult with the California Department of Fish and Wildlife to identify and implement appropriate mitigation measures.

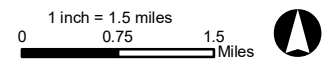
**EP MM BIO-5: Work in Jurisdictional Waters.** The Etiwanda Pipeline will be designed to avoid impacts to jurisdictional areas. If construction activities should disturb anywhere within the jurisdictional limits of a watercourse, the following shall apply as needed: a) notification of a lake or streambed alteration (LSA) shall be given to the California Department of Fish and Wildlife (CDFW); b) a request shall be made to the Santa Ana River Regional Water Quality Control Board for a Clean Water Act Section 401 Water Quality Certification (WQC); and/or c) pre-construction notification to the Los Angeles District of the U.S. Army Corps of Engineers. Trenchless methods of construction are anticipated and construction should avoid the rainy season if feasible. The contractor shall prepare and have on-site during hydraulic directional drilling, a Frac-Out Contingency Plan in the event the pipeline breeches or frac-out occurs. The Frac-Out Contingency Plan shall identify the methods to contain released material into the waterway and identify the agencies that will be contacted should frac-out occur.



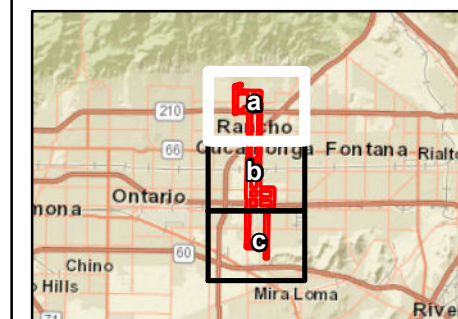
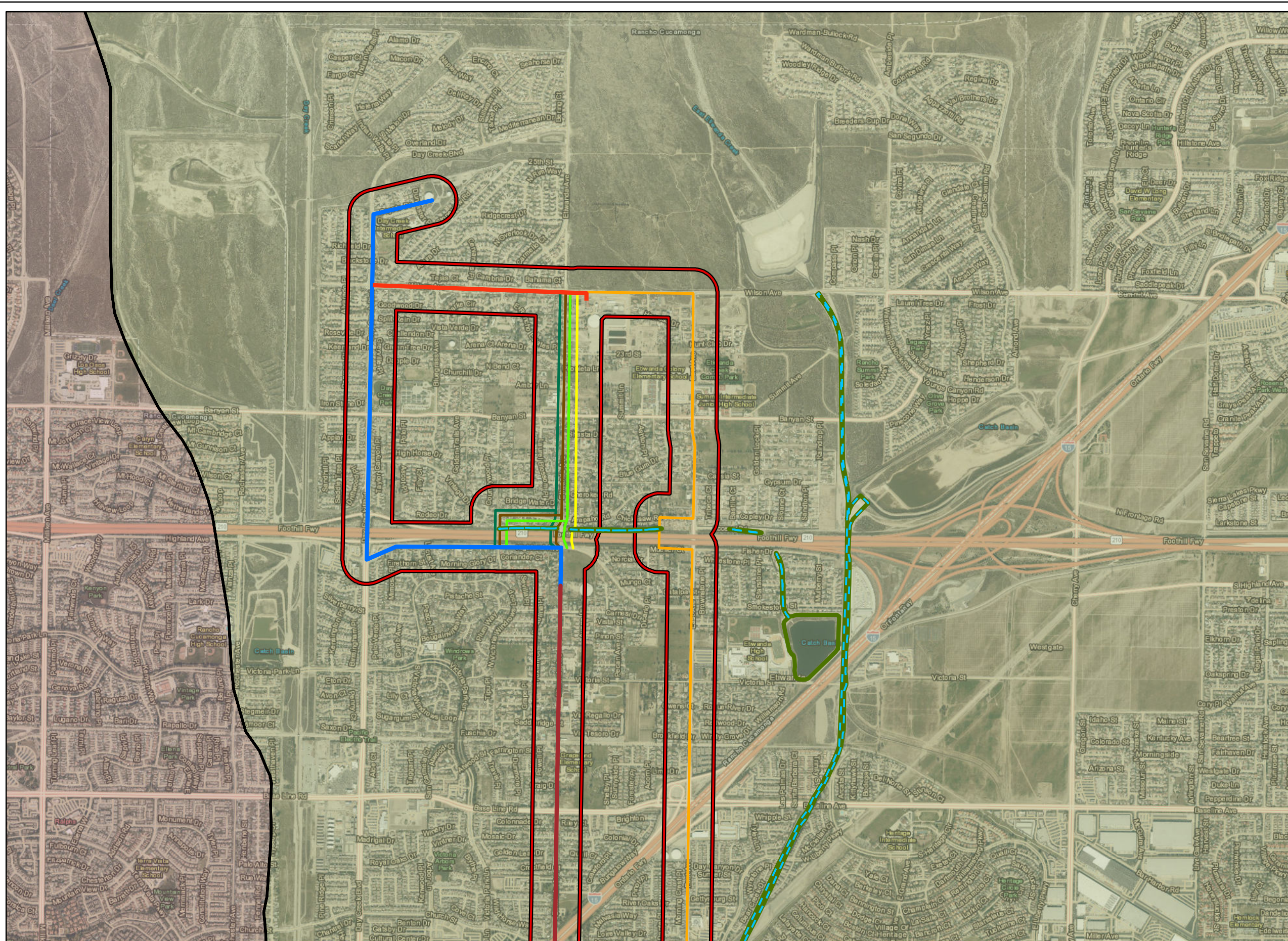
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Source: Wood Environment and Infrastructure Solutions

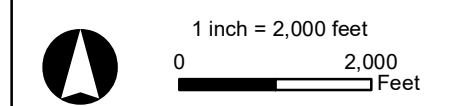
- Project Alignment (500ft Buffer)
- Recommended Alignment
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Option A
- Option B
- Option C
- Option D
- Option E



**Figure 9 - Etiwanda Pipeline Biological Study Area**



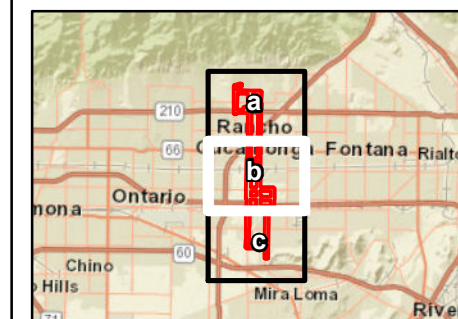
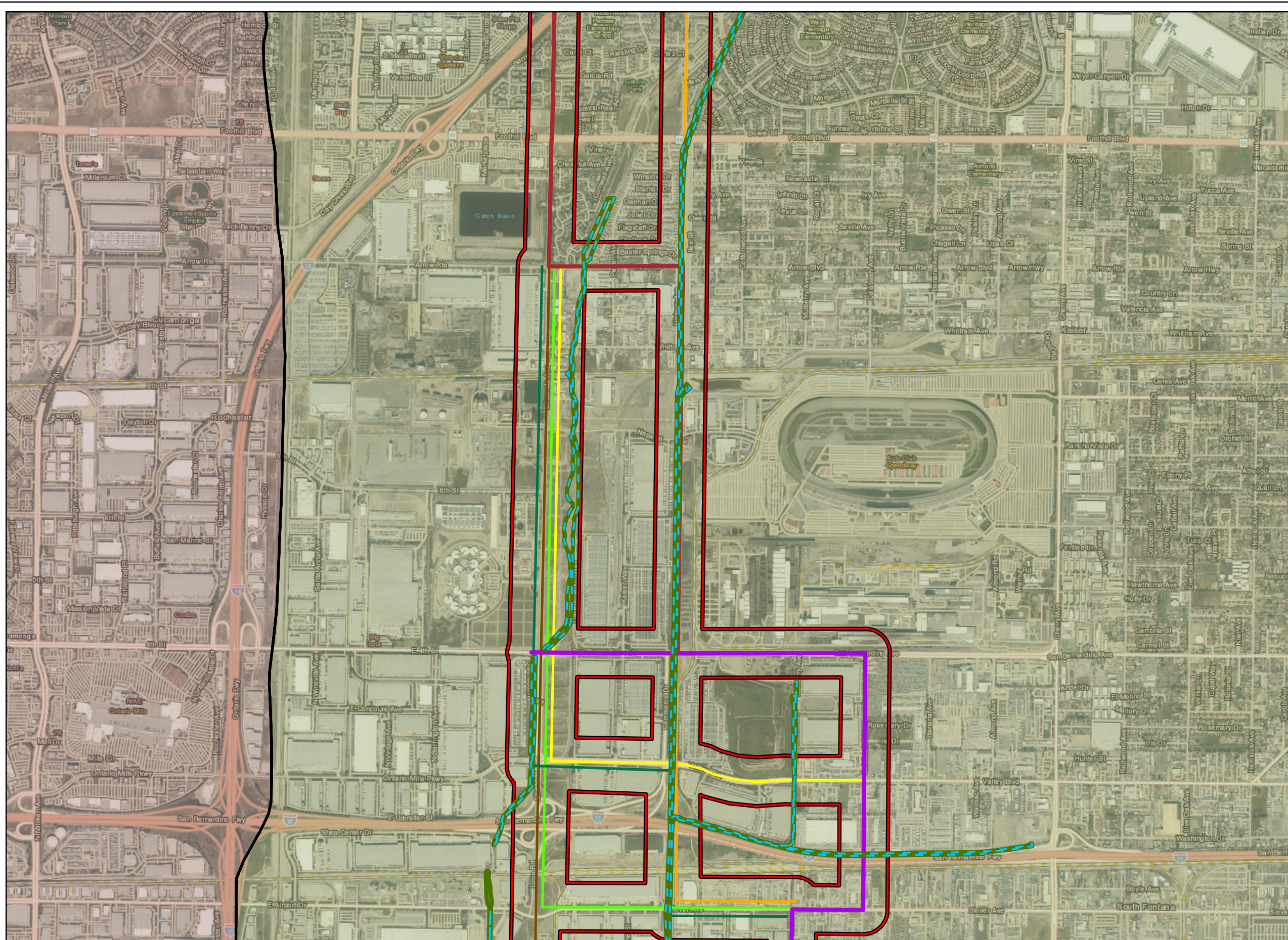
- ACOE
- CDFW
- Chino Creek Watershed (1807020307)
- Middle Santa Ana River Watershed (1807020308)
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Project Alignment (500ft Buffer)



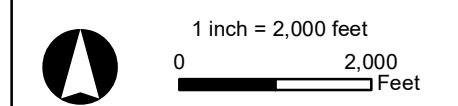
**Figure 10a**  
 Watershed Boundaries  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



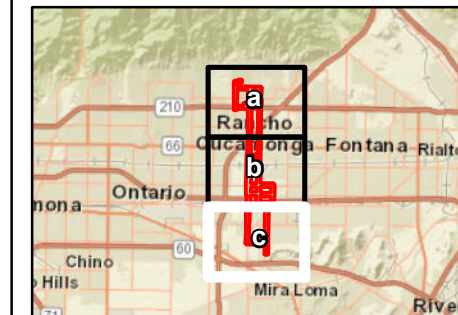
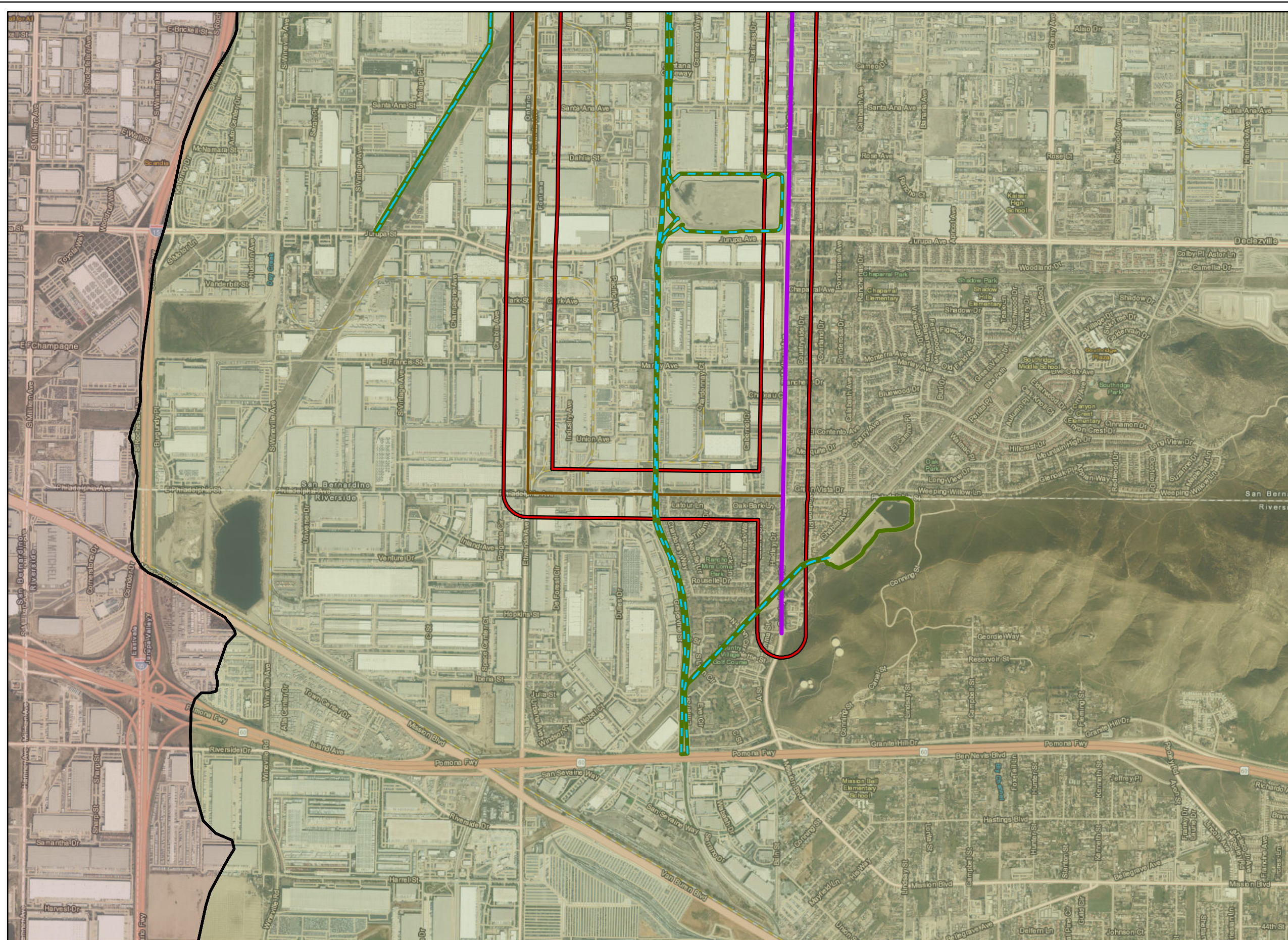
- ACOE
- CDFW
- Chino Creek Watershed (1807020307)
- Middle Santa Ana River Watershed (1807020308)
- Recommended Alignment**
- Phase 1
- Phase 2
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Project Alignment (500ft Buffer)



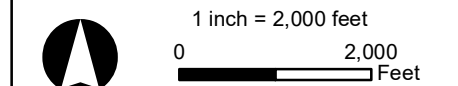
**Figure 10b**  
 Watershed Boundaries  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



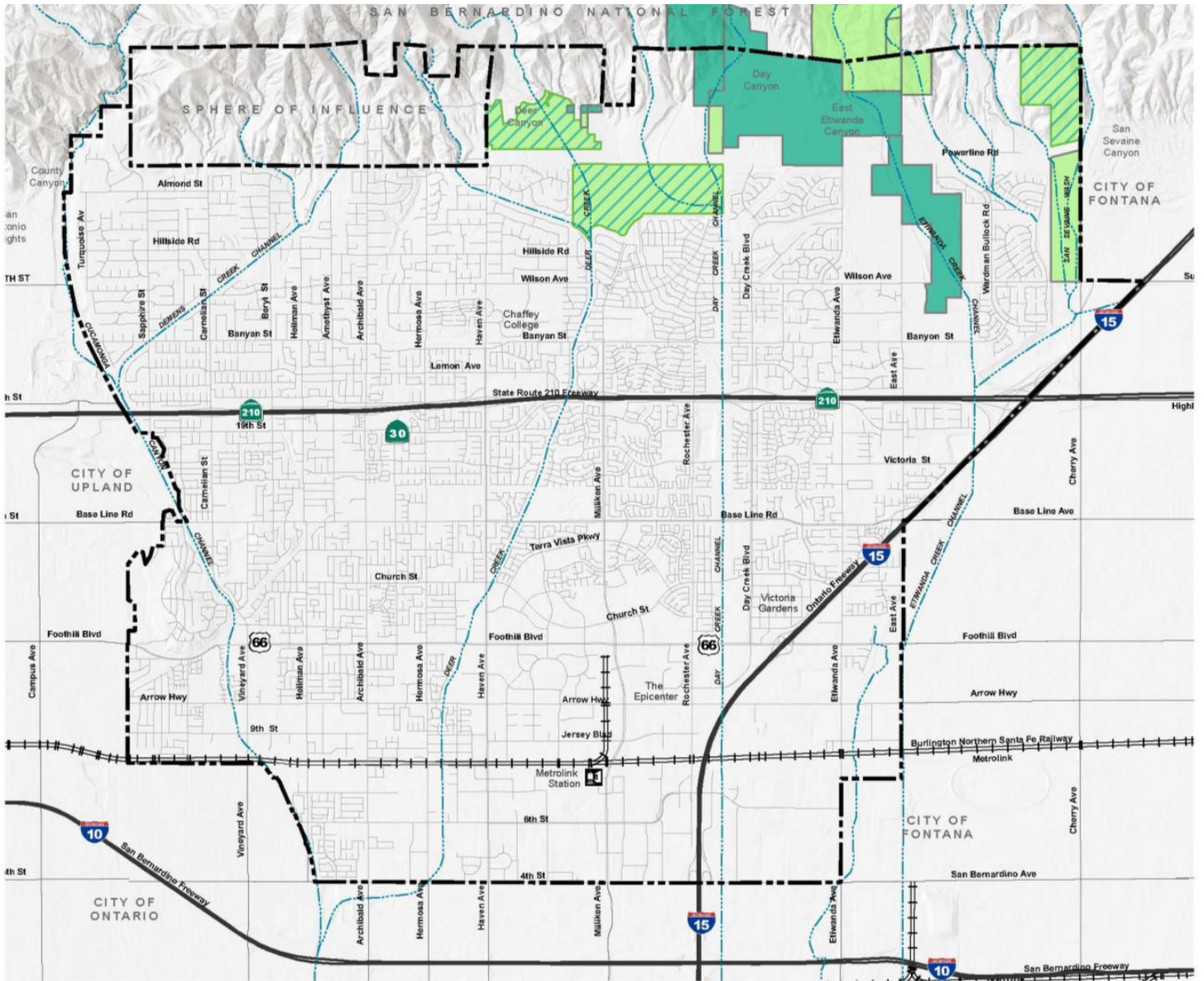
- ACOE
- CDFW
- Chino Creek Watershed (1807020307)
- Middle Santa Ana River Watershed (1807020308)
- Recommended Alignment**
- Phase 1
- Optional Alignments**
- Option A
- Project Alignment (500ft Buffer)



**Figure 10c**  
 Watershed Boundaries  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



Source: City of Rancho Cucamonga 2020



- Conserved and Managed
- Conserved not Managed
- Proposed EHNCP Preserve

**Figure 11 - EHNCP**  
Etiwanda Intervalley Water Quality and Water Resiliency Project

|  | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i>         |
|--|---------------------------------------|---|-------------------------------------|--------------------------|
| <b>5. CULTURAL RESOURCES.</b> Would the project:   |                                       |   |                                     |                          |
| a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?   | <input type="checkbox"/>              | <input checked="" type="checkbox"/>                       | <input type="checkbox"/>            | <input type="checkbox"/> |
| b. Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5? | <input type="checkbox"/>              | <input checked="" type="checkbox"/>                       | <input type="checkbox"/>            | <input type="checkbox"/> |
| c. Disturb any human remains, including those interred outside of dedicated cemeteries?                      | <input type="checkbox"/>              | <input type="checkbox"/>                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

(Sources: PaleoWest-A, Plan RC CR ECR, AB 52 Consultation)

**5.a Would the Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

Determination of National Register of Historic Property (NRHP) eligibility for cultural resources is made according to the following criteria of evaluation (36 CFR 60.4):

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, feeling and association, and:

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

A property must meet one or more of these specific criteria to qualify as a good representative of a significant historical theme or pattern. It must be associated with important historical events or persons (Criteria A and B); convey important technical, aesthetic, or environmental values (Criterion C); or have potential to provide important scientific or scholarly information (Criterion D). Unless a site is of exceptional importance, it is not eligible for listing in the NRHP until it is 50 years of age. (PaleoWest-A, pp. 22–23.)

For purposes of CEQA, a historical resource is any object, building, structure, site, area, place, record, or manuscript listed in, or eligible for listing in the CRHR (California Public Resources Code [PRC] Section 21084.1). A resource is eligible for listing in the CRHR if it meets any of the following criteria:

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

The California Code of Regulations (CCR) further provides that cultural resources of local significance are CRHR-eligible. (Title 14 CCR, Section 4852). (PaleoWest-A, pp.23–24.)

### ***Water Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not cause a substantial adverse change in the significance of a historical resource. Improvements to the LMWTP, RNWTP, and CVWD Reservoir 2 would not impact historical resources as no historic resources are present at those sites. The general location of some of the well sites contemplated by the Resiliency Project are within the historic Etiwanda neighborhood character area (NCA). The Etiwanda NCA is located along the eastern portion of Rancho Cucamonga and is bordered by the city boundary to the north and east, Day Creek Channel to the west, and Foothill Boulevard to the south. (Plan RC CR ECR, p. 12.) Since the specific location of the Resiliency Project wells and storage reservoir(s) are not known at this time, a historic resources assessment shall be conducted prior to approval of any new well or storage reservoir as required by **RP MM CR 1**. Since the specific JCSD wells at which groundwater treatment facilities may be constructed are not known at this time, a historic resources assessment shall be conducted as required by **RP MM CR 2** for any well over 45 years of age. With implementation of mitigation measures **RP MM CR-1** and **RP MM CR-2**, impacts to historical resources from implementation of the Resiliency Project would be reduced to less than significant.

### **Etiwanda Pipeline**

The Area of Potential Effect (APE) refers to the geographic area within which the Etiwanda Pipeline has the potential to impact historic properties directly or indirectly per 36 CFR 800.16(d). The horizontal APE for the Etiwanda Pipeline includes the Recommended Alignment and encompasses approximately 39.5 acres. (PaleoWest-A, p. 8.)

Cultural literature and records searches were conducted by PaleoWest at the Eastern Information Center (EIC) housed at the University of California, Riverside and the South Central Coastal Information Center (SCCIC) housed at California State University Fullerton for the APE and surrounding one-mile radius, collectively termed the Project Study Area or PSA. (PaleoWest-A, p. 31.) A Sacred Lands File (SLF) search was conducted with the California Native American Heritage Commission (NAHC) with positive results, which is discussed in response to threshold 18, Tribal Cultural Resources. (PaleoWest, p. 37.) Additional sources consulted include the National Register of Historic Places (HRHP), the Office of Historic Preservation Archaeological Determinations of Eligibility, and the Office of Historic Preservation Directory of Properties in the Historic Property Data File. There are 33 listed historic period sites recorded within a one-mile radius of the APE. Eight (8) of these resources are mapped within the PSA. (PaleoWest, p. 31.)

No less than 176 investigations have been conducted and documented within the PSA since 1977. Thirty-three of the identified studies encompass or include portions of the Pipeline APE. Many of these previous studies were conducted in support of underground utility installation or improvement projects. In total, approximately 40 percent of the Pipeline APE has been previously inventoried for cultural resources. The records search results also indicated no fewer than 129 previously recorded cultural resources within a one-mile radius of the APE. These resources include four previously recorded archaeological sites, 33 historic period archaeological sites, eight prehistoric isolated artifacts, two historic period isolated artifacts, one multi-component isolated artifact, and 81 historic period built-environment resources.<sup>13</sup> Eight of these previously recorded resources are

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<sup>13</sup> A list and brief description of the 129 previously recorded resources is included in Table 4-1 of Appendix C.1.



mapped within the Pipeline APE. (PaleoWest, p. 31.) Of the eight previously recorded resources, five are historic period built-environment resources and three are archaeological resources. (PaleoWest-A, pp. 53–58.)

In addition to the records search and literature review, a reconnaissance-level survey was conducted to identify any areas of exposed ground surface and to revisit the mapped locations of all previously recorded cultural resources to assess their current condition. This was followed by a pedestrian survey of the undeveloped portions of the Pipeline APE. The pedestrian survey was conducted by walking a series of transects across areas of exposed ground surface from July 27–29, 2021. The majority of the Pipeline APE lies within existing road ROWs that are fully developed. Ground visibility within these areas was poor (0-10%) due to the presence of the paved roadway, hardscaping, and landscaping. The portion of the Pipeline alignment adjacent to the San Sevaine Channel were unpaved and inaccessible at the time of the survey. These areas were observed from the edge of the public ROW and exhibited a higher level of visibility (40-60%) though the ground surface was partially obscured by gravels. (PaleoWest-A, p. 39.) In addition to determining the existing conditions of the five historic-period built-environment resources, two new historic-period built-environment resources were identified in the Pipeline APE during the field survey. **Table C – Historic Period Built-Environment Resources**, identifies all seven of these resources, their existing condition, and eligibility for listing in the NRHP or CRHR.

**Table C – Historic Period Built-Environment Resources**

| Resource and Description  | Existing Condition  | NRHP or CRHR Eligible?  |
|---|---|---|
| <b>Previously Recorded Historic Period Built-Environment Resources</b>  |   |   |
| <p><b>Kaiser Steel Mill</b><br/>(P-36-004131/CA-SBR-004131H)<br/>P-36-004131 is the historic period Kaiser Steel Mill. The mill was built in 1942 and was one of the largest steel production mills west of the Mississippi. In 1980, the San Bernardino County Museum created a site record form noting its location on Cherry Avenue and that it is a Point of Historical Interest. In 1997, six historic-era features were documented and by 2008 all major components of the Kaiser Steel Mill had been demolished and the resource was no longer extant. (PaleoWest-A, p. 35.)</p> | <p>No evidence of the steel mill facility was found within the Etiwanda Pipeline APE. Most, if not all, of the Kaiser Steel Mill appears to have been demolished and replaced by a complex of industrial warehouses and an auto speedway. A steel plant owned and operated by the California Steel Industry lies east of the APE. It is not known if this facility contains components of the original Kaiser Steel Mill. Results of the survey indicate that P-36-004131 is no longer extant within the Project APE; therefore no further consideration is required. (PaleoWest-A, p. 54.)</p> | <p><b>Not applicable</b> since the resource no longer exists within the Etiwanda Pipeline APE.</p>  |
| <p><b>Union Pacific Railroad</b><br/>(P-36-010330/CA-SBR-010330H)<br/>P-36-010330 is the historic period Union Pacific Railroad (UPRR). These rail lines were all acquired by UPRR but were originally part of other</p>  | <p>The portion of UPRR that intersects the proposed Etiwanda Pipeline alignment consists of an in-use rail line located south of I-10. The proposed Pipeline would be installed under the active rail</p>   | <p><b>Not applicable</b> because trenchless construction techniques will be used to install the Etiwanda Pipeline under the active rail line.</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description   | Existing Condition   | NRHP or CRHR Eligible?   |
|--|--|--|
| <p>railroad lines (Southern Pacific, Los Angeles, and Salt Lake Railroad). Major portions of track and associated spurs, sidings, and station were constructed between 1869 and 1905.</p> <p>In 1999, segments of the railroad located on the Los Angeles quadrangle, El Monte quadrangle, Baldwin Park quadrangle, La Habra quadrangle, Ontario quadrangle, Guasti quadrangle (including a section in the Project APE), Fontana quadrangle, and San Bernardino South quadrangle were recorded. At that time it was recommended that the recorded railroad was eligible for listing on the NRHP under criteria A and B for its association with the transportation of goods and people and its association with the individuals who funded the railroad construction (Mark Hopkins, Callis P. Huntington, Leland Stanford, and Charles Crocker). (PaleoWest-A, p. 35.)</p> | <p>line using trenchless construction techniques. As such, the APE in this portion of the Project underlies P-36-010330. Because the UPRR would be crossed using trenchless construction techniques, this resource would not be impacted or affected by the proposed Project. Therefore, no further consideration is necessary. (PaleoWest-A. pp. 54, 56.)</p>   |  |
| <p><b>Base Line Road</b><br/>(P-36-015497)</p> <p>P-36-015497 consists of a segment of the historic period Base Line Road. The resource is a major thoroughfare through San Bernardino County and continues west as far as Azusa in Los Angeles County. The road, constructed on the southern California Base Line, was surveyed by Colonel Henry Washington in 1853. A monument was erected on the summit of Mt. San Bernardino and the line extended east and west. It became the basis for land titles established by California Courts.</p>  | <p>The segment of Base Line Road within the Project APE that intersects Etiwanda Avenue consists of an in-use six-lane road with two turn lanes. A hardscaped center divider bisects the opposing lanes. This segment of the resource is approximately 90-ft-wide and is paved. Although some cracks and ruts are noted in the roadway, the resource appears to be well maintained with modern materials and construction.</p> <p>A Department of Parks and Recreation (DPR) form was updated for this portion of Base</p> | <p><b>No</b>, this segment of Base Line Road does not appear to meet any criterion listing for the NRHP or CRHR. (PaleoWest-A, p. 64.)</p> <p>The road is historically associated with the Southern California Baseline of 1853. However, the survey line itself is an imaginary map line, with no physical manifestation of it or the survey markers located within or adjacent to the Project APE. Furthermore, archival research found no indication that it is associated with significant persons in history.</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description  | Existing Condition  | NRHP or CRHR Eligible?  |
|---|---|---|
| <p>In 2014, a segment of the Baseline Road was formally documented. This segment was recorded as being a modern, six-lane asphalt-concrete roadway with a landscaped center median. This segment of pavement measured 90 feet wide and appeared to be completely modern in its appearance, design, construction, and materials. This segment of the resource does not appear to have been evaluated for listing on the NRHP or CRHR. (PaleoWest-A, p. 36.)</p>  | <p>Line Road and is included in Appendix C.1. (PaleoWest-A, pp. 56–57.)</p>   | <p>Although first constructed as a simple dirt road, it has been expanded over time into a six-lane asphalt-concrete roadway. Today, the roadway is completely modern in its appearance, design, construction, and materials and does not exhibit any architectural or engineering merits that would set it apart from the many similar roads in the region. Therefore, this segment of Base Line Road does not appear eligible for the NRHP Criterion C/CRHR Criterion 3. Finally, it does not have the potential to yield any information important to the study of our local, state, or national history and is therefore not eligible under NRHP Criterion D/CRHR Criterion 4 (PaleoWest-A, p. 57.)</p> |
| <p><b>Pacific Electric San Bernardino Line; Pacific Electric Southern Pacific Alignment</b><br/>(P-36-020137/CA-SBR-015904H)</p> <p>P-36-020137 is a segment of the historic period Pacific Electric San Bernardino Line and Southern Pacific Alignment. The resource recorded was a 3.25-mile-long single track section of the overall 22-mile-long Pacific Electric San Bernardino Line that lies between Haven Avenue and Etiwanda Avenue. At the time of its recordation, all of the rails and ties had been removed with the exception of the rails embedded in the asphalt of the at-grade crossings on Rochester and Haven Avenues. Track ballast remained in place over</p> | <p>No evidence of this resource was found during an intensive survey within the mapped location of the resource within the Project APE. All traces of this resource have been removed and replaced with a modern walking/biking path. A pillar on the west side of Etiwanda Avenue marks and commemorates the former Pacific Electric alignment. Based on these findings, PaleoWest concluded that the resource is no longer extant within the Project APE. (PaleoWest-A, p. 57.)</p> | <p><b>Not applicable</b> since the resource no longer exists within the Etiwanda Pipeline APE.</p>  |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description  | Existing Condition  | NRHP or CRHR Eligible?   |
|---|---|--|
| <p>much of the section. The width of the rail corridor varied between 80 and 100 ft with the majority of the railbed elevated above grade to prohibit flooding. A short, steel girder bridge was noted as spanning the Day Creek Flood Control Channel. P-36-020137 was recommended not eligible for listing on the NRHP or the CRHR.</p> <p>In 2005, an additional 3.5-mi-long segment of the Pacific Electric alignment was recorded. The only extant features identified along the newly recorded segment were the roadbed and associated concrete drainage culverts. All the track, ballast, ties, hardware, and other features had been removed. Because this portion of the resource did not retain its integrity of design, workmanship, materials, setting, feeling, or association, it is considered ineligible for the NRHP or the CRHR.</p> <p>In 2006, an approximately 1,600-ft-long segment of the rail line between East Avenue and Interstate 15 was revisited. At the time of the revisit, the resource consisted of an 80-ft-wide ROW bounded by recent residential tract developments on the north and south. All railroad-related material had been removed and the alignment consisted of a graded dirt corridor containing nothing to indicate its former use as a rail line.</p> |   |  |
| <p><b>Devers-San Bernardino 22 kV; SCE Hayfield-Chino 220 kV Transmission Line</b><br/>(P-36-026051)</p>  | <p>This transmission line is composed of a series lattice steel, type-S suspension towers that measure approximately 50 ft wide and 150 ft tall. The transmission towers have a wide set base</p> | <p><b>Not applicable</b> because the only portion of the resource within the Etiwanda Pipeline Alignment, are overhead transmission lines, which would</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description   | Existing Condition   | NRHP or CRHR Eligible?  |
|--|--|---|
| <p>P-36-026051 is a historic period transmission line that was first recorded in 2012. LSA Associates noted that the Devers-San Bernardino 220 kilowatt (kV) Transmission Line was previously recorded in 2006 in association with a historic-era access road that first appears on the 1953 edition of the Beaumont 7.5-minute USGS topographic quadrangle map. The total length of the transmission line from the San Bernardino Substation to the Devers Substation is approximately 43 miles in length. Tower types along the line include mainly single circuit lattice steel towers, with some single circuit tubular steel poles in more densely populated and residential areas. It was noted that the construction of this transmission line is associated with the development of the San Bernardino to Desert Hot Springs corridor through San Gorgonio Pass and San Timoteo Canyon. LSA Associates noted that the poles and equipment have been updated and replaced as needed over the past 65 years and as such, the original integrity of the line as a whole has been minimized. The 220 kV line was recommended not eligible for the NRHP or the CRHR. A portion of this line was later revisited in 2018 by ECORP Consulting Inc.; they noted that the condition of the resource was unchanged</p> | <p>placed in concrete anchor footings. The towers taper upward, supporting a three-phase double circuit configuration. Results of the cultural resources survey indicate that the transmission line spans the Etiwanda Pipeline. However, as no towers or structures associated with this transmission line are located in the Etiwanda Pipeline APE, construction and operation of the Etiwanda Pipeline would not impact or affect this resource. (PaleoWest-A, pp. 57, 59.)</p> | <p>not be affected by Pipeline construction.</p>  |
| <p><b>Newly Recorded Historic Period Built-Environment Resource</b></p>  |  |   |
| <p><b>San Sevaine Channel</b><br/>This resource consists of a three-mile-long segment of the historic-era San Sevaine Channel in the cities of</p>   | <p>The flood control channel consists of a rectangular concrete open channel that ranges from 30- to 50-ft in width with an approximate</p>  | <p><b>No</b>, the 3-mile-long segment of San Sevaine Channel recorded as part of the survey effort for the Etiwanda Pipeline consists</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description  | Existing Condition   | NRHP or CRHR Eligible?  |
|---|--|---|
| <p>Fontana and Rancho Cucamonga. The northernmost recorded point commences at Foothill Boulevard and extends south to Slover Avenue.</p> <p>The San Sevaine Channel carries water from East Etiwanda and San Sevaine creeks. The north end of the San Sevaine Channel is fed through a wash at the base of foothills of the San Gabriel Mountains, north of Wilson Avenue in Rancho Cucamonga. The wash feeds into five San Sevaine basins with an outfall into the East Etiwanda Channel just north of I-210 that continues south as the San Sevaine Channel. The north end the East Etiwanda Channel commences at the Etiwanda Dam and Debris Basin just north of Wilson Avenue to the outfall from San Sevaine Basin.</p> <p>The combined creeks of the San Sevaine Channel travel approximately 0.8 miles south along the former Pacific Electric Railroad alignment continuing in a southwestern alignment for approximately 1.4 miles to the intersection of East Avenue/E. Foothill Boulevard. The channel travels directly south for 5 miles into Riverside County, then continues in a southeasterly path for approximately 2.15 miles to the Santa Ana River.</p> <p>The recorded segment of the San Sevaine Channel was constructed in different stages at difference times. The northern 1-mile-long section was an underground pipe installed between 1948 and 1952 that carried East Etiwanda Creek water. The center 1-mile-long section dates to 1942 and was a storm water channel</p> | <p>depth of 15 ft. The edges of the concrete structure are lined with 6-ft-tall chain link fence and a paved access road runs alongside the channel. Associated structures include wall outfalls, basin outlet structures, and reinforced concrete overcrossings that carry vehicular and railroad traffic over the channel. (PaleoWest-A, p. 59.)</p> | <p>of two channelized creek segments that were constructed between 1942 and 1959 using different techniques and materials. The entire San Sevaine Channel was improved between 1996 and 2009 with the existing channel replaced and upgraded with a rectangular concrete open channel structure.</p> <p>The San Sevaine Channel, including the segment recorded and evaluated during this effort, is one of many flood control structures constructed along the foothills of the San Gabriel Mountains. It constitutes a minor, utilitarian feature within the larger, overall scheme of flood control development within the region, and is one of many similar flood protective works built throughout southern California. It does not stand out as an important aspect of flood control and is not a principal feature within the larger system of flood control in this region. The channel is not an important engineering project within the history and development of San Bernardino County and is not known to be directly associated with any other important historical events. Therefore, San Sevaine Channel is not eligible under NRHP Criterion A/CRHR Criterion 1. (PaleoWest-A, p. 60.)</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description   | Existing Condition | NRHP or CRHR Eligible?   |
|--|--------------------|--|
| <p>that rerouted the San Sevaine Creek around the Kaiser Steel Mill property that terminated at San Bernardino Avenue. The southern 1-mile-long section was an open channel that continued just past Slover Avenue and was constructed between 1952 and 1959. Between 1996 and 2009, all of the historic-era materials and different channel designs along the 11-mile-long San Sevaine channelized creek were improved through the efforts of the San Bernardino County Flood Control District and the Riverside County Flood Control District into the existing cohesive rectangular concrete open channel in place today. (PaleoWest-A, p. 59.)</p> |                    | <p>There is no association with noteworthy people in the past. Even if such a person was identified, this channelized creek system would unlikely be the locus of their importance. As there is no evidence the channel has an important association with any person or persons who made significant contributions to history at the local, state, or national level, the channel is not eligible under NRHP Criterion B/CRHR Criterion 2.</p> <p>The San Sevaine Channel does not exemplify a type, period, or method of construction, and does not possess high artistic merit, or appear to be the work of a master. Early channelization efforts employed techniques and materials common to their time of construction. The improved San Sevaine Channel is a rectangular concrete open channel that is a common engineering type implemented across California and the United States. It is therefore not eligible under NRHP Criterion C/CRHR Criterion 3.</p> <p>The San Sevaine Channel does not appear to be a source, or likely source, of important information regarding history, building materials, construction techniques, or advancements in floodwater control or engineering. Such structures are well documented in the historic record and use</p> |

**Table C – Historic Period Built-Environment Resources**

| Resource and Description  | Existing Condition   | NRHP or CRHR Eligible?  |
|---|--|---|
|   |  | <p>common construction materials and techniques. Therefore, the channel is not eligible under NRHP Criterion D/CRHR Criterion 4.</p> <p>For the reasons set forth above, the San Sevaine Channel, including the segment recorded and evaluated as part of this Initial Study, does not meet the eligibility criteria for listing in the NRHP or CRHR.</p>   |
| <p><b>Foothill Boulevard/U.S. Highway 66</b><br/>(36-002910)</p> <p>Sections of U.S. Highway 66 in San Bernardino County have been recorded 28 times between 1977 and 2009. The section of Foothill Boulevard intersecting the Etiwanda Pipeline APE is part of the former alignment of U.S. Highway 66. Because this portion of U.S. Highway 66 had not been previously documented, the segment was recorded by PaleoWest as part of the cultural resources assessment for this Initial Study. (PaleoWest-A, p. 61.)</p> | <p>The recorded segment of Foothill Boulevard/U.S. Highway 66 lies at the intersection with Etiwanda Avenue and serves as a main throughway for the city of Rancho Cucamonga. It consists of an approximately 105-ft-long segment of asphalt-paved roadway with two center turn lanes. The road at this location consists of six lanes and is 84-ft wide. The pavement is fairly even but shows evidence of having been cut and repaired for utilities trenching. This segment of road is flanked by vacant lots to the northeast, southeast, and northwest; a shopping complex exists to the southwest. (PaleoWest-A, p. 61.)</p> | <p><b>Yes</b>, U.S. Highway 66 is listed on the NRHP and is considered significant under criteria A and C. The NRHP form submitted for U.S. Highway 66 identified character defining features (CDFs) of highway segments that included original surface material associated with its period of significance and the presence of road-related structures. Other CDFs were identified in relationship to the original construction setting (urban and desert/rural).</p> <p>The section of Foothill Boulevard/ U.S. Highway 66 recorded by PaleoWest was originally constructed in rural agricultural lands that connected the communities of Cucamonga, Rialto, and San Bernardino. The CDFs for desert/rural segments include graded portions of road shoulder, banked curves, side lopes, and roadbed raised from surrounding landscape. (PaleoWest-A, pp. 61–62.)</p> |



**Table C – Historic Period Built-Environment Resources**

| Resource and Description | Existing Condition | NRHP or CRHR Eligible?  |
|--------------------------|--------------------|---|
|                          |                    | <p>Although the segment of Foothill Boulevard/U.S. Highway 66 at its intersection with Etiwanda Avenue retains integrity of location because it has not been realigned and continues to be used as a primary roadway; the widening of the rural four-lane road in this location to a six-lane road with added turn lanes, medians, modern curbs, sidewalks, lighting, and traffic signals has affected the design, workmanship, and materials of the original highway. Additionally, the setting of U.S. Highway 66 at this location has changed from open rural land, to dense urban residential and commercial development.</p> <p>Because the portion of Foothill Boulevard/U.S. Highway 66 within the Etiwanda Pipeline APE has been altered over time and the visual integrity of the surrounding area has been fundamentally compromised, this road segment does not contribute to the overall significance of the historic property. (PaleoWest-A, pp. 67-68.)</p> |

Source: PaleoWest-A

Although construction of the Recommended Alignment of the Etiwanda Pipeline is not anticipated to substantially damage historic resources within the APE, record search results indicate that several underground utility replacement and improvement projects have taken place along Etiwanda Avenue over the last several decades. Although construction activities associated with these previous project have likely impacted these early infrastructure systems, it is possible that portions of these systems still exist. To reduce impacts associated with an inadvertent discovery of one of these systems, mitigation measure **EP MM CR-1**, which requires archaeological monitoring for initial ground disturbing activities along Etiwanda Avenue, shall be implemented.

Additionally, as part of the AB 52 consultation process, the San Manuel Band of Mission Indians (SMBMI) indicated that the project area is located within Serrano ancestral territory and, as such, is of interest to the Tribe. The SMBMI do not have any concerns with the project's implementation as planned at this time, and requested certain mitigation measures be incorporated. Those measures are incorporated as **EP MM CR-2** and **EP MM CR-3** as discussed in the response to threshold 5.b.

**5.b Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?**

***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not cause a substantial adverse change in the significance of an archaeological resource. Improvements to the LMWTP, RNWTP, CVWD Reservoir 2, and groundwater treatment facilities at JCSD's existing wells are not anticipated to impact archaeological resources due to the previous and on-going anthropomorphic activities at these sites. Since the specific location of the Resiliency Project wells and storage reservoir(s) are not known at this time, mitigation measure **RP MM CR-3**, which requires an archaeological resources assessment be conducted prior to approval of any Resiliency Project component for which a prior cultural resources assessment has not been prepared, shall be implemented. Any component-specific measures identified in the cultural resources assessment(s) to reduce impacts to archaeological resources shall be implemented. With incorporation of mitigation measure **RP MM CR-3**, potential impacts to archaeological resources would be reduced to less than significant.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** As discussed under response to threshold 5.a, Cultural literature and records searches and field surveys were conducted for the Etiwanda Pipeline APE. There are three previously recorded archaeological resources within the Pipeline APE. **Table D – Archaeological Resources**, identifies these resources and their existing condition within the APE.

**Table D – Previously Recorded Archaeological Resources**

| Resource and Description  | Existing Condition  | NRHP or CRHR Eligible?  |
|---|---|---|
| <p><b>P-36-007099/CA-SBR-007099H</b></p> <p>P-36-007099 is a historic period archaeological resource consisting of a 1000-ft-long section of a sewer line discovered approximately three feet below the ground surface. This resource was recorded in 1992 and was described as a six-inch-diameter clay pipeline running in a north-south direction under Etiwanda Avenue that likely dated to the 1920s. The recorders of this resource noted that the sewer pipeline may continue farther north and south along Etiwanda Avenue.</p> <p>This resource was not evaluated for listing on the NRHP or CRHR. (PaleoWest-A, p. 35.)</p>   | <p>The DPR form for this resource noted the resource was removed from this location prior to 1992 and no longer extant. No evidence of the resource was observed during the survey conducted for this Initial Study.</p>  | <p><b>Not applicable</b> since this resource no longer exists within the Etiwanda Pipeline APE.</p> |
| <p><b>P-36-007322/CA-SBR-007322H</b></p> <p>P-36-007322 is a historic period refuse scatter consisting of machine-made glass bottles and bottle fragments (liquor, food, and cosmetic), porcelain and stoneware ceramic fragments, metal sanitary and beverage cans, iron straps, and wire nails. Additionally, a two-hole bone button, a machine-made brick, and other refuse were noted. At the time of its recordation, the site appeared to be relatively intact. However, recorders noted that vandals may have removed whole bottles since most of what remained was fragmented. It does not appear that this resource was evaluated for listing on the NRHP or CRHR. (PaleoWest-A, p. 35.)</p> | <p>During the cultural resources survey for this Initial study the mapped location of P-36-007322 was revisited and no evidence of the historic period refuse scatter was found. It is likely this resource was destroyed during construction and maintenance of the I-210 freeway and is no longer extant within the Project APE. PaleoWest prepared a DPR update for this resource. (PaleoWest, p. 54.)</p> | <p><b>Not applicable</b> since this resource no longer exists within the Etiwanda Pipeline APE.</p> |

**Table D – Previously Recorded Archaeological Resources**

| Resource and Description   | Existing Condition   | NRHP or CRHR Eligible?  |
|--|--|---|
| <p><b>P-36-033130/CA-SBR-0033130</b><br/>                     P-36-033130 is a prehistoric archaeological site that was recorded as a large mortar boulder with 20 or more cupules. The feature appeared to have been moved from its original context and relocated near the Etiwanda School. Specifically, the mortar with cupules has been cemented into the sidewalk at the corner of Etiwanda Avenue/Victoria Street. A 1987 revisit to the mapped location of P-36-033130 could not relocate the mortar boulder. The resource has not been evaluated for listing on the NRHP or the CRHR. (PaleoWest-A, p. 37.)</p> | <p>The cultural resources survey in the vicinity of this resource found no evidence of the archaeological site within the Project’s APE. Other granitic boulders in the vicinity of the front of Etiwanda School were examined but none of them appear to be culturally modified. A previous attempt to locate the resource in 1987 was also unsuccessful. It is possible that the resource has been destroyed by the placement of utility boxes and vaults located at the same corner. Based on these findings, PaleoWest concludes that the resource is no longer extant within the Project APE and prepared an updated DPR. (PaleoWest-A, p. 54.)</p> | <p><b>Not applicable</b> since this resource no longer exists within the Etiwanda Pipeline APE.</p> |

Source: PaleoWest-A

Sediments throughout the APE have been extensively disturbed by the construction of roadways and flood control channels, as well as the installation of underground utilities. Therefore, it is unlikely that intact prehistoric archaeological deposits would be encountered in the APE. (PaleoWest, p. 64.) Nonetheless, in order to provide protection in the unlikely event that archaeological resources are unearthed during construction of the Etiwanda Pipeline, mitigation measures **EP MM CR-2** and **EP MM CR-3** shall be implemented. With incorporation of these mitigation measures, potential impacts to archaeological resources would be reduced to less than significant.

**5.c Disturb any human remains, including those interred outside of dedicated cemeteries?**

***Resiliency Project and Etiwanda Pipeline***

Human remains are not expected to be disturbed as a result of implementation of the Resiliency Project or the Etiwanda Pipeline. In the unlikely event that unknown human remains or funerary objects are uncovered during construction, pursuant to law, the proper authorities would be notified and standard procedures for the respectful handling of human remains would be adhered to in compliance with California Code of Regulations (CCR) Title 14, Chapter 3, Section 15064.5(e); Public Resources Code (PRC) Division 5, Chapter 1.75, Section 5097.98; and State Health and Safety Code (HSC) Division 7, Part 1, Chapter 2, Section 7050.5. Compliance with these regulations would reduce potential impacts to the disturbance of human remains to less than significant.

### **Cultural Resources Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts to cultural resources to less than significant.

#### ***Resiliency Project Mitigation Measures***

**RP MM CR-1: Historic Resources Assessment.** To reduce potential impacts to historical resources resulting from construction of new Resiliency Project components, prior to approval of any Resiliency Project component, a historical resources assessment shall be conducted by a qualified historian retained by the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD). The historical resources assessment(s) shall determine if historic resources, as defined by *CEQA Guidelines* Section 15064.5, are present, identify potential impacts to such resources, and set forth measures that shall be implemented to reduce potential impacts to historical resources to less than significant. (The historical resources assessment(s) may be combined with the cultural resources assessment(s) required by **RP MM CR-3**.) The recommendations from the historical resources assessment(s) shall be incorporated into the component's design and construction.

**RP MM CR-2: Historic Resources Assessment JCSD Wells.** To reduce potential impacts to historical resources resulting from ground water treatment facilities that may be constructed on JCSD wells, prior to any ground disturbing activity or construction at any well that is over 45 years old and for which a previous historical resources assessment has not been conducted, a historical resources assessment(s) shall be conducted by a qualified historian retained by JCSD. The historical resources assessment(s) shall determine if historic resources as defined by *CEQA Guidelines* Section 15064.5 are present, identify potential impacts to such resources (if present), and set forth measures that shall be implemented to reduce potential impacts to historical resources to less than significant. (The historical resources assessment(s) may be combined with the cultural resources assessment required by **RP MM CR-3**.)

**RP MM CR-3: Cultural Resources Assessment.** To reduce potential impacts to cultural resources resulting from construction of new Resiliency Project components, as part of the design process for any Resiliency Project for which a previous cultural resources assessment has not been prepared, an archaeological resources assessment shall be conducted by a qualified archaeologist. The archaeological resources assessment(s) shall determine if archaeological resources, as defined by *CEQA Guidelines* Section 15064.5, are present, identify potential impacts to such resources, and set forth measures to reduce potential impacts to archaeological resources to less than significant. (The archaeological resources assessment(s) may be combined with the historical resources assessments required by **RP MM CR-1** and/or **RP MM CR-2**.) The recommended measures in the cultural resources assessment(s) shall be implemented during construction of the Resiliency Project components.

#### ***Etiwanda Pipeline Mitigation Measures***

**EP MM CR-1: Archaeological Monitoring Along Etiwanda Avenue.** To reduce impacts to any extant buried historic period infrastructural remains, prior to any work in or adjacent to Etiwanda Avenue JCSD shall retain a qualified archaeological monitor meeting the Secretary of the Interior Standards (the "Project Archaeologist"). The Project Archaeologist shall observe all initial Etiwanda Pipeline-related ground-disturbing activities in and along Etiwanda Avenue. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for National Register of Historic Places

(NRHP) and California Register of Historical Resources (CRHR) eligibility. If monitoring of the initial ground-disturbing activities indicates there is a low potential for encountering intact historic-era infrastructural systems within the Etiwanda Pipeline Area of Potential Effect (APE), monitoring activities may be reduced or halted at the discretion of the Project Archaeologist or Archaeological Monitor.

**EP MM CR-2: Etiwanda Pipeline Inadvertent Discovery.** In the event cultural resources are discovered during construction activities associated with the Etiwanda Pipeline, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards (the “Project Archaeologist”) shall be retained by JCSD to assess the find. Work on other portions of the Etiwanda Pipeline outside of the buffered area may continue during this assessment period. Additionally, the San Manual Band of Mission Indians Cultural Resources Department shall be contacted as detailed in **EP MM TCR-1**, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist makes the initial assessment of the nature of the find, as to provide Tribal input with regards to significance and treatment.

**EP MM CR-3: Etiwanda Pipeline Monitoring and Treatment Plan.** If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the Project Archaeologist shall develop a Monitoring and Treatment Plan, the drafts of which shall be provided to the San Manual Band of Mission Indians Cultural Resources Department for review and comment, as detailed within mitigation measure **EP MM TCR-1**. The Project Archaeologist or Archaeological monitor shall monitor the remainder of the Etiwanda Pipeline project and implement the Plan accordingly.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| <b>6. ENERGY.</b> 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 type="checkbox"/>     | <input checked="" 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"/> |

(Sources: Project Description, WEBB-A, WEBB-B)

**6.a Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

**Water Resiliency Project**

**No Impact.** Adoption of the Water Resiliency Project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. However, future implementation of individual components would require subsequent environmental review for potential energy impacts resulting from construction and operation of proposed facilities.

**Etiwanda Pipeline**

**No Impact.** As an infrastructure project, the majority of impacts would be short-term. As described in the AQ/GHG Analysis (WEBB-A), the Project’s short-term construction would last approximately 22 months. Project construction would require the use of construction equipment for pipeline installation, paving, and trenchless construction operations, as well as construction workers and vendors traveling to and from the Project site. Construction equipment requires diesel as the fuel source and construction worker and vendor trips use both gasoline and diesel fuel. Project-related fuel consumption was estimated and is included in Appendix D – Energy Tables. (WEBB-B.) Construction of the Etiwanda Pipeline is estimated to use approximately 259, 535 gallons of diesel fuel and 14,659 gallons of gasoline. (WEBB-B.)

Fuel consumption from on-site heavy-duty construction equipment and construction would be temporary in nature and uses a limited number of equipment, which would represent a negligible demand on energy resources. Furthermore, there are no unusual Project site characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in other parts of the State.

For these reasons, the Project would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy during Project construction or operation. Impacts are less than significant. No mitigation is required.

**6.b Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

**Water Resiliency Project**

**No Impact.** Adoption of the Water Resiliency Project would not conflict with or obstruct implementation of any state or local plans for renewable energy or energy efficiency. However, future implementation of individual components would require subsequent environmental review for potential energy impacts resulting from construction and operation of proposed facilities.

***Etiwanda Pipeline***

**No Impact.** The Project would not conflict with or obstruct implementation of any state or local plans for renewable energy or energy efficiency because there are no applicable plans for water transmission pipelines. Thus, the Project would not conflict with or obstruct implementation of a state or local plan for renewable energy or energy efficiency. No impact would occur.

**Energy Mitigation Measures**

There are no impacts to energy; therefore, no mitigation is required.



|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|--|------------------------------|-------------------------------------|
| <b>7 GEOLOGY AND SOILS.</b> Would the project :  |                                |  |                              |                                     |
| a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:   |                                |  |                              |                                     |
| i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| ii. Strong seismic ground shaking?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| iii. Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| iv. Landslides?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| b. Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?   | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |
| e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>                | <input type="checkbox"/>     | <input type="checkbox"/>            |

(Sources: Construction General Storm Water Permit Order 2009-0009-DWQ, DOC, JVGP, PaleoWest-B, PDR, Plan RC DEIR, Plan RC NH ECR)

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

Surface rupture refers to the actual “tearing apart” of the ground surface along a fault trace resulting from an earthquake. The effects of surface rupture may be mitigated by placing structures a specific distance from the known fault trace. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) and to issue appropriate maps. Local agencies must then regulate most development projects within the zones.

The Project area is situated in a seismically active region. As is the case for most areas of Southern California, ground-shaking resulting from earthquakes associated with nearby and more distant faults may occur at the Project site. During the life of the Project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking.

There are two Alquist-Priolo Earthquake Fault Zones (AP Zones) in Rancho Cucamonga, the Cucamonga Fault and Etiwanda Avenue Fault AP Zones. Additionally, Rancho Cucamonga has established a special study zone for the Red Hill-Etiwanda Avenue Fault. (Plan RC NH ECR, pp. 11, 14.) There are no mapped AP Zones in Jurupa Valley or Fontana. (JVGP, p. 8-5; DOC.)

### ***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not expose people or structures to potential adverse effects resulting from the rupture of a known earthquake fault. Although Resiliency Project components would be subject to seismic activity from faults located in the vicinity, no habitable structures that would involve exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquake rupture are proposed as part of the Resiliency Project. The Resiliency Project components would be designed to incorporate standard seismic design criteria, including those set forth by the American Water Works Association, JCSD, and CVWD. To identify any site specific geotechnical concerns associated with the Resiliency Project components, mitigation measure **RP MM GEO-1**, which requires geotechnical investigations for Resiliency Project components as part of the design process shall be implemented to reduce impacts to less than significant.

### ***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** The Phase 3 portion of the Recommended Alignment would be the most proximate to the Etiwanda Avenue Fault AP Fault Zone, which is shown on **Figure 12 – Fault Zones**. Although the Pipeline would be subject to seismic activity from faults located in the vicinity, no habitable structures that would involve exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquake rupture are proposed as part of the Project. The Etiwanda Pipeline would be designed to incorporate standard seismic design criteria, including those set forth by the American Water Works Association and JCSD. To identify any site specific geotechnical concerns associated with the Etiwanda Pipeline, mitigation measure **EP MM GEO-1**, which requires geotechnical investigations as part of the design process and incorporation of the recommendations contained in the geotechnical investigations shall be implemented to reduce impacts to less than significant.

### **7.a.(ii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking**

Given the proximity of known faults (**Figure 12**), the Project area is susceptible to potential intense seismic ground shaking. The effects of ground shaking on structures and underground pipelines are difficult to predict, and depend on the intensity of the quake, the distance from the epicenter to the site, the composition of soils and bedrock, construction design, and other physical criteria. Based on these factors, ground shaking may cause no, little, or major structural damage or destruction.

### ***Water Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not result in substantial adverse effects from strong seismic ground shaking. Although the Resiliency Project components would be subject to seismic activity from faults located in the vicinity, no habitable structures that would involve exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquake rupture are proposed. Further, through compliance with the recommendations of the component-specific geotechnical investigations required by mitigation measure **RP MM GEO-1**, hazards associated with strong seismic ground shaking would be reduced to less than significant.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Although the Pipeline would be subject to seismic activity from faults located in the vicinity, no habitable structures that would involve exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving earthquake rupture are proposed. Further, through compliance with the recommendations of the geotechnical investigations required by mitigation measure **EP MM GEO-1**, hazards associated with strong seismic ground shaking would be reduced to less than significant.

**7.a.(iii) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?**

Liquefaction commonly occurs in loose, saturated, sandy sediments that are subjected to ground vibrations greater than 0.2g (g-force). When liquefaction occurs, the sediments involved have a substantial loss of shear strength and behave like a liquid or semi-viscous substance, which can result in structural distress or failure due to ground settlement, a loss of load-bearing capacity in foundation soils, and the buoyant rise of buried structures.

Rancho Cucamonga, Fontana, and Jurupa Valley have areas considered to have low or moderate to high potential for liquefaction. (FFGP DEIR, p. 5.5-5; JVGP p. 5-92; Plan RC NH ECR, pp. 15.) The mapping is broadly based on the known depth to groundwater and soil types.

***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not result in the risk of loss, injury, or death resulting from liquefaction. The Resiliency Project components would likely be located in areas expected to have “low” liquefaction potential (**Figure 13 – Secondary Seismic Hazards**). Nonetheless, component-specific liquefaction hazards would be addressed by the geotechnical investigations required by mitigation measure **RP MM GEO-1**. Through compliance with the recommendations of the component-specific geotechnical investigations, hazards associated with liquefaction would be reduced to less than significant.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Portions of the Recommended and Alternative Alignments of the Etiwanda Pipeline may traverse within or adjacent to areas susceptible to liquefaction. However, through compliance with the recommendations of the geotechnical investigations required by mitigation measure **EP MM GEO-1**, hazards associated with liquefaction would be reduced to less than significant.

**7.a.(iv) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?**

Strong ground motions can result in landslides, rock slides, and rock falls, particularly where saturated ground conditions exist. During an earthquake, groundwater conditions also have an influence in the development of seismically-induced slope failures, as well as landslides and mudflows. Lateral spreading is a type of landslide that can occur on gentle to steep slopes where seismic-induced liquefaction occurs in saturated soils.

***Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not result in the risk of loss, injury, or death involving landslides. Construction of Resiliency Project components would not result in loss, injury, or death because there are no landslide hazard zones in proximity to the likely location of Resiliency Project components. (Plan RC NH ECR, p. 15.) Impacts would be less than significant.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Segments of the Recommended and Alternate Alignments for the Etiwanda Pipeline traverses through or adjacent to areas susceptible to landslide hazards (e.g., Jurupa Mountains, Southridge Village Open Space Reserve). Mitigation measure **EP MM GEO-1**, which requires a site-specific Geotechnical Investigation prior to construction of the proposed Pipeline, would be implemented to assess the geology and soils present, as well as hazards associated with landslides or mudflows. Compliance with construction standards and recommendations from the geotechnical investigation(s) would reduce hazards associated with landslides or mudflows to less than significant.

**7.b Would the Project result in substantial soil erosion or the loss of topsoil?*****Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not result in substantial soil erosion or the loss of topsoil. Grading and excavation associated with construction of Resiliency Project components may lead to localized erosion as wind and water carry loose soils offsite. Compliance with current regulations and implementation of a State-required Storm Water Pollution Prevention Plan (SWPPP) that incorporates effective erosion and sediment control measures would reduce these impacts to less than significant. For any Resiliency Component that does not require preparation of a SWPPP, mitigation measure **RP MM GEO-2**, which requires preparation and implementation of an erosion control plan shall be implemented.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Installation of the proposed Etiwanda Pipeline would not result in changes to existing topography, or require grading. However, excavation of the Pipeline trench may occur during the rainy season and unstable soil conditions and soil erosion may occur. Compliance with current regulations for utility trench excavations and implementation of a SWPPP that incorporates effective erosion and sediment control measures would reduce these impacts to a less than significant level. If any segment of the Etiwanda Pipeline does not require preparation of a SWPPP, mitigation measure **EP MM GEO-2**, which requires preparation and implementation of an erosion control plan shall be implemented.

**7.c Would the Project 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?**

Impacts related to landslide and lateral spreading are addressed in threshold 7.a.iv above; impacts related to liquefaction are addressed in threshold 7.a.iii above. This analysis addresses impacts related to unstable soils, as a result of lateral spreading, subsidence, or collapse.

***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would create a substantial direct or indirect risk to life or property. Depending upon the location of the Resiliency Project components, construction may occur on unstable soils. However, component-specific geological hazards resulting from construction on unstable soils, would be addressed by the component-specific geotechnical investigations required by mitigation measure **RP MM GEO-1**. Compliance with the recommendations contained in the component-specific geotechnical investigations would reduce hazards associated with construction on unstable soils to less than significant.

***Etiwanda Pipeline***

Segments of the Recommended and Alternate Alignments of the Etiwanda Pipeline may traverse unstable soils. However, geological hazards resulting from construction on unstable soils, would be addressed by the geotechnical investigation(s) required by mitigation measure **EP MM GEO-1**. Compliance with the recommendations contained in the geotechnical investigation(s) would reduce hazards associated with construction on unstable soils to less than significant.

**7.d Would the Project 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?**

This question makes specific reference to a definition from the Uniform Building Code (1994), which has been replaced by the California Building Code (2016) and the definition of expansive soil provided in section 1803.5.3. Expansive soils are those that contain a significant amount of clay particles that have a high shrink (dry) and swell (wet) potential. The upward pressures induced by the swelling of expansive soils under moist conditions can damage structures.

***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would create a substantial direct or indirect risk to life or property. Depending upon the location of the Resiliency Project components, construction may occur on expansive soils. However, component-specific geological hazards resulting from construction on expansive soils, would be addressed by the component-specific geotechnical investigation(s) required by mitigation measure **RP MM GEO-1**. Compliance with the recommendations contained in the component-specific geotechnical investigation(s) would reduce hazards associated with construction on expansive soils to less than significant.

***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Portions of the Etiwanda Pipeline alignment may traverse through areas with expansive soils. However, compliance with the recommendations set forth in the geotechnical investigation(s) required by mitigation measure **EP MM GEO-1** would reduce hazards associated with expansive soils to less than significant.

**7.e Would the Project 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?*****Resiliency Project and Etiwanda Pipeline***

**No impact.** Neither the Resiliency Project or Etiwanda Pipeline includes the use of septic tanks or alternative wastewater disposal systems. The Project does not propose to dispose of any wastes by applying to soil. Thus, there would be no impact in terms of having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems.

**7.f Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Paleontological resources include fossils of plant and animal remains from prehistoric eras.

***Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not directly or indirectly destroy a unique paleontological resource or unique geologic feature. As shown on Jurupa Valley General Plan Figure 4-18: *Paleontological Sensitivity in Jurupa Valley*, Jurupa Valley has a low to high potential

of containing paleontological resources. (JVGP, p. 4-36.) According to research performed at the Natural History Museum of Los Angeles County as part of the Rancho Cucamonga General Plan Draft EIR, the bulk of Rancho Cucamonga and its sphere of influence consists of surficial sedimentary or metamorphic rocks that are unlikely to contain significant vertebrate fossils; however, there may be sedimentary deposits at a greater depth. Alluvial deposits extend throughout Rancho Cucamonga. Though shallow excavations in the younger Quaternary alluvium are unlikely to expose significant fossils, deeper excavations that extend into older Quaternary deposits could encounter significant fossils. (RCGP EIR, p. 5.7-20.) Since construction of Resiliency Project components could entail excavations to a depth greater than three feet, mitigation measure **RP MM GEO-3**, which requires paleontological resources assessments and incorporation of any recommendations from said assessments, shall be implemented. With implementation of mitigation measure **RP MM GEO-3**, impacts would be reduced to less than significant.

### ***Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** The Western Science Center (WSC) maintains fossil locality records for the Project area. The WSC does not have any paleontological localities within the Etiwanda Pipeline Recommended Alignment or within a one-mile radius. The WSC notes the paleontological significance of Quaternary alluvial deposits in the region and has numerous localities within similarly mapped alluvial sediments throughout the region. Similar deposits are well documented and known to contain abundant fossil resources including those associated with *Mammuthus columbi* (Columbian mammoth), *Mammut pacificus* (Pacific mastodon), *Smilodon fatalis* (Sabertooth cat), *Equus sp* (Ancient horse), and many other Pleistocene megafauna. (PaleoWest-B, p. 12.) Shallow excavations (less than approximately three feet in depth) along the Recommended and Alternative Alignments are unlikely to yield any significant paleontological resources because younger Quaternary deposits are void of fossils and near surface alluvium is usually too young to contain fossils. Deeper excavations (approximately 3 feet in depth) that may extend down into older Quaternary (Pleistocene) alluvial deposits are more likely to unearth fossil vertebrate remains. Older Quaternary deposits underlying the Recommended and Alternative Alignments are considered to have a high paleontological sensitivity because they have proven to yield significant paleontological resources (i.e., identifiable vertebrate fossils). To reduce potential direct or indirect impacts to a unique paleontological resource, mitigation measures **EP MM GEO-3**, **EP MM GEO-4**, and **EP MM GEO-5** shall be implemented. (PaleoWest-B, pp. 14–16.)

### **Geology and Soils Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts to geology and soils to less than significant.

#### ***Resiliency Project Mitigation Measures***

**RP MM GEO-1: Geotechnical Investigation for Water Resiliency Components.** As part of the design process for any Resiliency Component for which a prior geotechnical report has not been prepared, a geotechnical investigation shall be conducted for such component and a report prepared that contains recommendations for design and construction. The recommendations of the geotechnical investigation(s) shall be incorporated into the final design and construction of the component investigated.

**RP MM GEO-2: Water Resiliency Project Components Erosion Control Plan.** Prior to the construction of any Resiliency Project component that does not require preparation of a Resiliency Project component-specific SWPPP, the agency responsible for such component (JCSD or CVWD) shall cause to be prepared an erosion control plan. The erosion control plan(s) shall identify erosion control BMPs, including but not limited to soils binders, mulching, permanent seeding, sodding, or other BMPs which will provide adequate protection against

wind and water erosion. The erosion control plan may be prepared by the Construction Contractor or designee; however, it must be approved by the agency responsible for such component (JCSD or CVWD) prior to the start of construction. The erosion control plan shall be retained at the construction site and available for inspection upon request.

**RP MM GEO-3: Paleontological Resources Assessment.** To reduce potential impacts to paleontological resources resulting from construction of Resiliency Project components, as part of the design process for any Resiliency Project component for which a previous paleontological resources assessment has not been prepared, the agency responsible for construction of such a Resiliency Project component (JCSD or CVWD) shall prepare, or cause to be prepared, a paleontological resources assessment. The paleontological resources assessment shall be conducted by a professional paleontologist and shall, for each Resiliency Project component being evaluated, identify the geologic units that may be impacted by construction, determine the paleontological sensitivity of the geologic units, assess the potential for impacts to paleontological resources resulting from construction, and provide recommendations to avoid or reduce impacts to scientifically significant paleontological resources as necessary. The recommendations of the paleontological resources assessment shall be implemented during construction.

#### ***Etiwanda Pipeline Mitigation Measures***

**EP MM GEO-1: Geotechnical Investigation for Etiwanda Pipeline.** As part of the design process for each phase of the Etiwanda Pipeline, geotechnical investigations shall be conducted and a report prepared that contains recommendations of design and construction of the Etiwanda Pipeline phase investigated. The recommendation of the geotechnical investigations shall be incorporated into the final design and construction of the Etiwanda Pipeline phase investigated.

**EP MM GEO-2: Etiwanda Pipeline Erosion Control Plan.** Prior to the construction of any portion of the Etiwanda Pipeline for which a SWPPP has not been prepared or is not required, JCSD shall cause to be prepared an erosion control plan. The erosion control plan shall identify erosion control BMPs including but not limited to, soils binders, mulching, permanent seeding, sodding, or other BMPs which will provide adequate protection against wind and water erosion. The erosion control plan may be prepared by the Construction Contractor or designee; however, it must be approved by JCSD prior to the start of construction. The erosion control plan shall be retained at the construction site and available for inspection upon request.

**EP MM GEO-3: Paleontological Resources Workers Environmental Awareness Program (WEAP).** To educate construction crews about the types of paleontological resources that may be encountered along the selected Etiwanda Pipeline Alternate, prior to the start of the construction for each phase of the Etiwanda Pipeline, JCSD shall retain a professional paleontologist (the "Project Paleontologist") to prepare a Paleontological Resources Workers Environmental Awareness Program (WEAP). The Paleontological Resources WEAP shall provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The Project Paleontologist or designee(s) shall present the Paleontological Resources WEAP to the construction contractor and each of the construction crews working on the Etiwanda Pipeline project during a preconstruction meeting. The Paleontological Resources WEAP shall be taped and presented to any construction crew members not present at the preconstruction meeting during which it was initially presented prior to such crew

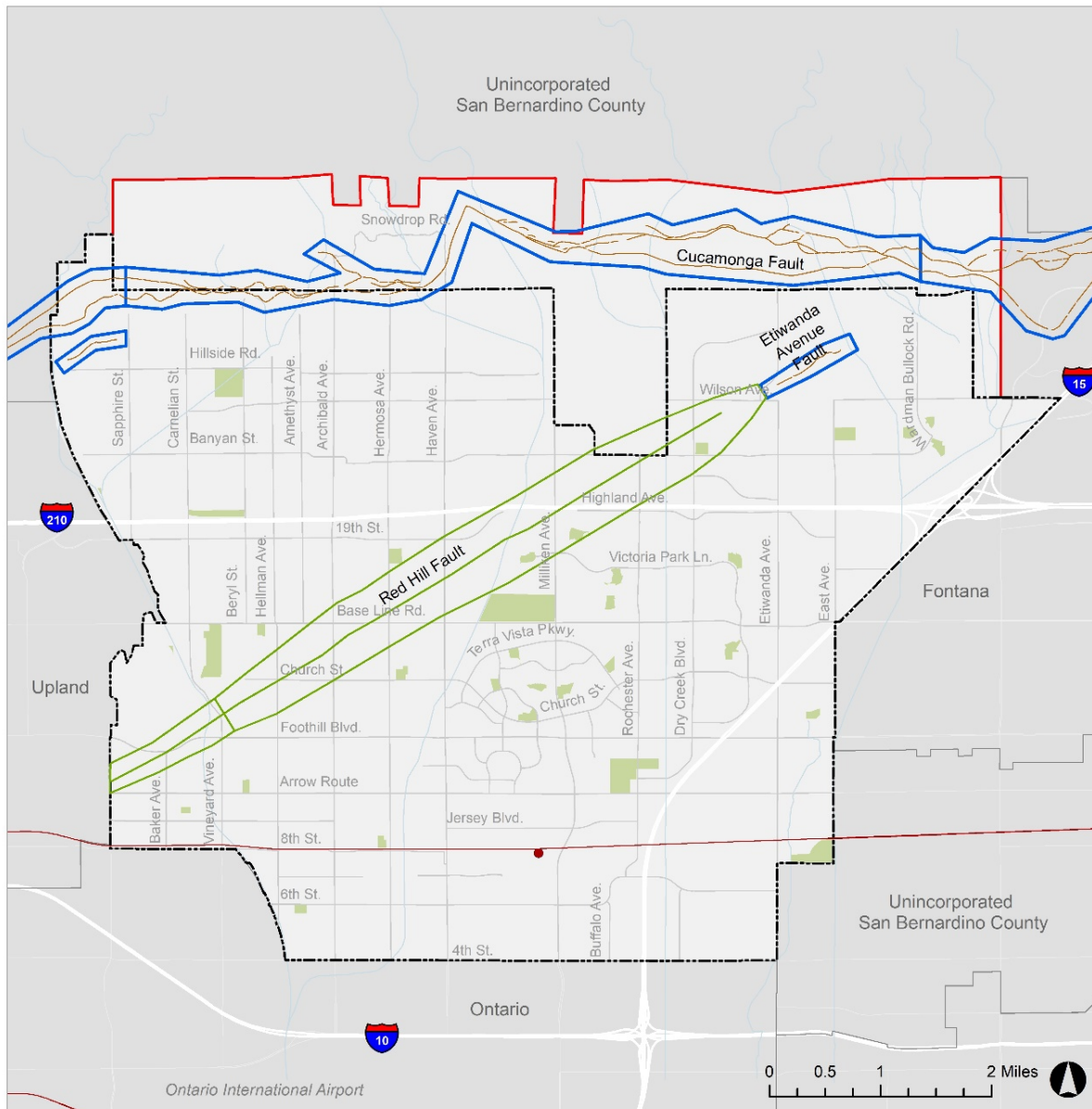
members working on the Etiwanda Pipeline. This training may be conducted concurrent with other preconstruction training (e.g., biological resources, safety).

**EP MM GEO-4: Paleontological Mitigation Monitoring.** Prior to the commencement of ground-disturbing activities for the Etiwanda Pipeline, the Project Paleontologist (retained under **EP MM GEO-3**) shall prepare and implement a Paleontological Resources Mitigation Monitoring Plan (PRMMP) for the Etiwanda Pipeline. The PRMMP shall describe the monitoring required during excavations that extend into older Quaternary (Pleistocene) age sediments, and the location of areas deemed to have a high paleontological resource potential. Paleontological Monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, the Project Paleontologist may recommend monitoring be reduced or ceased entirely.

**EP MM GEO-5: Fossil Discoveries.** In the event that a paleontological resource is discovered, the Project Paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared per **EP MM GEO-4**. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
2. Fossil Preparation and Curation. The PRMMP shall identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossil specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of JCSD.
3. Final Paleontological Mitigation Report. Upon completion of ground disturbing activity (and curation of fossils if necessary) for each phase of the Etiwanda Pipeline, the Project Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.



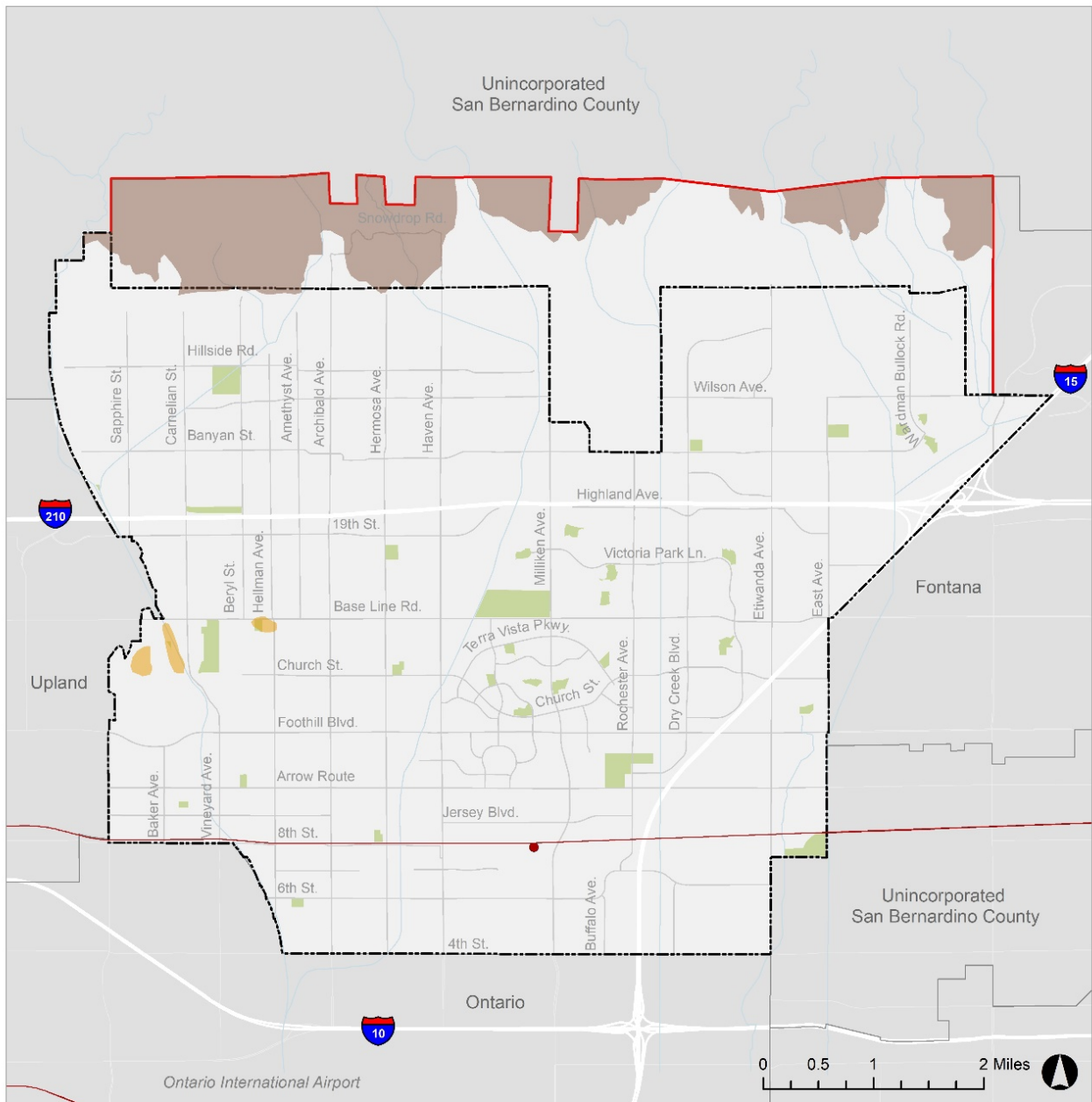


Raimi + Associates, 2020 | Sources: City of Rancho Cucamonga, 2020; SCAG, 2020; County of San Bernardino, 2020; California Geological Survey Alquist-Priolo Fault Hazard Zones, 2020.

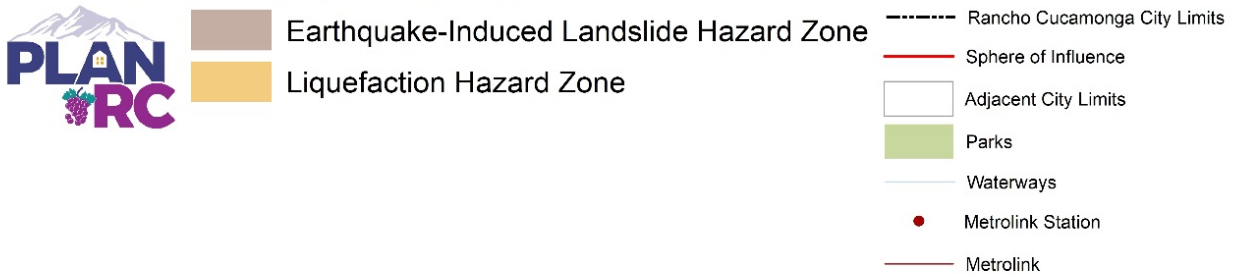


- Alquist Priolo Faults
- Alquist-Priolo Special Study Zone
- Red Hill Fault
- Red Hill Fault Special Study Zone
- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Metrolink Station
- Metrolink

**Figure 12 - Fault Zones**  
Etiwanda Intervalley Water Quality and Water Resiliency Project



Raimi + Associates, 2020 | Sources: City of Rancho Cucamonga, 2020; SCAG, 2020; County of San Bernardino, 2020; California Geological Survey Seismic Hazards Mapping Program, 2020.



**Figure 13 - Secondary Seismic Hazards**  
 Etiwanda Intervalley Water Quality and Water Resiliency Project

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>8. GREENHOUSE GAS EMISSIONS.</b> 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 type="checkbox"/>            | <input checked="" type="checkbox"/> |

(Sources: Project Description, WEBB-A)

**8.a Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Greenhouse gases (GHG) are not presented in pounds per day (lbs/day) like criteria pollutants; they are typically evaluated on an annual basis using the metric system. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD has worked on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tonnes per year of carbon dioxide equivalents (MTCO<sub>2</sub>E/yr) for stationary source projects where SCAQMD is the lead agency. The most recent draft proposal was in September 2010 and included screening significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 MTCO<sub>2</sub>E/yr, respectively. Alternatively, a lead agency has the option to use 3,000 MTCO<sub>2</sub>E/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also recommends amortizing construction emission over an expected project life of 30 years.

**Water Resiliency Project**

**No Impact.** Adoption of the Resiliency Project would not generate GHG emission, directly or indirectly. Future implementation of individual components would require subsequent environmental review for potential GHG impacts resulting from construction and operation of proposed facilities.

**Etiwanda Pipeline**

**Less than significant impact.** The AQ/GHG Analysis prepared for the Project (WEBB-A) estimated GHG emissions from fuel usage by construction equipment and construction-related activities, such as construction worker trips. Model results indicate that an estimated 74.24 MTCO<sub>2</sub>E would occur from Project construction equipment over the course of the estimated construction period, as shown in **Table E – Project Construction Equipment GHG Emissions**.

**Table E – Project Construction Equipment GHG Emissions**

| Year                         | Metric Tons per year (MT/yr) |                       |                        |                         |
|------------------------------|------------------------------|-----------------------|------------------------|-------------------------|
|                              | Total CO <sub>2</sub>        | Total CH <sub>4</sub> | Total N <sub>2</sub> O | Total CO <sub>2</sub> E |
| 2022                         | 1,172.61                     | 0.29                  | 0.01                   | 1,184.42                |
| 2023                         | 1,495.01                     | 0.36                  | 0.00                   | 1,509.78                |
| <b>Total</b>                 | 2,667.62                     | 0.65                  | 0.01                   | 2,694.20                |
| <b>Amortized<sup>1</sup></b> |                              |                       |                        | <b>79.24</b>            |

Long-term emissions, as discussed under the response to threshold 3.b, Air Quality, from the proposed Pipeline would primarily be in the form of mobile source emissions from infrequent maintenance. Therefore, GHG emissions from operation would be negligible.

The proposed Project does not fit into the categories provided (industrial, commercial, and residential) in the draft thresholds from SCAQMD. The Project's emissions were compared to whichever threshold is more conservative. Since the draft SCAQMD GHG threshold Guidance document released in October 2008 recommends that construction emissions be amortized for a project lifetime of 30 years, the total GHG emissions from Project construction were amortized and found to be less than the lowest SCAQMD recommended screening level of 3,000 MTCO<sub>2</sub>E/yr. Due to the lack of adopted emissions thresholds, the estimated amount of emissions from Project construction and negligible operational emissions from infrequent maintenance vehicles, the proposed Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment and impacts would be less than significant. No mitigation is required.

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

There are no applicable plans, policies, or regulations adopted for the purpose of reducing GHG emissions (i.e., Climate Action Plan) for an infrastructure project such as this Project.

***Water Resiliency Project***

**No Impact.** Adoption of the Water Resiliency Project would not conflict with or obstruct applicable plans policies, or regulations adopted for the purpose of reducing GHG emissions. Future implementation of individual components would subject to future applicable regulations once adopted. Therefore, no impact would occur.

***Etiwanda Pipeline***

**No Impact.** Construction and operation of the proposed water transmission Pipeline would not generate GHG emissions such that a significant impact on the environment would result. Refer to the response to threshold 8.a, above. Further, these facilities would not obstruct implementation of any future plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, no impact would occur.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>9. HAZARDS AND HAZARDOUS MATERIALS.</b> Would the project:   |                                |  |                                     |                                     |
| a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input 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"/>            |

(Sources: Cal Fire Cal OES; CalEPA; CCR; CFR; Cortese List; CFR Title 40, Chapter 1, Subchapter I, Part 261; Google Earth; Gov. Code 65962.5, Health and Safety Code; ONT ALUCP; Plan RC NH ECR, Project Description)

**9.a Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Construction activities may include the transport and storage of hazardous materials, such as fuels for the construction equipment. The transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. The Project is not expected to create the need for an excess of hazardous materials being used on-site for construction.

A number of federal and state agencies prescribe strict regulations for the safe transportation of hazardous materials. Hazardous material transport, storage and response to upsets or accidents are primarily subject to federal regulation by the U.S. Department of Transportation, Office of Hazardous Materials Safety in accordance with Title 49 of the Code of Federal Regulations (CFR). California regulations applicable to hazardous material transport, storage, and response to upsets or accidents are codified in Title 13 (Motor Vehicles), Title 8 (Cal/OSHA), Title 22 (Management of Hazardous Waste), Title 26 (Toxics) of the California Code of Regulations (CCR), and the Chapter 6.95 of the Health and Safety Code (Hazardous Materials Release Response Plans and Inventory).

***Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Construction of Resiliency Project components may include the transport and storage of hazardous materials, such as fuels for construction equipment. The transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. Depending on the type of improvements at the LMWTP or RNWTP, groundwater treatment facilities installed at existing JCSD wells, and any water treatment used for new wells, hazardous materials may be stored and used at those locations. Through compliance with applicable federal and state laws related to the transportation, use, storage, and response to upsets or accidents that may involve hazardous materials potential impacts would be less than significant.

***Etiwanda Pipeline***

**Less than significant impact.** Construction of the Etiwanda Pipeline may include the transport and storage of hazardous materials, such as fuels for the construction equipment. The transportation of hazardous materials can result in accidental spills, leaks, toxic releases, fire, or explosion. Pipeline construction is not expected to create the need for an excess amount of hazardous materials being used on-site.

Compliance with applicable federal and state laws related to the transportation, use, storage, and response to upsets or accidents that may involve hazardous materials would reduce the likelihood and severity of upsets and accidents during transit and storage. Additionally, construction and operation of the Etiwanda Pipeline is not expected to result in the use of large amounts of hazardous materials that would create a hazard to the public or environment. Therefore, potential impacts would be less than significant.

**9.b      Would the Project 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?**

***Water Resiliency Project***

**Less than significant with mitigation incorporated.** Adoption of the Resiliency Project would not create a significant hazard to the public or environment resulting from the accidental release of hazardous materials. Because there are known leaking underground storage tanks (USTs) within Rancho Cucamonga, Fontana, and Jurupa Valley, some of which may be in proximity to the ultimate location of Resiliency Project components, mitigation measure **RP MM HAZ-1** shall be implemented. This mitigation measure requires database searches, identification of contaminated sites on the component plans, and identification of measures to minimize the potential for accidental release in the component specifications. Through compliance with mitigation measure **RP MM HAZ-1**, impacts regarding hazards resulting from the accidental release of hazardous materials would be less than significant.

***Etiwanda Pipeline***

**Less than significant impact.** As noted above, construction of the Etiwanda Pipeline may involve the use of hazardous materials during construction and operation, but shall be required to comply with all applicable federal and state laws pertaining to the transport, use, disposal, handling, and storage of hazardous materials. Through compliance with applicable regulations, impacts would be less than significant.

**9.c Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

***Water Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not result in the emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Given the large geographic area in which a Resiliency Project component could be sited, it is likely that a component would be within one-quarter mile of an existing or proposed school. As discussed in responses to threshold 9.a, through compliance with applicable federal and state laws related to the transportation, use, storage, and response to upsets or accidents that may involve hazardous materials potential impacts would be less than significant.

***Etiwanda Pipeline***

**Less than significant impact.** The Recommended and Alternate Alignments are located within one-quarter mile of the following schools: Day Creek Intermediate, Etiwanda Colony Elementary School, Etiwanda High School, Etiwanda Intermediate School, Grapeland Elementary School, and Summit Elementary School.

Construction and installation of the Etiwanda Pipeline would not require atypical chemicals associated with construction methods and equipment. Fuels, lubricants and solvents can be anticipated but would not create a route of hazardous exposure to students at nearby schools because construction activities would be limited to roadways and transient as they progress along the alignment. In addition, the construction of the Etiwanda Pipeline would comply with state and federal regulations governing the use and transport of hazardous materials. Therefore, the proposed Project would not expose nearby schools to hazardous materials, substances, or waste and impacts would be than significant.

**9.d Would the Project 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?**

***Water Resiliency Project and Etiwanda Pipeline***

**No impact.** There are no sites on the list compiled pursuant to Government Code Section 65962.5 within the general area in which the Resiliency Project components would be located or along or adjacent to the Recommended or Alternate alignments for the Etiwanda Pipeline.

**9.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 for people residing or working in the project area?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** The Policy Boundaries of the Ontario International Airport Influence Area extends north into the southern portion of Rancho Cucamonga (**Figure 14 – Ontario ALUCP**). Depending on the final locations selected, some Resiliency Project components may be within these Policy Boundaries. (ONT ALUCP, Map 2-1.) The Safety Zones of the Ontario Airport Land Use Compatibility Plan are south of Rancho Cucamonga; thus, it is not likely that Resiliency Project components would be located within a Safety Zone. (ONT ALUCP, Map 2-2.) Therefore, impacts regarding safety hazards for people residing or working in the Project area would be less than significant.

**9.f Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

Eastvale, Fontana, Jurupa Valley, and Rancho Cucamonga have Emergency Operations Plans (EOPs) that addresses how each city would respond to emergency situations ranging from minor incidents to large-scale disasters. The plan addresses four primary phases of emergency operation including Preparedness, Response, Recovery, and Mitigation. (Eastvale EOP, p. 4; FFGP DEIR, Appendix F, p. 157; JVGP, p. 8-21; Plan RC NH ECR, p. 31.) These plans do not identify evacuation routes. Rancho Cucamonga has identified major roadways as potential evacuation routes and as part of its Plan RC General Plan Update is proposing to increase the number of identified roadways. (Ready RC, pp. 3, 18, 19; Plan RC NH ECR, p. 33.)

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** Adoption of the Resiliency Project would not impair implementation of, or physically interfere with any adopted emergency plans. Construction of Resiliency Project components, including the Etiwanda Pipeline, may cause traffic delays if lane closures are required, which may affect response times for emergency vehicles or travel time for evacuees. As part of the final design for the any Resiliency Project component, including the Etiwanda Pipeline, traffic control plans shall be prepared and shall be approved by each jurisdiction for which a lane closure or encroachment permit is required. The traffic control plans shall provide adequate pass-by features for emergency vehicles. Through compliance with required traffic control plans and encroachment permits, the details of which would be dictated by each affected city and county, the ability of emergency vehicles to pass by the construction site(s) safely, efficiently and quickly would not be limited. Therefore, impacts related to the interference with an adopted emergency response plan or emergency evacuation plan would be less than significant.

**9.g Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?**

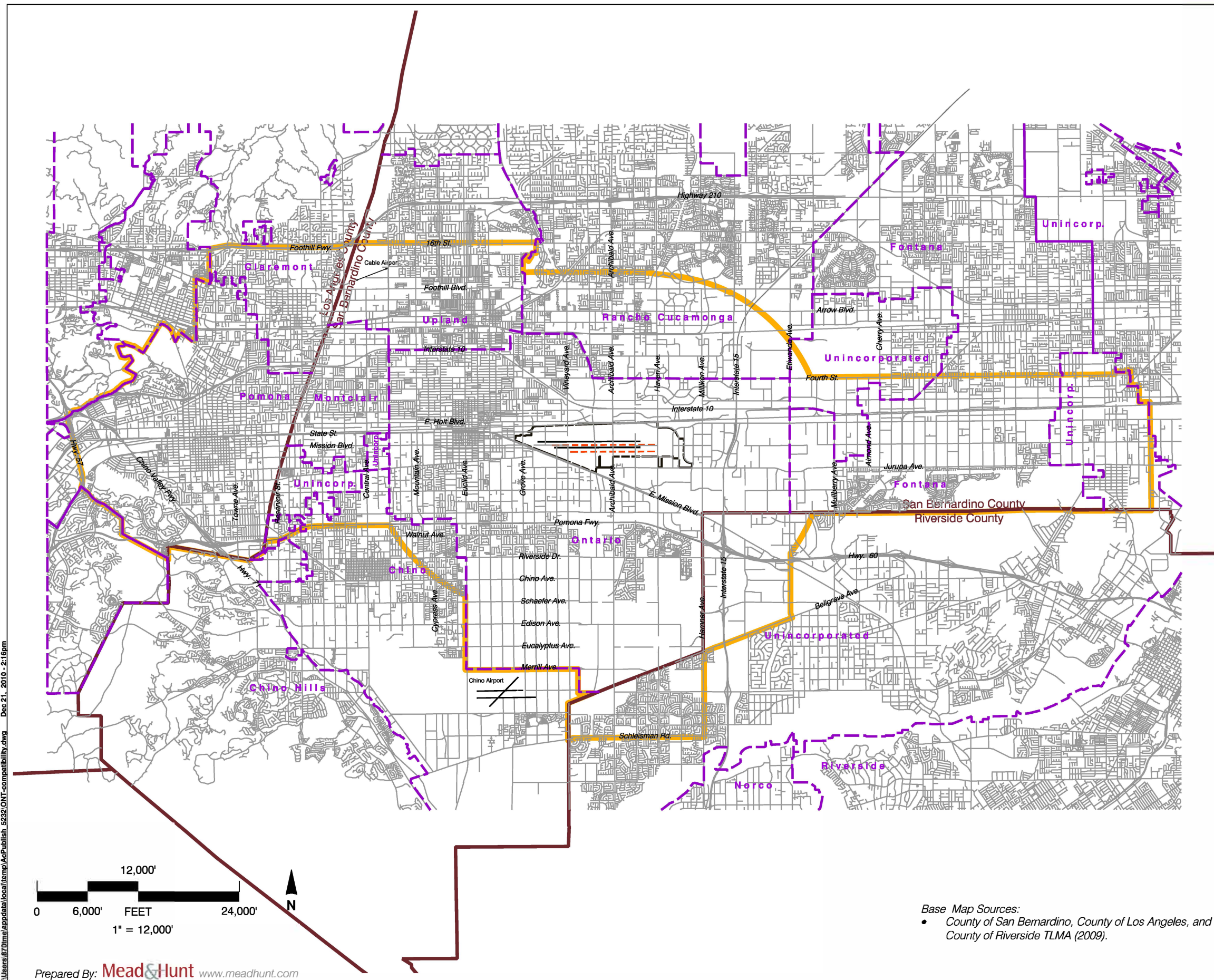
***Water Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not expose people or structures to wildland fires. As discussed in threshold 20, Wildfire, the only Resiliency Project component within a very high fire severity zone (VHFHSZ) are the LMWTP and RNWTP (**Figure 15 – Fire Hazard Severity Zones**). Improvements to these WTPs proposed by the Resiliency Project may result in the installation of new facilities. The WTP's existing procedures for fuel abatement and fire suppression would limit the risk of wildland fires. Additionally, the Resiliency Project does not include the construction of residential structures that would expose people or structures to a significant risk from wildland fires. Therefore, impacts would be than significant.

***Etiwanda Pipeline***

**Less than significant impact.** The Etiwanda Pipeline would be located underground and as such would not expose people or structures to a significant level of risk from wildland fires.





**LEGEND**

**Boundary Lines**

- Airport Property Line
- County Line
- City Limits
- Street
- Existing Runway } Runway 8L-26R
- Future Runway } Runway 8R-26L
- FAA Height Notification Area

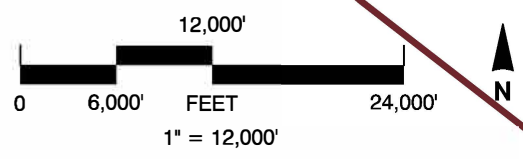
**Policy Boundaries**

- Airport Influence Area <sup>1</sup>

**NOTES**

1. Airport influence area includes the areas in which current or future airport-related safety, noise, airspace protection, or overflight factors may significantly affect land uses or necessitate restrictions on those uses.

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Prepared By: **Mead&Hunt** www.meadhunt.com

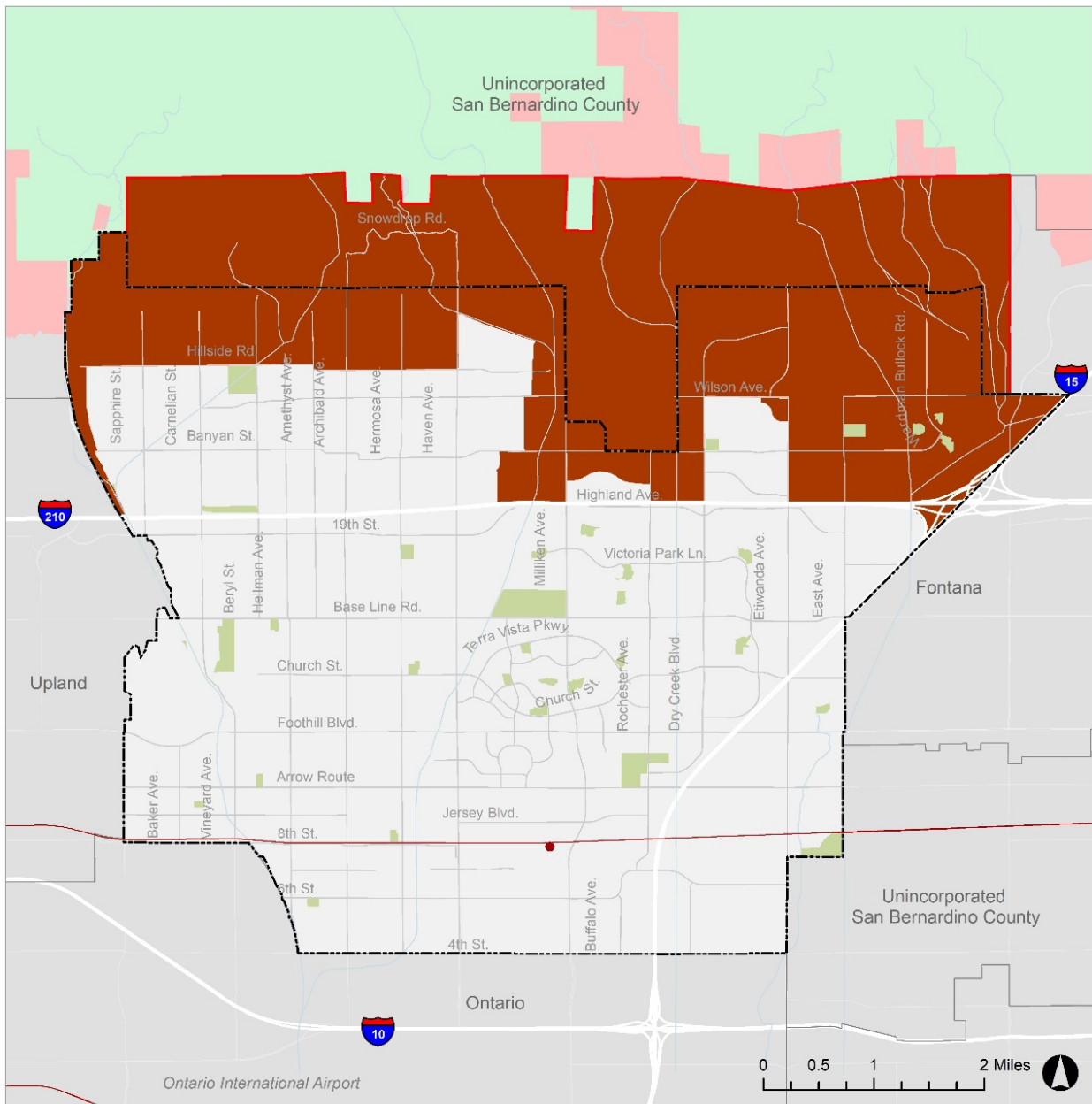


**LA/Ontario International Airport  
Land Use Compatibility Plan**

Base Map Sources:  
 • County of San Bernardino, County of Los Angeles, and County of Riverside TLMA (2009).

Map 2-1

**Figure 14 - Ontario ALUCP**



Raimi + Associates, 2020 | Sources: City of Rancho Cucamonga, 2020; SCAG, 2020; County of San Bernardino, 2020; Cal FIRE, 2007



### Fire Hazard Severity Zones

- Rancho Cucamonga Wildland Urban Interface Fire Area
- Cal FIRE State Responsibility Areas
- National Forest (Federal Responsibility Area)

- Rancho Cucamonga City Limits
- Sphere of Influence
- Adjacent City Limits
- Parks
- Waterways
- Metrolink Station
- Metrolink

**Figure 15 - Fire Hazard Severity Zones**  
 Etiwanda Intervalley Water Quality and Water Resiliency Project

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| <b>10. HYDROLOGY AND WATER QUALITY. Would the project:</b>   |                                |  |                                     |                          |
| a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater 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: | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i. result in substantial erosion or siltation on- or off-site;   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or                             | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iv. impede or redirect flood flows?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

(Sources: Basin Plan, CBWM(a), CBWB(b), IEBL, Order 2009-0009-DWQ, Order No. R8-2015-0004, WQ 2014-0194-DWQ, WEI(a), WEI(b))

**10.a Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

Water quality standards are the combination of water quality objectives (i.e. numeric and narrative thresholds) that are established to protect the beneficial uses of downstream receiving waters.

**Resiliency Project**

**Less than significant impact.** The Resiliency Project involves the handling of local groundwater and imported SWP water for the purpose of increasing drinking water supplies for JCSD and CVWD. Construction and operation of the facilities identified in the Resiliency Project would involve actions that have the potential to degrade surface or groundwater quality. Construction of Resiliency Project facilities could result in degraded downstream water quality as a result of polluted stormwater runoff coming from the various construction sites. Construction-phase stormwater quality is regulated by a statewide National Pollutant Discharge Elimination System (NPDES) permit with waste discharge requirements (the Construction General Permit, Order 2009-0009-DWQ, NPDES No. CAS000002). The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD) and implemented onsite by a Qualified SWPPP Practitioner (QSP) for the duration of construction.

Operation of the Project facilities may impact downstream water quality during the periodic release of fresh water that can occur during Project installation and ongoing operation and maintenance activities, including,

but not limited to, system failures, pressure releases, and pipeline/tank flushing and dewatering. These types of operational releases of fresh water are regulated by NPDES permits, for example, Order No. R8-2015-0004 (NPDES No. CAG998001), General Waste Discharge Requirements for Insignificant Threat Discharges to Surface Waters and Order WQ 2014-0194-DWQ (NPDES No. CAG140001), Drinking Water System Discharges to Waters of the United States.

In addition, the operation of water treatment facilities can result in waste byproducts such as brine waste, that have the potential for degrading downstream water quality if not disposed of properly. Brine waste is disposed using specific methods, such as the Inland Empire Brine Line (IEBL). The IEBL allows authorized entities to convey concentrated brine and industrial waste to Orange County Sanitation District for treatment and then discharge into the Pacific Ocean.

Water quality standards for each surface and ground water bodies include the beneficial uses and the water quality objectives that have been established by the California Regional Water Quality Control Board – Santa Ana Region (RWQCB). These standards are provided in the RWQCB's Water Quality Control Plan (aka "Basin Plan"). The Project is ultimately tributary to the middle Santa Ana River and Prado Basin, as well as the Chino Groundwater Basin, all of which have assigned beneficial uses and water quality objectives. Through compliance with existing water quality regulations including NPDES permits, the Project would not substantially impact the water quality standards for these downstream receiving waters.

Through compliance with existing regulations including proper disposal procedures for treatment byproducts like brine and separate NPDES permit requirements for construction and operation-phase activities, Project impacts to surface and ground water quality resulting from implementation of the Resiliency Project would be less than significant.

### ***Etiwanda Pipeline***

**Less Than Significant Impact.** The Etiwanda Pipeline would convey potable water for domestic purposes. Construction activities associated with the Etiwanda Pipeline have the potential to result in the degradation of downstream water bodies from the release of polluted stormwater runoff from Pipeline construction sites. Further, operation of the Etiwanda Pipeline is likely to include some activities such as line flushing that can discharge water to downstream water bodies. These construction and operational activities are regulated with NPDES permits containing waste discharge requirements for project proponents meet in order to protect downstream water bodies and ensure that surface and groundwater water quality standards are not violated. Construction-phase stormwater quality is regulated by a statewide NPDES permit with waste discharge requirements (the Construction General Permit, Order 2009-0009-DWQ, NPDES No. CAS000002). The Construction General Permit requires the development of a SWPPP by a certified Qualified SWPPP Developer (QSD) and implemented onsite by a Qualified SWPPP Practitioner (QSP) for the duration of construction. During operation of the Etiwanda Pipeline, fresh water may be released periodically. Such releases originating from drinking water pipelines are regulated by Order No. R8-2015-0004 (NPDES No. CAG998001), *General Waste Discharge Requirements for Insignificant Threat Discharges to Surface Waters* and Order WQ 2014-0194-DWQ (NPDES No. CAG140001), *Drinking Water System Discharges to Waters of the United States*. Through compliance with existing regulations to protect surface and groundwater quality, impacts resulting from construction and operation of the Etiwanda Pipeline would be less than significant.

**10.b Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

### **Resiliency Project**

**Less Than Significant Impact.** The Resiliency Project proposes several components including the installation of new production wells for the purpose of producing groundwater for potable uses. Possible well sites are currently based on a 2017 Well Siting Study prepared for CVWD by Wildermuth Environmental ((WEI), included in Appendix C of the PDR). These new wells would be located in the CVWD service area which is in the northern part of the Chino Groundwater Basin and north of the JCSD service area. The Resiliency Project would include securing well sites, assessing ground water quality at each site, and then drilling/equipping the wells for operation. (PDR, p. 7-1.) Some of the new wells would also have aquifer storage and recovery (ASR) capabilities to convey surplus water underground for later use. Each well has an assumed production capacity of 2,500 gpm (4,000 AFY) and would not require any treatment beyond the addition of chlorine for disinfection. (PDR, p. 7-1.) Indeed, the Resiliency Project would not produce 20,000 AFY (i.e., 5 wells x 4,000 AFY); rather, wells would run as needed and typically at no more than 2/3rds capacity or approximately 13,400 AFY (i.e., 5 wells x 4,000 AFY x 2/3).

Water rights to the Chino Basin were adjudicated by the Superior Court of the State of California for the County of San Bernardino on January 27, 1978 (Judgment).<sup>14</sup> JCSD and CVWD are Parties to the Judgment and members of the appropriative pool and therefore have production rights to the Chino Basin groundwater. The principal function of the Judgment is to control the use of the water source in order to ensure the source is utilized in an optimum manner. The provisions of the Judgment and the monitoring of the basin are carried out by the court-appointed Chino Basin Watermaster (Watermaster or CBWM). The primary management plan for the Chino Basin is the Optimum Basin Management Program or OBMP, originally prepared in 1999 and updated in 2020 with a Storage Management Plan that describes how the basin can be managed for the next 20 years. Because the Chino Basin is adjudicated, a Groundwater Sustainability Plan (GSP) pursuant to the Sustainable Groundwater Management Act of 2014 or similar mechanism is not required and management of the basin is done by the Watermaster and the OBMP.

As of July 1, 2018, the Chino Groundwater Basin has an estimated 12.6 million AF of total water in storage and an unused storage capacity of approximately 1 million AF (WEI(a), p.6-15). The Safe Yield of the Chino Basin has been set by the court at 131,000 AFY for the period of July 1, 2020 to June 30, 2030. (CBWM(a), p. 2 of 15.) JCSD's and CVWD's annual production rights are currently 19,547.9 AF and 7,517.1 AF, respectively (CBWM(b), p. 10.1). JCSD has an additional 31,861.3 AF in a groundwater storage account and CVWD has 16,072.4 AF in storage (CBWM(b), p. 11.1). JCSD and CVWD produced approximately 11,305 AF and 5,920.6 AF from the Chino Basin in calendar year 2020, respectively. (JCSD UWMP, pp. 6-11 and CBWM(b), p. 10.1) CVWD also produced 17,394.8 AF in FY 2019/2020 from the Chino Basin as part of a conjunctive use program. (CBWM(b), p. 20.1.) Pursuant to the Judgment, JCSD and CVWD can pump in excess of their rights with payment of a replenishment fee. Therefore, JCSD could have produced at least 8,243 AF more to reach its annual production right in addition to accessing the water held in its storage account, as well as pumping in excess of the District's rights with payment of a replenishment fee. CVWD also could have produced 1,596.5 AF more in addition to using the water held in storage and pumping in excess of rights with payment of a replenishment fee. Therefore, adding new wells in the Chino Basin for JCSD and/or CVWD is within their current rights. Although groundwater production inherently results in a decrease of groundwater supply, additional wells for JCSD and CVWD are permitted in order to meet the needs of customers and groundwater production by the Parties is limited by the rules and regulations of the Judgment.

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<sup>14</sup> The 1978 Judgment, the 2012 Restated Judgment, and additional amendments to the Judgment can be found online at <http://www.cbwm.org/pages/legal/>

The Project would facilitate more recharge because some of the new wells would also have ASR capabilities to convey surplus water underground for later use. Groundwater recharge is a key component of the management activities of the Watermaster, and recharge with SWP water is permitted and planned for in the Chino Basin. (WEI(b), p. 3-10.) The Project does not include new and large impervious surfaces that would potentially impede the existing potential for groundwater recharge.

Because JCSD and CVWD have the legal authority to install groundwater production wells as needed to meet the needs of its customers, and the Resiliency Project includes ASR capability to recharge the groundwater basin with surplus imported water, and the Chino Basin contains a significant amount of water - the production of which is limited by the rules and regulations of the Judgment and monitored by the Watermaster, compliance with existing regulations would ensure Resiliency Project impacts on groundwater supplies, recharge, and groundwater management would be less than significant.

### ***Etiwanda Pipeline***

The Chino Groundwater Basin is adjudicated and managed according to a court Judgment by the court-appointed Watermaster and the OBMP that is approved by the court.<sup>15</sup> JCSD and CVWD are Parties to the Judgment and therefore have rights to the Chino Basin Groundwater. The Etiwanda Pipeline project would convey a combination of potable Chino Basin groundwater and imported water and would not result in the depletion of groundwater supplies in and of itself. Nor would the Pipeline interfere with groundwater recharge due to the limited impervious footprint of the Pipeline and the alignment being mostly within existing paved and impervious roadways. Therefore, installation and operation of the Pipeline would not substantially interfere with groundwater management activities and impacts are less than significant.

- 10.c.i. Would the Project 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 result in substantial erosion or siltation on-or-off-site?**
- 10.c.ii. Would the Project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or-off-site?**
- 10.c.iii. Would the Project 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 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?**
- 10.c.iv. Would the Project 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 create or contribute runoff water which would impede or redirect flood flows?**

### ***Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not alter the existing drainage patterns of the Project Area. The Resiliency Project does not include any component that would alter the course of a

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<sup>15</sup> The 1978 Judgment, the 2012 Judgment, and additional amendments to the Judgment can be found online at <http://www.cbwm.org/pages/legal/>

stream or river. Regarding the potential for substantial erosion, siltation, and polluted runoff, refer to the response to threshold 10.a. Regarding the potential for flooding, refer to the response to threshold 10.d.

Aboveground Resiliency Project components could introduce new impervious surfaces into the Project area; however, these surfaces would not be large. Resiliency Project improvements at the LMWTP, the RNWTP, CVWD's Reservoir 2 site, and JCSD's existing groundwater wells would be constructed on hardpacked dirt and/or surfaces that are currently paved. Since these sites have existing facilities on them, the Resiliency Project improvements would not substantially change the elevation of these sites or otherwise substantially alter the drainage patterns in the Project area. New groundwater wells and storage reservoir(s) would require site preparation that could include grading. Since the specific location of the Resiliency Project wells and storage reservoir(s) are not known at this time the extent of site preparation is also not known. Because the Resiliency Project components would be designed and constructed in compliance with American Water Works Association, JCSD, and CVWD standards and NPDES requirements, drainage impacts would be less than significant.

### ***Etiwanda Pipeline***

**Less than significant impact.** Construction of the Etiwanda Pipeline would occur mostly within road ROWs that are either paved or highly disturbed (either dirt or landscaping) with the exception of the portion of the Pipeline that would be within the SBCFC ROW. Where the pipeline crosses drainages, waterways, or railroad tracks, the Pipeline would be constructed with trenchless methods in order to avoid these resources. Roadways and construction areas would be returned to their original line and grade. With implementation of the SWPPP and dewatering/de minimus permits, as well as Project design to avoid watercourses, the Project would not result in substantial erosion or siltation and impacts would be less than significant.

### **10.d In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to project inundation?**

The Project location is too far inland to be subject to tsunamis and there are no seiche zones in the Project area. FEMA Flood Hazard Zones for the Project area are shown on **Figure 16**.

### ***Water Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not result in the release of pollutants as the result of inundation. The RNWTP is not within a FEMA Flood Hazard Zone or Dam Inundation Zone. The LMWTP and CVWD Reservoir 2C are within a FEMA designated 500-year flood hazard zone but not within a Dam Inundation Zone. (Plan RC NH ECR, p. 20.) Inundation of any resiliency Project component facilities constructed at these locations would pose limited risk of pollutant release because chemicals are stored indoors or are secured outdoors. New Resiliency Project components constructed within a FEMA Flood Hazard or dam inundation zone would be designed to prevent or contain any pollutants released in the event of inundation. Therefore, through existing regulations and project design to adequately secure and store chemicals, impacts from release of pollutants during inundation would be less than significant.

### ***Etiwanda Pipeline***

**Less than significant impact.** Segments of the Recommended and Alternate Alignments are within a FEMA designated 500-year flood hazard zone. Pipeline Alignments along Day Creek are within the Day Creek Dam Inundation Zone. (Plan RC NH ECR, p. 20.) Because the pipeline is buried underground, the risk of pollutant release during inundation is less than significant.

### **10.e Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

As discussed in response to threshold 10.b, because the Chino Basin is adjudicated, a Groundwater Sustainability Plan (GSP) pursuant to the Sustainable Groundwater Management Act of 2014 or similar mechanism is not required and management of the basin is done by the Watermaster and the OBMP.

***Water Resiliency Project***

**Less than significant impact.** Adoption of the Resiliency Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Regarding impacts to the Basin Plan resulting from construction and operation of Water Resiliency Project components, refer to the response to threshold 10.b.

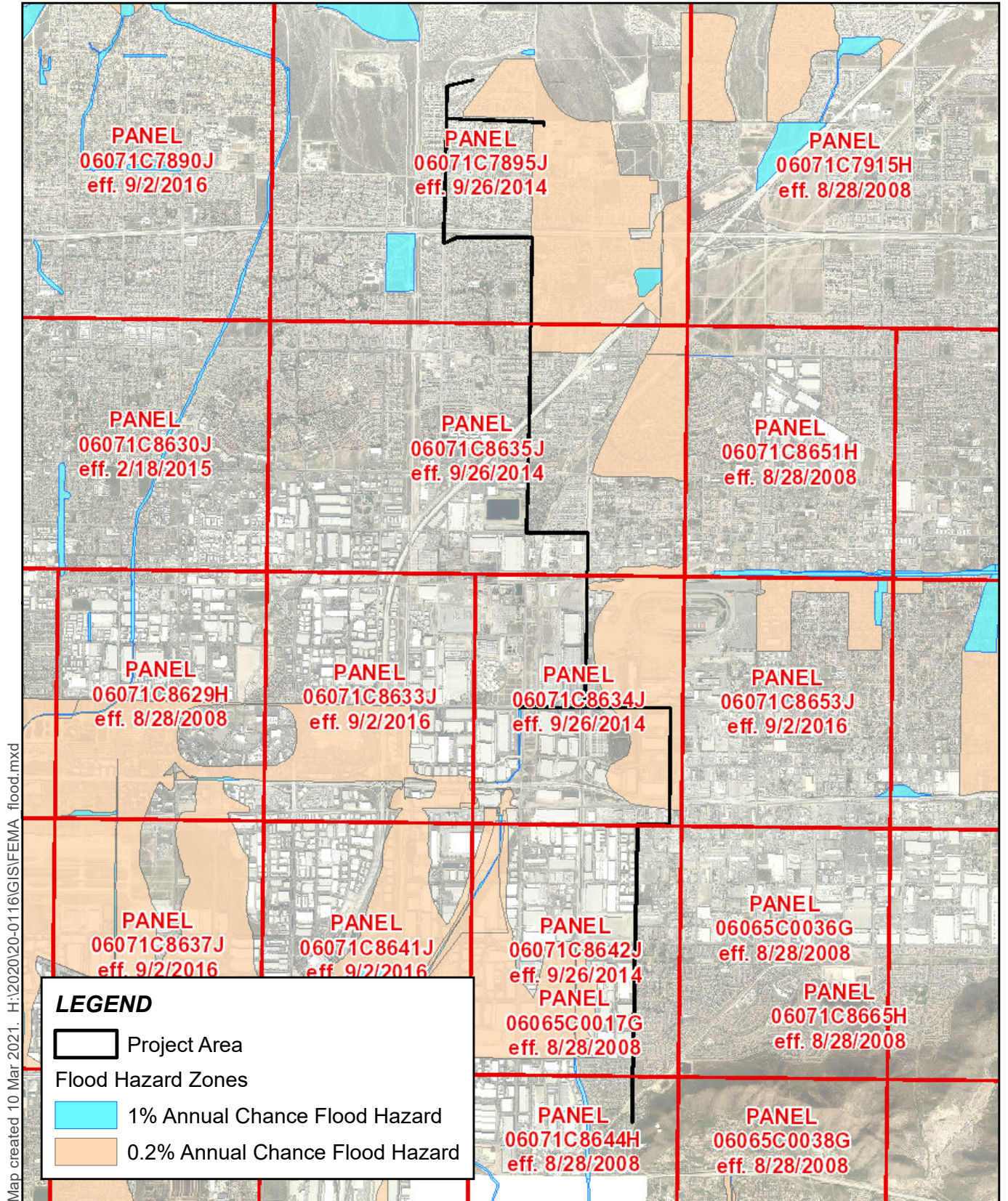
***Etiwanda Pipeline***

**Less than significant impact.** Refer to the response to threshold 10.b, above.

**Hydrology and Water Quality Mitigation Measures**

Impacts regarding hydrology and water quality are less than significant; therefore, no mitigation is required.

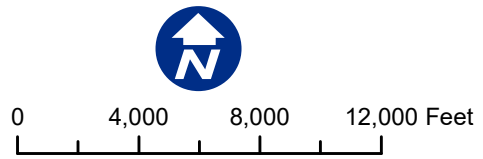




Map created 10 Mar 2021. H:\2020\20-0116\GIS\FEMA\_flood.mxd

Sources: FEMA, 2018; San Bernardino Co. GIMS, 2020.

**Figure 16 - FEMA Flood Hazard Zones**  
Etiwanda Intervalley Water Quality and Water Resiliency Project



|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>11. LAND USE PLANNING.</b> Would the project   |                                |  |                                     |                                     |
| a. Physically divide an established community?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

(Sources: Google Earth; JVGP; RC Plan 2040; PDR: Project Description;)

**11.a Would the Project physically divide an established community?**

**Water Resiliency Project and Etiwanda Pipeline**

**Less than significant impact.** The physical division of an established community typically refers to the construction of a physical feature (such as a wall, interstate highway, or railroad tracks) or the removal of a means of access (such as a local road or bridge) that would impair mobility. Adoption of the Resiliency Project would not physically divide an established community. The Resiliency Project components are water facilities and other than water storage reservoirs are not large enough to constitute a physical barrier. Storage reservoirs are typically sited at higher elevations and not in the middle of an established community. The Etiwanda Pipeline is an underground facility and once construction is complete, any roads in which the Pipeline is installed would be returned to its original condition and access restored. For these reasons impacts regarding physically dividing an established community would be less than significant.

**11.b Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**Water Resiliency Project and Etiwanda Pipeline**

**No impact.** The agencies with jurisdiction over the Project are JCSD and CVWD. Neither of these agencies have land use jurisdiction. Thus, adoption of the Resiliency Project would not conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD’s long-term water supply deficit, comply with current and pending drinking water quality regulations, and develop a domestic water supply and conveyance project that would benefit both JCSD and CVWD. As such the Resiliency Project is consistent with JCSD’s and CVWD’s water planning efforts. The Etiwanda Pipeline is one of the Resiliency Project components. Because the Resiliency Project implements large water supply planning efforts, the Project would not conflict with any JCSD or CVWD plan, policies, or regulations there would be no impact in this regard.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|--|-------------------------------------|--------------------------|
| <b>12. MINERAL RESOURCES.</b> 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 checked="" type="checkbox"/> | <input 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 checked="" type="checkbox"/> | <input type="checkbox"/> |

(Sources: Plan RC DEIR)

**12.a Would the Project 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?**

**12.b Would the Project 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?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** Mineral resources are naturally occurring chemicals, elements, or compounds formed by inorganic processes or organic substances. These resources include bituminous rock, gold, sand, gravel, clay, crushed stone, limestone, diatomite, salt, borate, potash, geothermal, petroleum, and natural gas resources. Construction aggregate, another mineral resource, refers to sand and gravel (natural aggregates) and crushed stone (rock) that are used as Portland cement-concrete (PCC) aggregate, asphaltic-concrete aggregate, road base, railroad ballast, riprap, fill, and the production of other construction materials.

Based on the Mineral Land Classification prepared by the California Department of Conservation, Rancho Cucamonga is mainly within the Claremont-Upland Production-Consumption region, where regionally significant mineral resources have been identified along Day Creek, Deer Creek, Cucamonga Creek, and San Antonio Wash. The northeastern edge of the city is in the San Bernardino Production-Consumption region, where regionally significant mineral resources have been identified along Lytle Creek and the San Sevaine Wash near Rancho Cucamonga. (Plan RC DEIR, p. 5.12-4.)

Adoption of the Resiliency Project would not result in the loss of availability of a regionally or locally-important mineral resource site. Construction of the individual components of the Resiliency Project, including the Etiwanda Pipeline, could result in direct impacts to mineral resources; however, given the small footprint of the Resiliency Project components this loss is not considered substantial. Impacts would be less than significant.

**Mineral Resources Mitigation Measures**

Impacts to mineral resources are less than significant; therefore, no mitigation is required.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>13. NOISE.</b> Would the project result in:  |                                |  |                                     |                                     |
| a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?                   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. For a project located within 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"/> |

(Sources: ECO; FCO; JVMC; RCMC; SBCO)

**13.a Would the Project result in the 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?**

**Water Resiliency Project and Etiwanda Pipeline**

**Less than significant impact.** Temporary increases to ambient noise levels would occur during Project construction. Noise would derive from the use of various types of construction equipment such as compactors, cranes, excavators, generators, drills, and from a worker-related increase in traffic in the vicinity of a Resiliency Project component. Maximum noise levels ( $L_{max}$ ) associated the construction equipment expected to be used ranges from 80 dBA  $L_{max}$  at 50 feet to 90 dBA  $L_{max}$  at 50 feet. Once construction is complete, Resiliency Project components would produce noise from generators, pumps, and traffic associated with maintenance. Sensitive receptors are residences, educational institutions, and public parks adjacent to the location of a Resiliency Project component.

Resiliency Project components are expected to be constructed within Eastvale, Fontana, Jurupa Valley, Rancho Cucamonga, and unincorporated San Bernardino County. Noise standards for these jurisdictions are summarized below.

- Eastvale Code of Ordinances Chapter 8.52 Noise Regulations. According to Section 8.52.020, sound emanating from facilities owned or operated by or for a governmental agency or capital improvement projects of a governmental agency are exempt. (ECO.)
- Fontana Code of Ordinances Article II Noise. Article II does not identify noise from facilities owned or operated by or for a governmental agency or capital improvement projects of a governmental agency as being prohibited within Fontana. (FCO.)
- Jurupa Valley Municipal Code Title 11.05 Noise Regulations. Section 11.05.020(D) states that capital improvement projects of a governmental agency are exempt from the from the provisions of this chapter of the Municipal Code. (JVMC.)
- City of Rancho Cucamonga Municipal Code Section 17.66.050 Noise Standards. Section 17.66.050 states noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, are exempt provided:

- When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday or on any time on Sunday or a national holiday and noise levels do not exceed the noise standard of 65 dBA when measured at the adjacent property line.
- When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line. (RCMC.)
- San Bernardino County Code of Ordinances, Chapter 7 Noise Abatement and Control. Two sections of the San Bernardino County Code of Ordinances exempt Project-generated noise from the County Noise standards. Section 24.0707(e) Public Health, Welfare, and Safety Activities, exempts noise sources associated with construction, maintenance, and repair operations conducted by public agencies and/or utility companies or their contractors which are deemed necessary to serve the best interest of the public and to protect the public health, welfare, and safety, including but not limited to, trash collection, street sweeping, debris and limb removal, removal of downed wires, restoring electrical service, repairing traffic signals, unplugging sewers, vacuuming catch basins, repairing of damaged poles, removing abandoned vehicles, repairing water hydrants and mains, gas lines, oil lines, sewers, storm drains, roads, or sidewalks, and the executing of official duties by public safety personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationery or mobile. Section 24.0708 Other Public Agency Exception states that the provisions of this Chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency. (SBCO.)

Segments of the Recommended and Alternative Alignments for the Etiwanda Pipeline traverse through residential areas and the LMWTP and RNWTP are also in proximity to residences; thus sensitive receptors are expected to be within 250 feet or less of Project construction activities. The only jurisdiction that limits the hours of construction for public projects is Rancho Cucamonga.

Noise from trenchless construction operations are similar to cut-and-cover pipeline construction; however, rather than the noise progressing linearly, it would be confined to entry and exit locations. Thus, noise impacts could last for several weeks rather than a few days at the areas adjacent to tunnel access points.

Underground pipelines do not generate noise above ground. In addition, noise would not be emitted from the above-ground structures (i.e., pressure relief valves/blow-offs) that are needed for the Etiwanda Pipeline. Through compliance with each agencies' noise standards for construction, the proposed Project would not expose people to, or generate noise levels in excess of, standards established in the local noise ordinance and potential impacts would be less than significant.

### **13.b Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?**

Construction projects can generate ground-borne vibration, and in general, demolition of structures preceding construction generates the highest vibrations. However other construction equipment such as vibratory compactors or rollers, pile drivers and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight and pavement conditions.

Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of vibration. Man-made vibration issues are therefore, usually confined to short distances (i.e., 500 feet or less) from the source. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and vibration sensitive equipment. Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the audible and feelable ranges in buildings very close to the site.

Various types of construction equipment have been measured under a wide variety of construction activities with an average of source levels reported in terms of velocity as shown in **Table F – Vibration Source Levels for Construction Equipment**. Although the table gives one level for each piece of equipment, it should be noted that there is a considerable variation in reported ground vibration levels from construction activities. The data provide a reasonable estimate for a wide range of soil conditions.

**Table F – Vibration Source Levels for Construction Equipment<sup>a</sup>**

| Equipment       | PPV at 25 feet<br>(inches/second) | RMS <sup>b</sup> at 25 feet |
|-----------------|-----------------------------------|-----------------------------|
| Large Bulldozer | 0.089                             | 87                          |
| Caisson Drill   | 0.089                             | 87                          |
| Loaded Truck    | 0.076                             | 86                          |
| Small Bulldozer | 0.003                             | 58                          |

Notes:

<sup>a</sup> Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006. Table 12-2

<sup>b</sup> RMS velocity in decibels (VdB) re 1 micro-inch/second.

Regarding impacts from ground-borne vibration, the Federal Transit Administration (FTA) has published guidance in their document titled *Transit Noise and Vibration Impact Assessment*. According to the FTA, although the perceptibility threshold for humans is approximately 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB. If the vibration level at a residence reaches 85 VdB, most people would be strongly annoyed by the vibration.

**Table G– Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration**, displays some of the common human reactions to various levels of groundborne vibration (expressed in PPV) and its effect on buildings.

**Table G – Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration<sup>a</sup>**

| Vibration Level<br>(PPV <sup>b</sup> )<br>(inches/second) | Human Reaction                | Effect on Buildings   |
|---|-------------------------------|---|
| 0.006-0.019   | Threshold of perception       | Vibrations unlikely to cause damage of any type   |
| 0.08  | Vibration readily perceptible | Recommended upper level of vibration to which ruins ancient monuments should be subjected |

**Table G – Typical Human Reaction and Effect on Buildings Due to Groundborne Vibration<sup>a</sup>**

| <b>Vibration Level (PPV<sup>b</sup>) (inches/second)</b> | <b>Human Reaction</b>  | <b>Effect on Buildings</b>   |
|--|--|--|
| 0.10   | Level at which continuous vibration begins to annoy people   | Virtually no risk of “architectural” (i.e., not structural) damage to normal buildings   |
| 0.20   | Vibrations annoying to people in buildings   | Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings                     |
| 0.4-0.6  | Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges | Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage |

Notes:

<sup>a</sup> Source: California Department of Transportation, Compiled from Table 5 (p. 22) and Table 12 (p. 24).

<sup>b</sup> PPV = Peak Particle Velocity.

#### ***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant.** Construction of the Resiliency Project components and the Etiwanda Pipeline would require standard construction equipment and methods that could produce ground-borne vibrations as shown in **Table G** above. Operation of the Resiliency Project components and the Etiwanda Pipeline is not anticipated to result in ground-borne vibrations or ground-borne noise. A majority of the Pipeline alignment is located in a developed, urban area and it is expected that the other Resiliency Project components would also be constructed in an urban area. Based on the information in **Tables F and G**, above, if it is assumed that the distance construction to the nearest sensitive receptor is approximately 50 feet, ground-borne vibration generated during construction may be perceptible, but would not reach the threshold of annoyance. Because Project construction and operation would be consistent with each jurisdiction’s noise ordinances, and construction methods are not anticipated to generate any significant sources of ground-borne vibration above those that would normally be associated with construction, impacts regarding the exposure and generation of excessive ground-borne vibration or ground-borne noise levels would be less than significant.

**13.c 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 expose people residing or working in the project area to excessive noise levels?**

#### ***Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** As discussed in response to threshold 9.e, depending on the final locations some Resiliency Project components may be within the Policy Boundaries of the Ontario International Airport Influence Area. (ONT ALUCP, Map 2-1.) The noise exposure from the Ontario International Airport to people working in the Project area would not change as a result of this Project. The Resiliency Project does not include housing accommodations, therefore, impacts from excessive airport noise are less than significant.

#### **Noise Mitigation Measures**

Noise impacts are less than significant; therefore, no mitigation is required.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                           |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| <b>14. POPULATION AND HOUSING.</b> Would the project:   |                                |  |                              |                                     |
| a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

(Source: JCSD UWMP, PDR, Project Description)

**14.a Would the Project 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)?**

***Water Resiliency Project and Etiwanda Pipeline***

**No Impact.** The proposed Project does not include new residential or commercial development. The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD’s long-term water supply deficit, comply with current and pending drinking water quality regulations, and develop a domestic water supply and conveyance project that will benefit both JCSD and CVWD. Thus, the Resiliency Project is proposed in response to planned and projected growth within JCSD’s and CVWD’s service areas. The Etiwanda Pipeline is one of the components of the Resiliency Project. The Resiliency Project and Etiwanda Pipeline would not extend water availability to an area where it is not currently available. For these reasons, there would be no impacts regarding inducing substantial unplanned population growth within the JCSD and CVWD service areas.

**14.b. Would the Project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

***Water Resiliency Project and Etiwanda Pipeline***

**No Impact.** Construction and operation of the Resiliency Project facilities and Etiwanda Pipeline would not necessitate the demolition or relocation of existing housing units. Since no housing would be displaced, no people would be displaced as a result of Project implementation and no impacts would occur.

**Population and Housing Mitigation Measures**

There are no impacts to population and housing; therefore, no mitigation is required.



|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>15. PUBLIC SERVICES.</b> Would the project:   |                                |  |                                     |                                     |
| Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: |                                |  |                                     |                                     |
| a. Fire protection?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Police protection?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Schools?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d. Parks?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e. Other public facilities?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

(Sources: Project Description)

**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:**

**15.a Fire Protection?**

**15.b Police Protection?**

**Water Resiliency Project**

**Less than significant impact.** Adoption of the Resiliency Project would not result in the need for new or physically altered government facilities or increase the need for fire or police protection services. If construction of Resiliency Project components require a lane closure traffic delays may result, which may affect response times for emergency vehicles. As part of the final design for each Resiliency Project component, traffic control plans shall be prepared and shall be approved by each jurisdiction in which a lane closure is required. The traffic control plans shall provide adequate pass-by features for emergency vehicles. Through compliance with required traffic control plans and encroachment permits, the details of which would be dictated by each affected city and county, impacts would be less than significant.

**Etiwanda Pipeline**

**Less than significant impact.** Once construction is complete, the Etiwanda Pipeline would be underground and would not affect fire or police protection services. Construction of the proposed Pipeline may cause traffic delays if lane closures are required, which may affect response times for emergency vehicles. As part of the final design for the Etiwanda Pipeline, traffic control plans shall be prepared and shall be approved by each jurisdiction through which the Pipeline would align. The traffic control plans shall provide adequate pass-by features for emergency vehicles. Through compliance with required traffic control plans and encroachment permits, the details of which would be dictated by each city and county through which the Pipeline aligns, impacts would be less than significant.

**15.c Schools?**

**15.d Parks?**

**15.e Other Public Facilities?**

***Water Resiliency Project and Etiwanda Pipeline***

**No impact.** As discussed in response to threshold 14.a, the Resiliency Project is proposed in response to planned and projected growth within JCSD's and CVWD's service areas and would not extend water availability to an area where it is not currently available. Thus, the Resiliency Project in and of itself would not result in population increases that would require additional schools, parks, or other public facilities. The Resiliency Project does not propose new schools, parks, or other public facilities other than the components, including the Etiwanda Pipeline, described in the Project Description. As such the proposed Project would not result in or contribute to the need for new or physically altered schools, parks, or other public facilities and there would be no impacts in this regard.

**Public Services Mitigation Measures**

Impacts to public services are less than significant; therefore, no mitigation is required.

|  | <i>Potentially Significant Impact</i> | <i>Less Than Significant with Mitigation Incorporated</i> | <i>Less Than Significant Impact</i> | <i>No Impact</i>                    |
|--|---------------------------------------|---|-------------------------------------|-------------------------------------|
| <b>16. RECREATION.</b>   |                                       |   |                                     |                                     |
| 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"/> |

(Source: PDR, Project Description)

**16a 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?**

***Resiliency Project and Etiwanda Pipeline***

**No impact.** The proposed Project involves enhancing infrastructure resiliency for the JCSD and CVWD and construction of a potable water pipeline that would not cause an increase in the population. Therefore, the proposed Project would not 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 would occur in this regard.

**16.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?**

***Resiliency Project and Etiwanda Pipeline***

**No impact.** The Project does not include new public recreational facilities or require the construction or expansion of recreational facilities. Therefore, there would be no impact in this regard.

**Recreation Mitigation Measures**

There are no impacts to parks or recreational facilities; therefore, no mitigation is required.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>17. TRANSPORTATION.</b> 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. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Substantially increase hazards due to a 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"/>            |

(Sources: Project Description)

**17.a Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

**Water Resiliency Project**

**Less than significant impact.** Adoption of the Resiliency Project would not conflict with any program, plan, ordinance, or policy addressing the circulation system. Construction of certain Resiliency Project components may require lane closures and, depending upon the conditions of the encroachment permits issued by the affected jurisdictions, work may be required to take place at night. Traffic may be temporarily increased along the roadways used to access a specific Resiliency Project component as a result of construction personnel, supply trucks, and hauling of heavy duty equipment. However, this congestion would be short-term and relatively minor. Additionally, as part of the final design of any Resiliency Project component that would require a lane closure, a traffic control plan shall be prepared and approved by the affected jurisdiction. For these reasons, impacts to transit system plans, ordinances, or policies would be less than significant.

**Etiwanda Pipeline**

**Less than significant impact.** Construction of the Etiwanda Pipeline would result in traffic congestion as work progresses along the Recommended or Alternative Alignments. Temporary lane closures as well as construction personnel, material deliveries, and removal of excess soil material are to be expected. The Recommended and Alternative Alignments pass through existing rights-of-way in Jurupa Valley, Fontana, Rancho Cucamonga, and unincorporated San Bernardino County. It may be necessary to close at least one lane of traffic during construction, and, depending upon the conditions of the encroachment permits issued by the various jurisdictions in which the Pipeline traverses, work may be required to take place at night. The determination regarding street closure, lane modification, and/or night work would be made by each jurisdiction as part of the encroachment permit process. The Project would not conflict with an established circulation performance measure because the work would be temporary in nature and would be in compliance with encroachment permits. Additionally, as part of the final design for the Etiwanda Pipeline, traffic control plans shall be prepared and shall be approved by each jurisdiction through which the Pipeline would align, so that construction would be consistent with local traffic ordinances and policies. Therefore, through compliance with the conditions of the required encroachment permits and traffic control plans, impacts would be less than significant.

**17.b Would the Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?**

CEQA Guidelines section 15064.3(a) describes specific considerations for evaluating a project's transportation impacts and states "Generally, vehicle miles traveled is the most appropriate measure of transportation impacts." As stated in CEQA Guidelines section 15064.3(b)(2), "projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact."

***Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** Construction of the Resiliency Project components and the Etiwanda Pipeline would temporarily increase traffic in the area as a result of construction-related vehicles. However, since water facilities are not trip generators, there would be no net increase in vehicle miles traveled (VMTs). Therefore, Project implementation would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts would be less than significant.

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

***Resiliency Project and Etiwanda Pipeline***

**No impact.** The proposed Project would not change roadway configurations. There would be no impacts in this regard.

**17.d Result in inadequate emergency access?**

***Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** The proposed Project would not reconfigure current roadways. Through compliance with the conditions of the required encroachment permits and traffic control plans, access would be maintained throughout the construction period and impacts would be less than significant. Also refer to the response to threshold 9.f.

**Transportation Mitigation Measures**

Transportation impacts are less than significant; therefore, no mitigation is required.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact                |
|---|--------------------------------|--|------------------------------|--------------------------|
| <b>18. TRIBAL CULTURAL RESOURCES.</b> Would the project cause a substantial adverse change in the significance of a tribal cultural resources, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that: |                                |  |                              |                          |
| 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 Resource 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"/> |

(Sources: AB 52 Consultation Process, PaleoWest-A)

**18.a Listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

**18.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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

**Resiliency Project and Etiwanda Pipeline**

**Less than significant with mitigation incorporated.** WEBB Associates, on behalf of JCSD provided “Notification of Tribal Consultation Opportunity” via email on February 22, 2021, pursuant to Assembly Bill 52 (AB 52) to Tribes that have previously requested such a notice from JCSD and to tribes on CVWD’s notification list. Notification was sent to 11 Tribes: Agua Caliente Band of Cahuilla Indians, Gabrielino/Tongva Band of Mission Indians, Gabrielino/Tongva Indians of California, Gabrielino/Tongva Nation, Gabrielino/Tongva Tribe, Gabrieleno Band (Kizh Nation), Morongo Band of Mission Indians, Quechan Tribe of Fort Yuma, San Fernando Band of Mission Indians, San Manuel Band of Mission Indians, and Serrano Nation of Mission Indians. As of October 1, 2021, the Quechan Tribe of Fort Yuma and San Manuel Band of Mission Indians are the only tribes that responded.

A Sacred Lands File (SLF) search was conducted with the California Native American Heritage Commission (NAHC) with positive results and that the Gabrieleno Band of Mission Indians (Kizh Nation) should be contacted for additional information. The Gabrieleno Band (Kizh Nation) did not respond to the “Notification of Tribal Consultation Opportunity” transmitted February 22, 2021. This Tribe did express an interest in consulting with JCSD as a result of the Native American coordination efforts made by PaleoWest during preparation of the cultural resources investigation for the Etiwanda Pipeline Project.

As a result of the AB 52 consultation process, in addition to mitigation measures **RP MM CR-3, EP MM CR-2,** and **EP MM CR-3** (refer to threshold 5, Cultural Resources), mitigation measures **RP MM TCR-1, RP MM TCR-2, EP MM TCR-1,** and **EP MM TCR-2** shall be implemented for each of the Resiliency Project

components and the Etiwanda Pipeline. With implementation of these mitigation measures, impacts with regard to tribal cultural resources would be less than significant.

### **Tribal Cultural Resources Mitigation Measures**

Implementation of the following mitigation measures would reduce impacts to tribal cultural resources to less than significant.

#### ***Resiliency Project Mitigation Measures***

**RP MM TCR-1: Resiliency Project Notification to SMBMI.** The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in

**RP MM CR- 4**, of any pre-contact and/or historic-era cultural resources discovered during implementation of any Resiliency Project component, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

**RP MM TCR-2: Resiliency Project Document Dissemination.** Any and all archaeological/cultural documents created as a part of a Resiliency Project component implementation (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the agency taking the lead for such facility, i.e., JCSD or CVWD) for dissemination to SMBMI. JCSD and/or CVWD (as appropriate) shall, in good faith, consult with SMBMI throughout the construction of all Resiliency Project components.

#### ***Etiwanda Pipeline Mitigation Measures***

**EP MM TCR-1: Etiwanda Pipeline Notification to SMBMI.** The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in

**EP MM CR-1**, of any pre-contact and/or historic-era cultural resources discovered during implementation of the Etiwanda Pipeline, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

**EP MM TCR-2: Etiwanda Pipeline Document Dissemination.** Any and all archaeological/cultural documents created as a part of a Etiwanda Pipeline (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to JCSD for dissemination to SMBMI. JCSD shall, in good faith, consult with SMBMI throughout the construction of the Etiwanda Pipeline.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>19. UTILITIES AND SERVICE SYSTEMS.</b> Would the project:   |                                |  |                                     |                                     |
| a. Require or result in the relocation or construction of new water or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities or the construction of which could cause significant environmental effects? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?                                      | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e. Comply with federal, state, and local management and reduction statutes and regulation related to solid waste?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

(Sources: CVWD UWMP; JCSD UWMP; PDR; Project Description)

**19.a Would the Project require or result in the construction of new water or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities or the construction of which could cause significant environmental effects?**

**Water Resiliency Project**

**Less than significant impact.** Adoption of the Resiliency Project will not require new, expanded, or relocated utilities. The Resiliency Project proposes several components, including groundwater treatment at existing JCSD well sites and new production wells for the purpose of producing groundwater for potable uses. Since specific details regarding the construction, location, design, and operation of the Resiliency Project components are not known at this time it is also unknown what new or expanded utilities may be required. The need for new or expanded utilities will be one of the items considered in the design and siting of Resiliency Project components and will require subsequent environmental review.

**Etiwanda Pipeline**

**Less than significant impact.** Construction of the Etiwanda Pipeline will require water for dust control as well as potable water for on-site crews. JCSD has sufficient water supplies to serve these temporary needs. Construction of the Etiwanda Pipeline will require crossing existing water, sewer, recycled water, gas, electricity, fiber optics, private irrigation lines, channels, and storm drain culverts. (PDR, p. 4-8.) As part of the final design and prior to construction of each phase of the Etiwanda Pipeline, all utilities will be field verified and potholed. If any utility relocations are required, JCSD will coordinate with the affected provider and attempt to relocate the utilities within existing street ROWs. Because there are sufficient water supplies to serve the Project and any utility relocations will be coordinated with the appropriate providers, impacts will be less than significant.



**19.b Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** According to JCSD's 2020 Urban Water Management Plan (UWMP), water supplied to the JCSD service area is entirely from groundwater production from the adjudicated portion of the Chino Groundwater Basin (Chino Basin). This source is sufficient to meet JCSD's current and projected water demands. (JCSD 2020 UWMP, pp. 6-1, 7-9, 7-10, 7-12.) CVWD's 2020 UWMP identifies CVWD's water sources as groundwater pumped from the Chino Basin and Cucamonga Basin; untreated, imported surface water from The Metropolitan Water District of Southern California purchased through Inland Empire Utilities Agency (IEUA) and treated at the CVWD's treatment plant; local surface water from Cucamonga Canyon, Day/East Etiwanda Canyon, and Deer Canyon; and recycled water purchased from IEUA. These sources are sufficient to meet CVWD's current and projected water demands. (CVWD 2020 UWMP, pp. 6-1, 7-9, 7-10.)

**19.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?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** The wastewater treatment providers are JCSD and CVWD. Other than the potential for brine waste that may be produced depending on the groundwater treatment used at JCSD wells, there is no Resiliency Project component that would produce wastewater. JCSD will confirm that adequate capacity is available to treat or dispose of any brine waste produced as part of the Resiliency Project. The Etiwanda Pipeline will not generate wastewater. For these reasons impacts would be less than significant.

**19.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?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** Construction waste would be generated during construction of the Resiliency Project components, some of which may be recycled. Standard conditions in JCSD and CVWD construction specifications, require the contractors to dispose of construction waste in facilities licensed to accept such waste. The materials recovery facilities (MRFs) and landfills closest to JCSD's service area are the Agua Mansa MRF (Riverside), El Sobrante Sanitary Landfill in Corona (estimated close date 2047), and the Badlands Sanitary Landfill in Moreno Valley (estimated close date 2024). The MRFs and landfills closest to CVWD's service area are the West Valley MRF (Fontana), East Valley Recycling Transfer Station (San Bernardino), Inland Regional MRF Transfer Station (Colton), Mid-Valley Sanitary Landfill in Rialto (estimated close date 2033), and the San Timoteo Sanitary Landfill in Redlands (estimated close date 2043.) (Countywide Plan DEIR, p. 5.18-54-5.18-88.)

Construction waste generated in connection with the Resiliency Project components, including the Etiwanda Pipeline, would entail the removal of pavement, which must be disposed of at a legal landfill and may entail demolition of other structures. Construction-generated solid waste would be delivered via private haulers to an MRF or licensed landfill. Given the number of landfills in proximity to JCSD's and CVWD's service areas and estimated closure dates in excess of 20 years, sufficient capacity is expected for the temporary increase of solid waste to be disposed of at nearby landfills. Impacts would be less than significant.

**19.e Would the Project comply with federal, state, and local management and reduction statutes and regulation related to solid waste?**

***Resiliency Project and Etiwanda Pipeline***

**No impact.** The collection and disposal of solid waste would conform to applicable federal, state, and local plans and regulations, including AB 939 (Integrated Waste Management Act) that require local jurisdictions divert at least 50% of all solid waste. The proposed Project would adhere to all federal, state and local regulations related to solid waste during construction and operation. Therefore, the proposed Project would have no impact in terms of complying with federal, state, and local statutes and regulations related to solid waste.

**Utilities and Service Systems Mitigation Measures**

Impacts to utilities and service systems are less than significant; therefore, no mitigation is required.

|  | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|--|-------------------------------------|-------------------------------------|
| <b>20. WILDFIRE.</b> If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:  |                                |  |                                     |                                     |
| a. Substantially impair an adopted emergency response plan or emergency evacuation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?   | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?  | <input type="checkbox"/>       | <input type="checkbox"/>                           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

(Sources: Cal Fire, Plan RC NH ECR, Project Description)

**20.a. Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?**

**Water Resiliency Project**

**Less than significant impact.** Adoption of the Resiliency Project would not substantially impair adopted emergency response or evacuation plans. There are no State Responsibility Areas (SRAs) within areas in which the Resiliency Project components would be constructed. The LMWTP and RNWTP are located within an LRA that is designated by Cal Fire as a VHFHSZ (**Figure 14 – Fire Hazard Severity Zones**). The other Resiliency Project components are not located within an SRA or VHFSZ. Rancho Cucamonga has designated all major roadways within the city as emergency evacuation routes. However, because any improvements to the WTPs would take place at the treatment plant sites and the other Resiliency Project components are not within an SRA or VHFSZ, impacts regarding substantially impairing an adopted emergency response plan or emergency evacuation plan would be less than significant.

**Etiwanda Pipeline**

**Less than significant impact.** The following segments of the Etiwanda Pipeline are within an LRA VHFSZ: the segment of the Recommended Alignment within Wilson Avenue between Day Creek Boulevard and Etiwanda Avenue; the segment of Alternatives A, B, C, D, and F in Etiwanda Avenue commencing approximately 770 feet south of the intersection of Wilson Avenue/Etiwanda Avenue to Wilson Avenue; and the segment of Alternative E, in East Avenue commencing approximately 740 feet south of the intersection of East Avenue/Highland Avenue heading north approximately 5,880 feet to Wilson Avenue. All of the streets in which the Recommended and Alternative Alignments are proposed to be located within Rancho Cucamonga are designated as emergency evaluation routes. Because construction of the Etiwanda Pipeline would entail work within designated evacuation routes, an encroachment permit would be required from each agency with ROW through which the Pipeline would align (i.e., Jurupa Valley, Fontana, County of San Bernardino, Rancho Cucamonga). As part of the design process for the Pipeline, traffic control plans would be prepared to provide adequate pass-by features for emergency and other vehicles. Through compliance with required traffic control plans and

encroachment permits, the details of which would be dictated by each agency through which the pipeline aligns, temporary construction impacts would be reduced to less than significant.

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

***Water Resiliency Project***

**Less than significant impact.** The LMWTP and RNWTP are within an area that is moderately susceptible to landslides and within an LRA VHFSZ. However, improvements at these sites would not change the current level of fire risk that exists within the area or exacerbate landslides. Additionally, the WTPs are not occupied structures. Therefore, impacts regarding the exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant.

***Etiwanda Pipeline***

**Less than significant impact.** The same segments of the Etiwanda Pipeline described in response 20.a. as being within an LRA VHFSZ are also within an area that is moderately susceptible to landslides. However, construction of the Etiwanda Pipeline would not entail grading that would create new or change existing slopes or otherwise change the current level of fire risk that exists within the area. The segments of the proposed Pipeline would be installed underground within and adjacent to paved roadways. Therefore, impacts regarding the exposure of Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be less than significant.

**20.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?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant impact.** The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD's long-term water supply deficit and to develop a domestic water supply and conveyance project that would benefit both JCSD and CVWD. The Etiwanda Pipeline is one of the facilities identified in the Resiliency Project. The Project does not include roads, fire breaks, power lines, or installation of any new utilities. As discussed in response to threshold 20.b, implementation of the Project would not change the current level of fire risk that exists within the area. Impacts would be less than significant.

**20.d Would the Project 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?**

***Water Resiliency Project and Etiwanda Pipeline***

**No Impact.** The proposed Project does not include habitable structures, nor would it substantially alter existing drainage patterns. Therefore, there would be no impacts with regard to exposing people or structures to significant wildfire risks.

|   | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact        | No Impact                |
|---|--------------------------------|--|-------------------------------------|--------------------------|
| <b>21. MANDATORY FINDINGS OF SIGNIFICANCE.</b>  |                                |  |                                     |                          |
| 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 an 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 checked="" type="checkbox"/>                | <input type="checkbox"/>            | <input type="checkbox"/> |

(Source: Above Initial Study, Wood-A, Wood-B, Wood-C, PaleoWest-A)

**21.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 an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Water Resiliency Project**

**Less than significant with mitigation incorporated.** As discussed throughout this Initial Study, adoption of the Resiliency Project would not result in any physical changes to the environment. This Initial Study provides a program-level analysis of the potential environmental impacts that would be expected with implementation of the various components of the Resiliency Project. Because the Resiliency Project is evaluated at a program-level, one or more subsequent CEQA reviews and documents, such as NOEs, Addendum, and/or Subsequent or Supplemental MNDs, potentially with supporting technical studies as needed, would be required prior to construction of any Resiliency Project component.

Potential to Degrade the Quality of Environment: . As indicated in the foregoing analysis, at a program level with implementation of the mitigation measures identified herein, the Resiliency Project does not have the potential to degrade the quality of the environment.

Potential to Impact Biological Resources: As discussed in threshold 4, Biological Resources, with implementation of mitigation measures **RP MM BIO-1 through RP MM BIO-3**, the Resiliency Project would not substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; or threaten to eliminate a plant or animal community.

Potential to Eliminate Important Examples of the Major Periods of California History or Prehistory: As discussed in threshold 5, Cultural Resources, with implementation of mitigation measures **RP MM CR-1 through RP MM CR-3 and RP MM TCR-1 and RP MM TCR-2**, implementation of the Resiliency Project would not eliminate important historical or prehistorical resources.

**Etiwanda Pipeline****Less than significant with mitigation incorporated.**

Potential to Degrade the Quality of Environment: Construction of the Recommended or Alternative Alignments of the Etiwanda Pipeline does not have the potential to degrade the quality of the environment. As indicated in the foregoing analysis, either no impacts, less than significant impacts, or less than significant impacts with mitigation incorporated would occur with respect to each of the environmental issues analyzed in this Initial Study.

Potential to Impact Biological Resources: As discussed in threshold 4, Biological Resources, implementation of the proposed Project would not:

- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels; or
- threaten to eliminate a plant or animal community.

The results of the *Biological Resources Assessment*, the *Focused Surveys for the Burrowing Owl*, and the *Jurisdictional Delineation*, and the analysis in threshold 4.a, indicate that with implementation of mitigation measures **EP MM BIO-1 through EP MM BIO-5**, impacts to biological resources would be less than significant.

Potential to Eliminate Important Examples of the Major Periods of California History or Prehistory: As discussed in threshold 5, Cultural Resources, although there are historic period built-environmental resources within the APE for the Etiwanda Pipeline, impacts to those resources would be avoided because they are either overhead or trenchless construction techniques would be used to go under the resource. Since there is a potential for an inadvertent discovery of historic underground infrastructure in Etiwanda Avenue, in addition to the potential for an inadvertent archaeological resource, mitigation measures **EP MM CR-1 through EP MM CR-3** would be implemented. Regarding Tribal Cultural Resources, based on the outcome of AB 52 consultation, mitigation measures **EP MM TCR-1 and EP MM TCR-2** would be implemented. Through regulatory compliance and implementation of the aforementioned mitigation measures, impacts to historic and archaeological resources would be less than significant.

**21.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)?**

**Water Resiliency Project and Etiwanda Pipeline**

**Less than significant impact.** The Resiliency Project is proposed to be the water supply and conveyance mechanism to satisfy JCSD’s long-term water supply deficit and to develop a drinking water supply and conveyance project that will benefit both JCSD and CVWD. The Resiliency Project identifies a number of components that when constructed will treat and convey local groundwater and imported SWP water for the purpose of increasing drinking water supplies for planned population and development within JCSD’s and CVWD’s service area. The use of locally treated groundwater is preferable over alternative sources to increase water supply reliability and reduce reliance on expensive purchased imported surface water. The Project is consistent with local and regional plans, and the Project’s mitigated air quality emissions do not exceed established thresholds of significance. The Project adheres to all other land use plans and policies with jurisdiction in the Project area, and would not increase VMTs within the Project area. The Project is not considered growth-inducing as defined by *CEQA Guidelines* Section 15126.2(d) and would not induce, either directly or indirectly, population and/or housing growth beyond what is envisioned by the Eastvale General

Plan, Jurupa Valley General Plan, and Rancho Cucamonga General Plan. Therefore, impacts would be less than significant.

**21.c Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

***Water Resiliency Project and Etiwanda Pipeline***

**Less than significant with mitigation incorporated.** Effects on human beings were evaluated as part of the aesthetics, air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, population and housing, and transportation thresholds sections of this initial study and found to be less than significant for each of the above sections with implementation of mitigation measures **RP MM AES-1, RP MM GEO-1, RP MM GEO-2; EP MM GEO-1, EP MM GEO-2, and RP MM HAZ-1**. Based on the analyses and conclusions in this initial study, the proposed Project will not cause substantial adverse effects directly or indirectly to human beings. Therefore, potential direct and indirect impacts on human beings that result from the proposed Project are considered less than significant with mitigation incorporated.

## VII. CEQA PLUS ANALYSIS

### State Water Resources Control Board (State Water Board) Drinking Water State Revolving Fund Program

#### Evaluation for Environmental Review and Federal Coordination

##### 1. Potential Co-Funding Sources

*Will the project potentially be co-funded by any other federal agencies?*

*No – No other federal agencies will provide funding for the project.*

*Yes – The project will potentially receive funding from other federal agency(s). Please list the agency(ies) and explain the funding status.*

##### 2. United States Forest Service, Bureau of Land Management, and Other Federal Land

*Is any portion of the proposed project site located on United States Forest Service (USFS), Bureau of Land Management (BLM), or any other federally managed land?*

*No – The proposed project will not be located on USFS, BLM, or any other federally managed land.*

*Yes – The proposed project will be located on USFS, BLM, or other federally managed land. Please explain, or indicate where more information can be found (e.g., biological report/assessment, CEQA document, etc.), and attach a colored map identifying the project location with respect to the USFS, BLM, or other federal land. Attach a copy of the appropriate authorization/permit for the use of federal land (e.g., USFS Special-Use Authorization, BLM Land Use Permit) or indicate the status of the authorization/permit below.*

##### 3. Environmental Alternative Analysis

*The SRF Programs require an environmental alternative analysis for projects that have a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report.*

*Please attach a copy of the environmental alternative analysis or indicate where it can be found (e.g., Project Technical Report/Engineering Report):*

An engineering evaluation of the alternative alignments for the Etiwanda Pipeline is presented in the *Etiwanda Intervalley Water Quality and Water Resiliency Project Preliminary Design Report*, July 2021. This document is available for review at the Jurupa Community Services District, 11201 Harrel Street, Jurupa Valley, CA.

*Please briefly summarize the direct and indirect environmental impacts associated with each project alternative considered, including a “no project/no action” alternative, and the environmental considerations behind the selected project alternative. Also, include any mitigation measures to reduce potential environmental impacts:*

The Project’s Initial Study evaluates a Recommended Alignment and six Alternative Alignments for the Etiwanda Pipeline. Impacts for all alignments are similar and can be reduced to less than significant levels with implementation of mitigation measures; thus, there is no environmentally superior alternative. The no/project/no action alternative will not result in any environmental impacts; however, it would not achieve the Project’s intent of developing a domestic water supply and conveyance project that will benefit both JCSD and CVWD by



increasing water supply, improving water quality, enhancing infrastructure resiliency, and promoting sustainability.

In addition to compliance with existing regulations, the Project will implement the following mitigation measures. (Note mitigation measures identified as **RP MM** are applicable to the Resiliency Project and mitigation measures identified as **EP MM** are applicable to the Etiwanda Pipeline.)

**RP MM AES-1: Reservoir Siting Review.** To reduce impacts to scenic resources resulting from reservoir construction, as part of the site selection process and prior to future Resiliency Plan storage reservoir approvals, the agency responsible for the future reservoir (JCSD or CVWD) shall determine if the location of the storage reservoir(s) will negatively affect views of the San Gabriel Mountains, San Bernardino Mountains, San Jacinto Mountains, or the Santa Ana Mountains. If it is determined that these views will be affected, the agency responsible for the reservoir, shall implement design measures such as, but not limited to, camouflage paint color, screening, landscaping, and/or partial undergrounding of a portion of the storage reservoir, in such a way as to minimize the view of the storage reservoirs from public vantage points.

**RP MM BIO-1: Resiliency Project Biological Resources Assessments.** To reduce impacts to sensitive biological resources resulting from construction of Resiliency Project components evaluated at a program level in this Initial Study, general biological resources assessments shall be conducted by a qualified biologist retained by the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD). The general biological resources assessments shall be conducted prior to approval of any proposed Resiliency Project component evaluated at a program level in this Initial Study for which a previous general biological resources assessment has not been prepared. The general biological resources assessment(s) shall include an identification of: sensitive plant or animal species that occur or may occur on site, other protected natural resources including sensitive vegetation communities, streams, rivers, vernal pools, and wetlands, potential impacts to these sensitive resources implementation of the Resiliency Project component or components being evaluated, and mitigation measures that must be implemented to reduce potential impacts to levels less than significant. The Resiliency Project component(s) being evaluated per this mitigation measure shall implement the mitigation measures identified in the general biological resources assessment(s).

**RP MM BIO-3: Jurisdictional Resources and Regulatory Permits.** To reduce potential impacts to riparian habitat, streambeds regulated by the California Department of Fish and Wildlife, "waters of the United States," and wetlands regulated by the U.S. Army Corps of Engineers, if the biological resources assessment(s) prepared under mitigation measure **RP MM BIO-1** identifies that riparian habitat, streambeds regulated by the California Department of Fish and Wildlife, and "waters of the U.S.," and wetlands regulated by the U.S. Army Corps of Engineers may be affected by construction of a Resiliency Project component (other than the Etiwanda Pipeline), prior to construction of Resiliency Project component that would traverse land where riparian or wetland habitat occurs or is likely to occur, the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD), shall obtain the necessary authorizations from the regulatory agencies for proposed impacts to jurisdictional resources, as is applicable. These component(s)-specific delineation(s) may be required to determine the limits of the U.S. Army Corps of Engineers (ACOE), Regional Water

Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction. Impacts to jurisdictional waters would require authorization by the corresponding regulatory agency. Authorizations may include, but are not limited to, a Section 404 permit from the ACOE, a Section 401 Water Quality Certification from the RWQCB, and a Section 1602 Streambed Alteration Agreement from CDFW. Resiliency Project component-specific impacts to jurisdictional waters shall be mitigated at the component level through the permitting process in a manner approved by the ACOE, CDFW, and the RWQCB, where applicable.

**EP MM BIO-1: Biological Resources Worker Environmental Awareness Program.** To educate construction crews about sensitive biological resources along the selected Etiwanda Pipeline Alternate, prior to the start of the construction for each phase of the Etiwanda Pipeline a qualified biologist (the “Project Biologist”) shall be retained by JCSD to prepare a Biological Resources Worker Environmental Awareness Program (WEAP) that will outline pertinent biological issues and avoidance measures related to the selected Etiwanda Pipeline alignment (i.e., the Recommend or one of the Alternate Alignments). Such measures will include making sure construction workers and equipment stay out of sensitive vegetation communities. The Project Biologist or designee(s) shall present the Biological Resources WEAP to the construction contractor and each of the construction crews working on the Etiwanda Pipeline project during a preconstruction meeting. The Biological Resources WEAP shall be taped and presented to any construction crew members not present at the preconstruction meeting during which it was initially presented prior to such crew members working on the Etiwanda Pipeline. This training may be conducted concurrent with other preconstruction training (e.g., paleontological resources, safety).

**EP MM BIO-2: Preconstruction Nesting Bird Survey.** To avoid direct and indirect impacts to nesting birds if construction takes place between February 1 and August 31, a qualified biologist (the “Project Biologist”) shall be retained by JCSD and conduct preconstruction nesting bird survey(s) no sooner than seven (7) days prior to initiation of ground disturbing activities, to document the presence or absence of nesting birds within or directly adjacent to (within 100 feet) of the construction zone. If no active nests are found during the survey, construction activities may proceed. The Project Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.

If active nests are found, the nests should be avoided, and a no disturbance buffer zone established and observed until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted, the California Department of Fish and Wildlife (CDFW) generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case-by-case basis by the biological monitor and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the Project Biologist with CDFW concurrence. Any nest permanently vacated for the season will not require monitoring or protection.

**EP MM BIO-3: Preconstruction Burrowing Owl Surveys.** To avoid direct and indirect impacts to burrowing owls the Project Biologist shall conduct take avoidance surveys prior to any vegetation removal or soil disturbance to those portions of the Etiwanda Pipeline Alignment

with suitable habitat as shown on **Figure 3a through Figure 3c – Burrowing Owl Survey Results** of the *JCSD Northern Feeder Pipeline Project Focused Surveys for Burrowing Owl* (Appendix B.2 of the Initial Study). The first survey shall take place no sooner than 14 days prior to initiating ground disturbance and a second survey shall take place within 24 hours prior to ground disturbance. If burrowing owls are present, the Project Biologist shall consult with the California Department of Fish and Wildlife to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls and if avoidance of the area is not feasible, mitigation options may range from passive relocation to habitat replacement.

**MM BIO 4: Preconstruction Surveys for Western Yellow Bat.** To minimize or avoid impacts to the western yellow bat, prior to the disturbance of (e.g., branch trimming or removal) or removal of any trees along the Brine Pipeline alignment, the Project Biologist shall perform a preconstruction survey no sooner than seven (7) days prior to disturbance or removal to determine if bat roosts are present. If bat roosts are present and disturbance or removal cannot be avoided, the Project Biologist shall consult with the California Department of Fish and Wildlife (CDFW) to identify and implement appropriate mitigation measures.

**EP MM BIO-5: Work in Jurisdictional Waters.** The Etiwanda Pipeline will be designed to avoid impacts to jurisdictional areas. If construction activities should disturb anywhere within the jurisdictional limits of a watercourse, the following shall apply as needed: a) notification of a lake or streambed alteration (LSA) shall be given to the California Department of Fish and Wildlife (CDFW); b) a request shall be made to the Santa Ana River Regional Water Quality Control Board for a Clean Water Act Section 401 Water Quality Certification (WQC); and/or c) pre-construction notification to the Los Angeles District of the U.S. Army Corps of Engineers. Trenchless methods of construction are anticipated and should avoid the rainy season if possible. The contractor shall prepare and have on-site during hydraulic directional drilling, a Frac-Out Contingency Plan in the event the pipeline breeches or frac-out occurs. The Frac-Out Contingency Plan shall identify the methods to contain released material into the waterway and identify the agencies that will be contacted should frac-out occurs.

**RP MM CR 1: Resiliency Project Historic Resources Assessment(s).** To reduce potential impacts to historical resources resulting from construction of new Resiliency Project components, prior to approval of any Resiliency Project component, a historical resources assessment shall be conducted by a qualified historian retained by the agency responsible for the Resiliency Project component being proposed (JCSD or CVWD). The historical resources assessment(s) shall determine if historic resources, as defined by CEQA Guidelines Section 15064.5, are present, identify potential impacts to such resources, and set forth measures that shall be implemented to reduce potential impacts to historical resources to less than significant. (The historical resources assessment(s) may be combined with the cultural resources assessment(s) required by **RP MM CR-3**.) The recommendations from the historical resources assessment(s) shall be incorporated into the component's design and construction.

**RP MM CR 2: Historic Resources Assessment(s) JCSD Wells.** To reduce potential impacts to historical resources resulting from ground water treatment facilities that may be constructed on JCSD wells, prior to any ground disturbing activity or construction at any well that is over 45 years old and for which a previous historical resources assessment has not be conducted, a historical resources assessment(s) shall be conducted by a qualified historian retained by

JCSD. The historical resources assessment(s) shall determine if historic resources as defined by CEQA Guidelines Section 15064.5 are present, identify potential impacts to such resources (if present), and set forth measures that shall be implemented to reduce potential impacts to historical resources to less than significant. (The historical resources assessment(s) may be combined with the cultural resources assessment required by **RP MM CR-3**.)

**RP MM CR-3: Resiliency Project Cultural Resources Assessment(s).** To reduce potential impacts to cultural resources resulting from construction of new Resiliency Project components, as part of the design process for any Resiliency Project for which a previous cultural resources assessment has not been prepared, as part of the design process for such components, an archaeological resources assessment shall be conducted by a qualified archaeologist. The archaeological resources assessment(s) shall determine if archaeological resources, as defined by CEQA Guidelines Section 15064.5, are present, identify potential impacts to such resources, and set forth measures to reduce potential impacts to archaeological resources to less than significant. (The archaeological resources assessment(s) may be combined with the historical resources assessments required by **RP MM CR-1** and/or **RP MM CR-2**.) The recommended measures in the cultural resources assessment(s) shall be implemented during construction of the Resiliency Project components.

**EP MM CR-1: Archaeological Monitoring Along Etiwanda Avenue.** To reduce impacts to any extant buried historic period infrastructural remains, prior to any work in or adjacent to Etiwanda Avenue JCSD shall retain a qualified archaeological monitor meeting the Secretary of the Interior Standards (the "Project Archaeologist"). The Project Archaeologist shall observe all initial Etiwanda Pipeline-related ground-disturbing activities in and along Etiwanda Avenue. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) eligibility. If monitoring of the initial ground-disturbing activities indicates there is a low potential for encountering intact historic-era infrastructural systems within the Etiwanda Pipeline Area of Potential Effect (APE), monitoring activities may be reduced or halted at the discretion of the Project Archaeologist or Archaeological Monitor.

**EP MM CR-2: Etiwanda Pipeline Inadvertent Discovery.** To reduce impacts to cultural resources inadvertently discovered during construction of the Etiwanda Pipeline, in the event cultural resources are discovered during construction activities associated with the Etiwanda Pipeline (regardless of the Pipeline alignment or location), all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards ("Project Archaeologist") shall be retained by JCSD to assess the find. Work on other portions of the Etiwanda Pipeline outside of the buffered area may continue during this assessment period. Additionally, the San Manual Band of Mission Indians Cultural Resources Department shall be contacted as detailed in **EP MM TCR-1**, regarding any pre-contact and/or historic-era finds and be provided information after the archaeologist make the initial assessment of the nature of the find, as to provide Tribal input with regards to significance and treatment.

**EP MM CR-3: Etiwanda Pipeline Monitoring and Treatment Plan.** If significant pre-contact and/or historic-era cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the Project Archaeologist shall develop a Monitoring and

Treatment Plan, the drafts of which shall be provided to the San Manuel Band of Mission Indians Cultural Resources Department for review and comment, as detailed within mitigation measure **EP MM TCR-1**. The Project Archaeologist shall monitor the remainder of the Etiwanda Pipeline project and implement the Monitoring and Treatment Plan accordingly.

**RP MM GEO-1: Geotechnical Investigation for Water Resiliency Components.** As part of the design process for any Resiliency Component for which a prior geotechnical report has not been prepared, a geotechnical investigation shall be conducted for such component and a report prepared that contains recommendations for design and construction. The recommendations of the geotechnical investigation shall be incorporated into the final design and construction of the component investigated.

**RP MM GEO-2: Water Resiliency Project Components Erosion Control Plan.** Prior to the construction of any Resiliency Project component that does not require preparation of a Resiliency Project component-specific SWPPP, the agency responsible for such component (JCSD or CVWD), shall cause to be prepared an erosion control plan. The erosion control plan shall identify erosion control BMPs, including but not limited to soils binders, mulching, permanent seeding, sodding, or other BMPs which will provide adequate protection against wind and water erosion. The erosion control plan may be prepared by the Construction Contractor or designee; however, it must be approved by the agency responsible for such component (JCSD or CVWD) prior to the start of construction. The erosion control plan shall be retained at the construction site and available for inspection upon request.

**RP MM GEO-3: Paleontological Resources Assessment.** To reduce potential impacts to paleontological resources resulting from construction of Resiliency Project components, as part of the design process for any Resiliency Project component for which a previous paleontological resources assessment has not been prepared, the agency responsible for construction of such a Resiliency Project component shall prepare, or cause to be prepared, a paleontological resources assessment. The paleontological resources assessment shall be conducted by a professional paleontologist and shall, for each Resiliency Project component being evaluated, identify the geologic units that may be impacted by construction, determine the paleontological sensitivity of the geologic units, assess the potential for impacts to paleontological resources resulting from construction, and provide recommendations to avoid or reduce impacts to scientifically significant paleontological resources as necessary. The recommendations of the paleontological resources assessment shall be implemented during construction.

**EP MM GEO-1: Geotechnical Investigation for Etiwanda Pipeline.** As part of the design process for each phase of the Etiwanda Pipeline, geotechnical investigations shall be conducted and a report prepared that contains recommendations of design and construction of the Etiwanda Pipeline phase investigated. The recommendation of the geotechnical investigations shall be incorporated into the final design and construction of the Etiwanda Pipeline phase investigated.

**EP MM GEO-2: Etiwanda Pipeline Erosion Control Plan.** Prior to the construction of any portion of the Etiwanda Pipeline for which a SWPPP has not been prepared, JCSD shall cause to be prepared an erosion control plan. The erosion control plan shall identify erosion control BMPs, including but not limited to soils binders, mulching, permanent seeding, sodding, or

other BMPs which will provide adequate protection against wind and water erosion. The erosion control plan may be prepared by the Construction Contractor or designee; however, it must be approved by JCSD prior to the start of construction. The erosion control plan shall be retained at the construction site and available for inspection upon request.

**EP MM GEO-4: Paleontological Mitigation Monitoring.** Prior to the commencement of ground-disturbing activities for the Etiwanda Pipeline, the Project Paleontologist retained under **EP MM GEO-3**) shall prepare and implement a Paleontological Resources Mitigation Monitoring Plan (PRMMP) for the Etiwanda Pipeline. The PRMMP shall describe the monitoring required during excavations that extend into older Quaternary (Pleistocene) age sediments, and the location of areas deemed to have a high paleontological resource potential. Paleontological Monitoring shall entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, the Paleontological Monitor may recommend that monitoring be reduced or cease entirely.

**EP MM GEO-5: Fossil Discoveries.** In the event that a paleontological resource is discovered, the Project Paleontologist shall have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared per **EP MM GEO-4**. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the Project Paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
2. Fossil Preparation and Curation. The PRMMP shall identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected shall be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility JCSD.
3. Final Paleontological Mitigation Report. Upon completion of ground disturbing activity (and curation of fossils if necessary) for each phase of the Etiwanda Pipeline, the Project Paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include

discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

**RP MM HAZ-1:** To reduce impacts associated with the accidental release of hazardous materials, as part of the final design for Resiliency Project component for which a previous hazardous materials database search has not been conducted, a database search shall be conducted for the proposed location of said Resiliency Project component to identify the presence of any contaminated sites. If known contaminated sites are present at the proposed location of any Resiliency Project component, the location of the contaminated site shall be identified on the project plans and the project specifications shall identify measures to be taken to minimize the potential for an accidental release.

**RP MM TCR-1: Resiliency Project Notification to SMBMI.** The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, of any pre-contact and/or historic-era cultural resources discovered during implementation of any Resiliency Project component, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of construction or the Resiliency Project component, should SMBMI elect to place a monitor on-site.

**RP MM TCR-2: Resiliency Project Document Dissemination.** Any and all archaeological/cultural documents created as a part of a Resiliency Project component implementation (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the agency taking the lead for such component, (JCSD or CVWD) for dissemination to SMBMI. JCSD and/or CVWD (as appropriate) shall, in good faith, consult with SMBMI throughout the construction of all Resiliency Project components.

**EP MM TCR-1: Etiwanda Pipeline Notification to SMBMI.** The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in **EP MM CR 1**, of any pre-contact and/or historic-era cultural resources discovered during implementation of the Etiwanda Pipeline, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

**EP MM TCR-2: Etiwanda Pipeline Document Dissemination.** Any and all archaeological/cultural documents created as a part of the Etiwanda Pipeline (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to JCSD for dissemination to SMBMI. JCSD shall, in good faith, consult with SMBMI throughout the construction of the Etiwanda Pipeline.

**4. Archaeological and National Historic Preservation Act (AHPA)**

*Will the project cause the irreparable loss or damage to a significant archaeological or historic resource or data through alteration of the terrain resulting from dam or reservoir construction (i.e., flooding, building of access roads, or construction of a reservoir) and require compliance under the AHPA?*

*No – The project construction will not cause an irreparable loss or damage of significant archaeological or historic resources or data through alteration of the terrain resulting from dam or reservoir construction. The project does not require compliance with the AHPA*

Impacts to archaeological and historic resources were evaluated in the *Cultural Resources Investigation in Support of the Jurupa Community District’s Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California*, which is included as Appendix C.1 to this Initial Study.

*Yes – The project construction will cause an irreparable loss or damage of a significant archaeological or historic resources or data through alteration of the terrain resulting from dam or reservoir construction. The project requires compliance with the AHPA. Please explain, or indicate where this information can be found [e.g., Historic Properties Identification Report (HPIR) (see the National Historic Preservation Act below), CEQA document, etc.].*

**5. Bald and Golden Eagle Protection Act (<https://www.fws.gov/birds/policies-andregulations/laws-legislations/bald-and-golden-eagle-protection-act.php>)**

*The purpose of the Bald and Golden Eagle Protection Act is to not agitate the bald and golden eagle to the extent of not 1) Abusing an eagle, 2) Interfering with its substantial lifestyle, including shelter, breeding, feeding, or 3) Nest abandonment.*

*Will the project conflict with the intent of the Bald and Golden Eagle Protection Act?*

*No – The project does not conflict with the intent of the Bald and Golden Eagle Protection Act*

*Yes – The project may not conflict with the intent of the Bald and Golden Eagle Protection Act*

*Explain:*

**6. Clean Air Act**

*Name of Air Basin:* South Coast Air Basin

*Local Air District:* South Coast Air Quality Management District

**Complete the following table:**

| <b>Pollutant</b>        | <b>Federal Status (Attainment, Nonattainment, Maintenance, or Unclassified)<sup>1</sup></b> | <b>Nonattainment Rates (i.e., marginal, moderate, serious, severe, or extreme)<sup>1</sup></b> | <b>Threshold of Significance for Project Air Basin (if applicable)<sup>2</sup></b> | <b>Estimated Construction Emissions (Tons/Year)</b> | <b>Estimated Operation Emissions (Tons/Year)</b> |
|-------------------------|---|--|--|---|--|
| Ozone (O <sub>3</sub> ) | Nonattainment   | Extreme  | 10 tons/year   | N/A   | N/A  |
| Carbon Monoxide (CO)    | Maintenance   | Serious  | 100 tons/year  | 8.4   | N/A  |



| Pollutant   | Federal Status (Attainment, Nonattainment, Maintenance, or Unclassified) <sup>1</sup> | Nonattainment Rates (i.e., marginal, moderate, serious, severe, or extreme) <sup>1</sup> | Threshold of Significance for Project Air Basin (if applicable) <sup>2</sup> | Estimated Construction Emissions (Tons/Year) | Estimated Operation Emissions (Tons/Year) |
|---|---|--|--|--|---|
| Oxides of Nitrogen (NO <sub>x</sub> )                                     | Maintenance   | N/A  | 100 tons/year  | 7.7  | N/A                                       |
| Reactive Organic Gases (ROG)  | N/A   | N/A  | 10 tons/year   | 0.9  | N/A                                       |
| Volatile Organic Compounds (VOC)  | N/A   | N/A  | 10 tons/year   | 0.9  | N/A                                       |
| Lead (Pb)   | Attainment  | N/A  | N/A  | N/A  | N/A                                       |
| Particulate Matter less than 2.5 microns in diameter (PM <sub>2.5</sub> ) | Nonattainment   | Moderate   | 100 tons/year  | 0.4  | N/A                                       |
| Particulate Matter less than 10 microns in diameter (PM <sub>10</sub> )   | Maintenance   | Serious  | 100 tons/year  | 0.5  | N/A                                       |
| Sulfur Dioxide (SO <sub>2</sub> )   | Attainment  | N/A  | N/A  | 0.02   | N/A                                       |

Notes: <sup>1</sup> Federal criteria pollutant status and nonattainment rate, if applicable, per EPA Green Book. Available at <https://www.epa.gov/green-book>.

<sup>2</sup> Federal *de minimis* thresholds per Code of Federal Regulations Title 40, part 93.153. Available at [https://www.ecfr.gov/cgi-bin/text-idx?SID=2f19c374f01438b8787cf80e8c4cea43&mc=true&node=pt40.20.93&rgn=div5#se40.22.93\\_1153](https://www.ecfr.gov/cgi-bin/text-idx?SID=2f19c374f01438b8787cf80e8c4cea43&mc=true&node=pt40.20.93&rgn=div5#se40.22.93_1153).

Is the project subject to a General Conformity determination?

No. The project is in an attainment or unclassified area for all federal criteria pollutants, and/or the project emissions are below the federal *de minimis* levels. The project is not subject to General Conformity determination. Please include supporting documents utilized to compile the data, and any air quality studies/models (e.g., CalEEMod report) that have been completed for the project. Indicate where more information can be found (e.g., CEQA document, etc.):

An air quality assessment was prepared using the California Emissions Estimator Model® (CalEEMod) program to quantify Project-related emissions from the Etiwanda Pipeline. This assessment is provided in Appendix A of this Initial Study.

As shown in the above table, maximum construction-related emissions per year are estimated to be below the federal *de minimis* levels for all constituents. Moreover, operational emissions for the Project will be negligible. Therefore, the Project is not subject to General Conformity determination.

Yes. The project is in a nonattainment area or attainment area subject to maintenance plans for a federal criteria pollutant and project emissions are above the federal *de minimis* levels. The project is subject to General Conformity determination. Please include supporting documents utilized to compile the data, and any air quality studies/models (e.g., CalEEMod report) that have been completed for the project. Indicate where more information can be found (e.g., CEQA document, etc.).

**7. Coastal Barriers Resources Act:**

*Will the project impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters? (Note that since there are currently no Coastal Barrier Resources System in California, projects located in California are not expected to impact the Coastal Barrier Resources System. If there is a special circumstance in which the project may impact a Coastal Barrier Resource System, indicate your reasoning below.)*

*No – The project will not impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets, and near-shore waters,*

*Yes – The project will impact or be located within or near the Coastal Barrier Resources System or its adjacent wetlands, marshes, estuaries, inlets and near-shore waters. Describe the project location with respect to the Coastal Barrier Resources System, or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.). Please provide the status of any consultation with the appropriate Coastal Zone management agency and the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS):*

The Project is not located near a Coastal Barrier Resources System as there are none in the State of California or anywhere along the western coast of the United States. Further, the Project will not involve a special circumstance in which a Coastal Barrier Resource System would be affected.<sup>16</sup>

**8. Coastal Zone Management Act:**

*Is any portion of the project site located within the coastal zone? [NOTE: California's coastal zone generally extends 1,000 yards inland from the mean high tide line, but may extend further if the area is located in significant coastal estuarine, habitat, and/or recreational areas, or to a lesser extent if the area is located in a developed urban area or within a coastal zone of the San Francisco Bay Conservation and Development Commission (BCDC).] (To help determine if the project is located within a coastal zone, please visit <https://coastal.ca.gov/maps/> and/or <https://coast.noaa.gov/czm/media/StateCZBoundaries.pdf>, or contact your local California Coastal Commission office or the city or county in which the project is located.)*

*No – The project is not within the coastal zone.*

*Yes – The project is located within the coastal zone. Attach a copy of the coastal zone permit or coastal exemption, or indicate the status of the coastal zone permit below ([http://www.coastal.ca.gov/enforcement/cdp\\_pamphlet.pdf](http://www.coastal.ca.gov/enforcement/cdp_pamphlet.pdf)). Describe the project location with respect to coastal areas, or indicate where this information can be found (e.g., CEQA document, biological report/assessment, etc.).*

**9. Endangered Species Act (ESA)**

*Required documents: Attach a project-level biological report/assessment prepared by a qualified professional biologist that includes an up-to-date field survey and species list information (from the USFWS, the NMFS, the California Natural Diversity Database, and the California Native Plant Society) analyzing the project's direct and indirect impacts on special status species in the project area. An official species list is required from the USFWS*

<sup>16</sup> Source: <http://www.fws.gov/ecological-services/habitat-conservation/Coastal.html>

and NMFS. Refer to the USFWS Midwest Region website for guidance on preparing a biological report/assessment that meets ESA, Section 7 requirements:

<https://www.fws.gov/Midwest/endangered/section7/index.html>. Refer to the following resources for information regarding possible biological impacts and to obtain official and unofficial species lists for analysis:

<https://ecos.fws.gov/ipac/>, <http://www.rareplants.cnps.org/>, <http://www.nmfs.noaa.gov/pr/consultation/>, and/or <https://www.wildlife.ca.gov/Data/CNDDDB>.

The biological resources assessment, jurisdictional delineation, and focused burrowing owl surveys prepared for the Etiwanda Pipeline are included in Appendices B.1 through B.3.

#### Biological Field Survey Dates

- Field reconnaissance survey of the Etiwanda Pipeline Recommended and Alternative Alignments: August 19, 2020
- Field surveys for the jurisdictional delineation: October 7, 2020 and May 14, 2021
- Focused burrowing owl surveys: April 13 (burrow search only), April 14, May 14, June 4, and July 2, 2021

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

*No – The project will not have an impact on any federally listed species or their critical habitat. Please explain or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.)*

Impacts to biological resources for the Etiwanda Pipeline were evaluated in the *Biological Resources Assessment for JCSN Northern Feeder Pipeline Project*, which is included as Appendix B.1 to this Initial Study.

There is no critical habitat within the biological study area.

Mitigation measures for biological resources are listed in the response to item 3, Environmental Alternatives above.

Please refer to Appendices B.1 through B.3 of this Initial Study for the *Biological Resources Assessment*, focused Burrowing Owl survey report, and jurisdictional delineation report prepared for the Project.

No consultations with any state or federal agencies have been conducted.

*Yes – The project will have an impact on one or more federally listed species or their critical habitat. Please provide information on the federally listed species that could potentially be affected by the project any proposed avoidance and conservation measures. Please indicate below where more information can be found (e.g., biological report/assessment, CEQA document, etc.) If any consultations with state or federal agencies have been conducted for the project, please discuss the consultation efforts.*

#### 10. Environmental Justice

*Does the project involve an activity that is likely to be of particular interest to or have particular impact upon minority, low-income, or indigenous populations?*

No – The project is not likely to be of any particular interest to or have an impact on certain minority, low-income, or indigenous populations. Please explain, or indicate where this information can be found.

Yes – The project is likely to be of particular interest to or have an impact on certain minority, low-income, or indigenous populations.

Check the appropriate box(es):

- The project is likely to affect the health of these populations.
- The project is likely to affect the environmental conditions of these populations.
- The project is likely to present an opportunity to address an existing disproportionate impact of these populations.
- The project is likely to result in the collection of information or data that could be used to assess potential impacts on the health or environmental conditions of these populations.
- The project is likely to affect the availability of information to these populations.
- Other reasons (please describe):

As part of the AB 52 consultation process, the San Manuel Band of Mission Indians requested certain mitigation measures. Those mitigation measures are incorporated as **RP MM TCR-1, RP MM TCR-2, EP MM TCR-1, EP MM TCR-2, and EP MM CR-3.**

A Sacred Lands File (SLF) search was conducted with the California Native American Heritage Commission (NAHC) with positive results and that the Gabrieleno Band of Mission Indians – Kizh Nation should be contacted for additional information. The Gabrieleno Band (Kizh Nation) did not respond to the “Notification of Tribal Consultation Opportunity” transmitted February 22, 2021. This Tribe did express an interest in consulting with JCSD as a result of the Native American coordination efforts made by PaleoWest during preparation of the cultural resources investigation for the Etiwanda Pipeline Project. JCSD will conclude consultation with this Tribe prior to approval of the project.

## 11. Farmland Protection Policy Act

*Is any portion of the project located on prime, unique, or important farmland? (Please refer to the following resources regarding important farmland: <http://maps.conservation.ca.gov/ciff/ciff.html>, and or <http://www.conservation.ca.gov/DLRP/fmmp/Pages/Index.aspx>)*

No – The project is not located on and will not impact prime, unique, or important farmland. Please explain, or indicate where this information can be found (e.g., farmland conversion assessment, CEQA document, etc.).

According to the California Department of Conservation, the general location of the Resiliency Project facilities is located on areas designated as Urban and Built Up Land. The Recommended Alignment for the Etiwanda Pipeline passes through land designated as Farmland of Local Importance, Other Land Urban and Built Up Land. Portions of Alternative Alignment E in East Avenue passes by land designated Grazing Land. (Refer to **Figure 8 – Important Farmland** of this Initial Study.)

Refer to the discussion under threshold 2, Agricultural and Forestry Resources in this Initial Study.

Yes – The project is located on and/or will impact prime, unique, or important farmland. Attach documents/assessments evaluating the conversion of prime/unique farmland and farmland of statewide/local importance to non-agricultural uses, as well as any consultation(s) conducted with relevant agencies. Include

information on the acreage that would be converted from important farmland to other uses. Indicate if any portion of the project boundaries is under a Williamson Act Contract, and specify the amount of acreage affected. Include this information here or indicate it can be found (e.g., farmland conversion assessment, CEQA document, etc.).

## 12. Fish and Wildlife Coordination Act (FWCA)

(<https://www.fws.gov/ecological-services/es-library/pdfs/fwca.pdf>)

Will the project impact any bodies of water by impounding, diverting, deepening a channel, or otherwise controlling/modifying flow (including navigation and drainage)?

No – The project will not impact any bodies of water and will not require compliance with the FWCA.

Yes – The project will impact a body of water and will require compliance with the FWCA. Consultation with the USFWS and the California Department of Fish and Wildlife will be required. Please discuss the potential project impacts to the water body, or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.).

## 13. Flood Plain Management: Executive Orders 11988, 12148 and 13690

(<https://www.fema.gov/executive-order-11988-floodplain-management,Executive>,  
<https://www.archives.gov/federal-register/codification/executive-order/12148.html>, and  
<https://www.whitehouse.gov/the-press-office/2015/01/30/executive-order-establishing-federal-flood-risk-management-standard-and->)

- Required documents: Attach an official floodplain map that includes the project area. Please refer to the Federal Emergency Management Agency (FEMA) Flood Map Service Center for official floodplain maps: <https://msc.fema.gov/portal>. If the project area is unmapped by the FEMA, please explain below.

Is any portion of the project located within a 100-year floodplain as depicted on a floodplain map or otherwise designated by the Federal Emergency Management Agency?

No – The project is not located within a 100-year floodplain.

Yes – The project or a portion of the project is located within a 100-year floodplain. Attach any reports (floodplains/hydrological assessment) completed for the project, and provide information of any consultations completed with relevant agencies. Describe the floodplain and any proposed measures that will be implemented to minimize or avoid redirection of the flood flow by the project, or indicate where this information can be found (e.g., floodplains/hydrological assessment, CEQA document, etc.).

The Recommended and Alternative Alignments for the Etiwanda Pipeline are not within a FEMA designated 1% annual chance flood hazard zone. Segments of the Recommended and Alternative Alignments pass through or adjacent to a FEMA designated 0.2% annual chance flood hazard zone.

A map showing the FEMA Flood Zones is included as **Figure 16** in this Initial Study.

**14. Magnuson-Stevens Fishery Conservation and Management Act:**

Does the project involve any direct or indirect impacts from construction or operational activities or changes in water quality/quantity that may impact Essential Fish Habitat (EFH)? (Please refer to the NMFS Mapper to help determine the project's proximity and potential direct/indirect impacts to EFH, and to obtain a NMFS species list for the project location: [http://www.westcoast.fisheries.noaa.gov/maps\\_data/california\\_species\\_list\\_tools.html](http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html).)

No – The project will not impact EFH. Please explain, or indicate where this information can be found (e.g., biological report/assessment, EFH impact assessment/evaluation, CEQA document, etc.).

As discussed in the *Biological Resources Assessment* prepared for the Project (Appendix B.1 of the Initial Study), no waterways capable of supporting Santa Ana sucker (*Catostomus santaanae*), arroyo chub (*Gila orcutti*), or Santa Ana speckled dace (*rhinichthys osulus*) are present in the Project area. These are the only fish species identified with a potential for occurrence in the literature search. (Wood-A, p. 22.)

Yes – The project may adversely impact EFH and consultation with the NMFS will be required. Describe how EFH could potentially be impacted by this project and any proposed avoidance and conservation measures, or indicate where this information can be found (e.g., biological report/assessment, EFH impact assessment/evaluation, CEQA document, etc.). Please attach an official NMFS species list, obtained through the NMFS Mapper link above, and explain any previous consultations/coordination conducted with the NMFS for the project:

**15. Marine Mammal Protection Act:**

Does the project involve any direct or indirect impacts from construction or operational activities or changes in water quality/quantity that may impact marine mammals?

No – The project will not impact Marine Mammals.

Yes – The project may adversely impact marine mammals and consultation with the NMFS and/or the USFWS will be required. Describe how marine mammals could potentially be impacted by this project and any proposed avoidance and conservation measures, or indicate where this information can be found (e.g., biological report/assessment, marine mammals impact assessment/evaluation, CEQA document, etc.). Please attach an official copy of the USFWS/NMFS species list(s), and explain any previous consultations/coordination conducted with the USFWS/NMFS for the project

**16. Migratory Bird Treaty Act:**

Will the project impact protected migratory birds that are known or have a potential to occur on the project site, or the surrounding area? (Please refer to the USFWS' iPaC tool to request an official list of "birds of conservation concern" with the potential to occur in the project area: <https://ecos.fws.gov/ipac/>)

No – The project will not impact protected migratory birds. Please explain, or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.).

Yes – The project may impact protected migratory birds. Attach documentation (e.g., biological report/assessment) that includes an official USFWS iPaC list of all the "birds of conservation concern" that could occur where the project is located. Discuss the project's direct and indirect impacts (such as noise, vibration impacts, or modification of habitat) to migratory birds, and the mitigation measures that will be implemented to

reduce or eliminate these impacts. Please indicate where more information can be found [e.g., page number(s) of the biological report/assessment, CEQA document, etc.].

The following table identifies the special status birds with potential occurrence in the Project’s BSA.

| Species   | Protective Status<br>(F=Federal;<br>C=California)   | Habitat  | BSA Occurrence<br>Probability   |
|---|---|--|---|
| <b>Birds</b>  |   |  |   |
| <i>Agelaius tricolor</i><br><b>tricolored blackbird</b>         | F: None<br>S: SSC<br>Global rank: G2G3<br>State rank: S1S2<br>Other: MBTA<br>BLM: sensitive | Breeds near fresh water, in emergent wetland with tall, dense cattails or tules, also in thickets of shrubs or tall herbs, including wheat and other crops. Feeds in grassland and cropland habitats.  | <b>Nesting: Absent</b><br>No suitable habitat (fresh water in emergent wetland areas) is present on-site for this species.<br><br><b>Foraging: Absent</b><br>Same as above  |
| <i>Artemisiospiza belli belli</i><br><b>Bell’s sage sparrow</b> | F: None<br>S: None<br>Global rank: G5T2T3<br>State rank: S3<br>Other: MBTA                  | Occupies dry shrublands or grasslands, including creosote and saltbush-dominated desert scrub, yucca, honey mesquite, and greasewood. Uncommon and very local summer resident on grassy slopes and mesas west of the deserts. In mountains of Southern California, they are common among big sagebrush ( <i>Artemisia tridentata</i> ) habitat. In the Mojave they are known to use low scrub habitats including big sagebrush, saltbush, bitterbrush, shadscale, and creosote bush. | <b>Nesting: Absent</b><br>No suitable habitat (shrublands, grasslands, creosote and saltbush dominant desert scrub, yucca, honey mesquite) is present on-site for this species.<br><br><b>Foraging: Absent</b><br>Same as above   |
| <i>Athene cucularia</i><br><b>burrowing owl</b>                 | F: None<br>S: None<br>Global rank: G4<br>State rank: S3<br>Other: MBTA<br>BLM: sensitive    | Occupies ground squirrel burrows in open, dry grasslands, agricultural, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. Nests in burrows, drainpipes, and piles of debris in grasslands, scrub habitats, and agricultural areas.   | <b>Nesting: Low</b><br>Marginally suitable habitat (open non-native grassland areas, fallow agricultural fields) is present within the project alignment for this species. California ground squirrel burrows suitable for burrowing owl use were detected and mapped. Focused surveys negative. Burrowing owls are highly mobile and can colonize or occur onsite at any time. A preconstruction clearance survey is recommended prior to site disturbance in accordance with the survey protocol and guidelines.<br><br><b>Foraging: Low</b><br>Same as above |

| Species   | Protective Status<br>(F=Federal;<br>C=California)   | Habitat  | BSA Occurrence<br>Probability   |
|---|---|--|---|
| <i>Laterallus jamaicensis coturniculus</i><br><b>California black rail</b>          | F: None<br>S: Threatened<br>Global rank: G3G4T1<br>State rank: S1<br>Other: MBTA              | Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Nests on the ground in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation. Species needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | <b>Nesting: Absent</b><br>No suitable habitat (freshwater marshes, wet meadows, saltwater marshes, flooded grassy vegetation) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above. |
| <i>Poliioptila californica californica</i><br><b>coastal California gnatcatcher</b> | F: Threatened<br>S: None<br>MSHCP: C<br>Global rank: G4G5T2Q<br>State rank: S2<br>Other: MBTA | Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.   | <b>Nesting: Absent</b><br>No suitable habitat (sage scrub in low-lying foothills and valleys, sparse chaparral) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above                |
| <i>Vireo bellii pusillus</i><br><b>least Bell's vireo</b>                           | F: Endangered<br>S: Endangered<br>Global rank: G5T2<br>State rank: S2<br>Other: MBTA          | Inhabits riparian forests and willow thickets. Nests from central California to northern Baja California and winters in southern Baja California.  | <b>Nesting: Absent</b><br>No suitable habitat (riparian forests and willow thickets) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above   |

**KEY TO ABOVE TABLE**

**Definitions of occurrence probability:**

*Occurs:* Observed on the site by Wood biologists or recorded on-site by other qualified biologists.

*High:* Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

*Moderate:* Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

*Low:* Site is within the known range of the species but habitat on the site is rarely occupied by the species.

*Absent:* A focused study failed to detect the species, or, no suitable habitat is present.

*Unknown:* Distribution and habitat use has not been clearly determined.

**Federal designations:** (F = federal Endangered Species Act or federal agency designations)

ND: No designation

**State designations:** (C = California Endangered Species Act or CDFG designations)

**CDFW state rankings** are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a threat designation attached to the rank:

**S1** = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres

**S1.1** = very threatened

**S1.2** = threatened

**S1.3** = no current threats known

**S2** = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

**S2.1** = very threatened

**S2.2** = threatened

**S2.3** = no current threats known

**S3** = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

**S3.1** = very threatened

**S3.2** = threatened

**S3.3** = no current threats known

**S4** = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

**S5** = Secure. Common, widespread, and abundant in the state.

**SH** = All known California sites are historical, not extant



**17. National Historic Preservation Act (NHPA)**

- *Required documents: A Historic Properties Identification Report (HPIR) written by a cultural resources professional who meets the Secretary of the Interior's Professional Qualification Standards in Archaeology or Architectural History ([www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm)), as appropriate. The report must include a current records search (not older than five years) from the California Historical Resources Information System (CHRIS) ([http://ohp.parks.ca.gov/?page\\_id=1068](http://ohp.parks.ca.gov/?page_id=1068)) extending to a half-mile beyond the Project's area of potential effects (APE), maps showing all recorded resources and surveys in relation to the APE, records of Native American outreach (<http://nahc.ca.gov>), and resource records from the CHRIS search and newly identified resources. Please contact State Water Board staff to receive additional details. Refer to the OHP website (under the Section 106 Submission Checklists header) for guidance regarding the information required to consult under Section 106: [http://ohp.parks.ca.gov/pages/1071/files/106Checklist\\_Details.pdf](http://ohp.parks.ca.gov/pages/1071/files/106Checklist_Details.pdf).*

*If the project is a type of activity that does not have the potential to cause effects to historic properties, a HPIR is not necessary. Contact the State Water Board to discuss this. This decision is based on the type of activities, not on the presence or absence of historic properties.*

*Note: Please do not upload confidential documents to the FAAST system. Contact the Project Manager or Division of Financial Assistance Environmental Review Staff for guidance regarding submission of confidential document*

*Identify the National Historic Preservation Act, Section 106 finding of effect contained in the cultural resources report:*

- No Historic Properties Affected
- No Adverse Effect to Historic Properties
- Adverse Effect to Historic Properties

*Provide a brief explanation for the above identified determination, or indicate where this information can be found (e.g., HPIR cultural report):*

As indicated in the *Cultural Resource Investigation in Support of the Jurupa Community Services District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California* (Appendix C.1 of the Initial Study), three segments of historic period built-environment resources were identified in the Etiwanda Pipeline APE – Base Line Road (P-36-015497), the San Sevaine Channel, and Foothill Boulevard/U.S. Highway 66 (P-36-002910). Significance evaluations indicate that none of the resources meet eligibility criteria for listing in the NRHP or the CRHR. The study did not identify any other cultural resources in the Project APE. (PaleoWest-A, p. 64.) The recommendations from the *Cultural Resource Investigation* for monitoring along Etiwanda Avenue and halting work if archaeological resources are encountered are incorporated into the Initial Study as mitigation measures **EP MM CR-1, EP MM CR-2, and EP MM CR-3**. The Cultural Resources Assessment recommends a finding of **less than significant impacts to historical resources with mitigation incorporated under CEQA** and **no adverse effects to historic properties under Section 106 of NHPA**. (PaleoWest-A, p. 64.)

**18. Protection of Wetlands:**

Will any portion of the project be located in or potentially affect a wetland?

No – The project will not be located in and/or will not potentially affect a wetland. Please explain, or indicate this information can be found (e.g., wetland assessment/delineation report, biological report/assessment, CEQA document, etc.).

Refer to the Jurisdictional Delineation included as Appendix B.3 of this Initial Study.

Yes – The project will involve the construction of structures and/or one or more of the listed regulated activities in, under, or over navigable waters of the United States, and will require a Section 10 permit. Please provide a copy of the permit obtained from the USACE, or the current status of the permit. Indicate below where more information on the project's construction and regulated activities can be found (e.g., Project Technical Report/Engineering Report, CEQA document, etc.).

**19. Rivers and Harbors Act, Section 10**

Will the project involve the construction of structures or any other regulated activities in, under, or over navigable waters of the United States? (NOTE: Regulated activities include the placement/removal of structures, work involving dredging, disposal of dredged material, filling, excavation, or any other disturbance of soils/sediments or modification of a navigable waterway.)

No – The project is not located in or near navigable waters of the United States. There will be no construction of structures, modification of existing structures, or any other regulated activity work in, under, or over navigable waters of the United States.

Yes – The project will involve the construction of structures and/or one or more of the listed regulated activities in, under, or over navigable waters of the United States, and will require a Section 10 permit. Please provide a copy of the permit obtained from the USACE, or the current status of the permit. Indicate below where more information on the project's construction and regulated activities can be found (e.g., Project Technical Report/Engineering Report, CEQA document, etc.).`

**20. Safe Drinking Water Act, Sole Source Aquifer Protection:**

Is the project located in an area designated by the USEPA, Region 9, as a Sole Source Aquifer?

No – The project is not within the boundaries of a sole source aquifer. <sup>17</sup>

Yes – The project is located in and/or will impact the below-marked Sole Source Aquifer:

- Fresno County Aquifer (Recharge Area or Streamflow Source Zone)
- Santa Margarita Aquifer, Scotts Valley
- Campo/Cottonwood Creek Aquifer
- Ocotillo-Coyote Wells Aquifer

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<sup>17</sup> Source: <http://www.epa.gov/region9/water/groundwater/ssa.html>.

Provide the necessary information, including an alternative project location and/or adequate mitigation measures, for the State Water Board to initiate consultation with the USEPA, Region 9, Ground Water Office, or indicate where this information may be found (e.g., biological report/assessment, CEQA document, etc.)

## 21. Wild and Scenic Rivers Act:

Identify the watershed within the project location: Santa Ana River Watershed

Will the project affect a wild and scenic river?

No – The project will not impact any of the wild and scenic rivers listed above. Please explain, or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.).

The nearest river to the Project is the Santa Ana River, which is not designated as wild and scenic.<sup>18</sup>

Yes - The project will impact the below-marked wild and scenic river. Attach a map of the impacted wild and scenic river, and identify the relative project location.

- |  |  |   |   |
|--|--|---|---|
| <input type="checkbox"/> Amargosa River              | <input type="checkbox"/> Cottonwood Creek  | <input type="checkbox"/> Klamath River                  | <input type="checkbox"/> Sespe Creek    |
| <input type="checkbox"/> American River (Lower)      | <input type="checkbox"/> Eel River         | <input type="checkbox"/> Merced River                   | <input type="checkbox"/> Sisquoc River  |
| <input type="checkbox"/> American River (North Fork) | <input type="checkbox"/> Feather River     | <input type="checkbox"/> Owens River Headwaters         | <input type="checkbox"/> Smith River    |
| <input type="checkbox"/> Bautista Creek              | <input type="checkbox"/> Fuller Mill River | <input type="checkbox"/> Palm Canyon Creek              | <input type="checkbox"/> Trinity River  |
| <input type="checkbox"/> Big Sur River               | <input type="checkbox"/> Kern River        | <input type="checkbox"/> Piru Creek                     | <input type="checkbox"/> Tuolumne River |
| <input type="checkbox"/> Black Butte River           | <input type="checkbox"/> Kings River       | <input type="checkbox"/> San Jacinto River (North Fork) |   |

Explain how the project will impact the wild and scenic river, or indicate where this information can be found (e.g., biological report/assessment, CEQA document, etc.):

## 22. Wilderness Act ([www.justice.gov/enrd/wilderness-act-1964](http://www.justice.gov/enrd/wilderness-act-1964))

Except as specifically provided for in this Wilderness Act (Act), and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment, or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such areas. Is the project located in an area designated as wilderness?

No - The project is not within the boundaries of a Wilderness Area.

Yes – The project is located in and/or will impact a Wilderness Area: Provide the necessary information, including an alternative project location and/or adequate mitigation measures, for the Division of Financial Assistance Environmental Review Staff to coordinate with the USEPA to complete the consultation with the

<sup>18</sup> Source: <http://www.rivers.gov/california.php>.

National Park Service and indicate where this information may be found (e.g., biological report/assessment, CEQA document, etc.):

*Provide the necessary information, including an alternative project location and/or adequate mitigation measures, for the Division of Financial Assistance Environmental Review Staff to coordinate with the USEPA to complete the consultation with the National Park Service and indicate where this information may be found (e.g., biological report/assessment, CEQA document, etc.):*

## VIII. REFERENCES

The following documents were referred to as information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section.

- 2020 WMP Albert A. Webb Associates, *Jurupa Community Services District 2020 Water Master Plan*, adopted June 28, 2021. (Available at <https://www.jcsd.us/home/showdocument?id=7229>, accessed July 19, 2021.)
- Basin Plan California Water Boards, Santa Ana – R8, *Santa Ana River Basin Plan*, updated June 2019. (Available at [https://www.waterboards.ca.gov/santaana/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/), accessed July 7, 2021.)
- Cal Fire Cal Fire Fire Resources Assessment Program, FHSZ View. (Available at <https://egis.fire.ca.gov/FHSZ/>, accessed July 31, 2021.)
- Caltrans Scenic Highways Caltrans, *Scenic Highway Systems List*, (Available at <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>, accessed March 2021.)
- CARB 2019 California Air Resources Board, *State and Federal Standard Area Designations*, webpage, 2019. (Available at <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, accessed July 12, 2021.)
- CBWM(a) Chino Basin Watermaster, *Notice of Lodging of (Proposed) Orders RE Chino Basin Watermaster Motion Regarding 2020 Safe Yield Reset, Amendment of Restated Judgement, Paragraph 6*, July 16, 2020. (Available at [http://www.cbwm.org/docs/WatermasterCourtFilings/2020/20200716%20Notice%20of%20Lodging%20of%20\[Proposed\]%20Order%20re%20CBWM%20Motion%20re%202020%20Safe%20Yield%20Reset.pdf](http://www.cbwm.org/docs/WatermasterCourtFilings/2020/20200716%20Notice%20of%20Lodging%20of%20[Proposed]%20Order%20re%20CBWM%20Motion%20re%202020%20Safe%20Yield%20Reset.pdf), accessed July 7, 2021.)
- CBWM(b) Chino Basin Watermaster, *Approved 2020/2021 Assessment Package (Production Year 2019/2020)*, November 19, 2020. (Available at <http://www.cbwm.org/docs/financdocs/All%20Assessment%20Packages/2020-21%20Assessment%20Package.pdf>, accessed July 12, 2021.)
- CNPS California Native Plant Society, *CNPS Rare Plant Ranks*. (Available at <https://www.cnps.org/rare-plants/cnps-rare-plant-ranks>, accessed July 30, 2021.)

- Cortese List California Department of Toxic Substances Control, *Hazardous Waste and Substances Site List*. Available at [https://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=7&CMD=search&ocieerp=&business name=&main street number=&main street name=&city=&zip=&county=&branch=&status=ACT%20CBKLG%20CCOM&site type=CSITES%20COPEN%20CFUDS%20CCLOSE&cleanup type=&npl=&funding=&reporttype=CO RTESE&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&federal superfund=&state response=&voluntary cleanup=&school cleanup=&operating=&post closure=&non operating=&corrective action=&tiered permit=&evaluation=&spec prog=&national priority list=&senate=&congress=&assembly=&critical pol=&business type=&case type=&display results=&school district=&pub=&hwmp=False&permitted=&pc permitted=&inspections=&inspectionsother=&complaints=&censustract=&cesdecile=&ORDERBY=county&next=Next+50](https://www.envirostor.dtsc.ca.gov/public/search.asp?PAGE=7&CMD=search&ocieerp=&business%20name=&main%20street%20number=&main%20street%20name=&city=&zip=&county=&branch=&status=ACT%20CBKLG%20CCOM&site%20type=CSITES%20COPEN%20CFUDS%20CCLOSE&cleanup%20type=&npl=&funding=&reporttype=CO RTESE&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST&federal%20superfund=&state%20response=&voluntary%20cleanup=&school%20cleanup=&operating=&post%20closure=&non%20operating=&corrective%20action=&tiered%20permit=&evaluation=&spec%20prog=&national%20priority%20list=&senate=&congress=&assembly=&critical%20pol=&business%20type=&case%20type=&display%20results=&school%20district=&pub=&hwmp=False&permitted=&pc%20permitted=&inspections=&inspectionsother=&complaints=&censustract=&cesdecile=&ORDERBY=county&next=Next+50), accessed September 17, 2021.)
- County Scenic Highways Caltrans, *Officially Designated County Scenic Highways*. (Available at <https://dot.ca.gov/-/media/dot-media/programs/design/documents/od-county-scenic-hwys-2015-a11y.pdf>.)
- Countywide Plan DEIR County of San Bernardino, *Draft environmental Impact Report (State Clearinghouse Number 2017101033), San Bernardino Countywide Plan for the County of San Bernardino*, June 2019. (Available at <http://countywideplan.com/eir/>, accessed September 21, 2021.)
- CVWD UWMP Stetson Engineers, Inc. *Cucamonga Valley Water District 2020 Urban Water Management Plan*, June 2021. (Available at <https://www.cvwwater.com/DocumentCenter/View/4741/Final-Cucamonga-Valley-Water-District-2020-UWMP?bidId=>, accessed July 29, 2021.)
- DOC State of California Department of Conservation, *EQ Zapp: California Earthquake Hazards Zone Application* website. (Available at <https://www.conservation.ca.gov/cgs/geohazards/eq-zapp>, accessed September 15, 2021.
- DOF State of California, Department of Finance Home Budget Accounting Forecasting Reports, *January Population and Housing Estimates, E-1 Cities, Counties, and the State population Estimates with Annual Percent Change – January 1, 2019 and 2020*. (Available at <https://dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>, accessed July 2021.)
- Eastvale EOP City of Eastvale, *Emergency Operations Plan (EOP) Part I Basic Plan*, April 2018. (Available at <https://www.eastvaleca.gov/home/showpublisheddocument/9602/63666825250070000>, accessed September 17, 2021.)

|                      |   |
|----------------------|---|
| ECO                  | City of Eastvale, Eastvale Code of Ordinances, online content updated on July 8, 2021. (Available at <a href="https://library.municode.com/ca/eastvale/codes/code_of_ordinances">https://library.municode.com/ca/eastvale/codes/code_of_ordinances</a> , accessed September 20, 2021.)  |
| El Sobrante Landfill | CalRecycle, <i>SWIS Facility/Site Activity Details El Sobrante Landfill (33-AA-0217)</i> website. (Available at <a href="https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2256?siteID=2402">https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2256?siteID=2402</a> , accessed September 21, 2021.)   |
| FCO                  | City of Fontana, Fontana Code of Ordinances, online content updated on September 13, 2021. (Available at <a href="https://library.municode.com/ca/fontana/codes/code_of_ordinances">https://library.municode.com/ca/fontana/codes/code_of_ordinances</a> , accessed September 20, 2021.)  |
| FFGP DEIR            | City of Fontana, <i>Fontana Forward General Plan Update 2015-2035 Draft Environmental Impact Report (State Clearinghouse #2016021099)</i> , June 8, 2018. (Available at <a href="https://www.fontana.org/DocumentCenter/View/29524/Draft-Environmental-Impact-Report-for-the-General-Plan-Update">https://www.fontana.org/DocumentCenter/View/29524/Draft-Environmental-Impact-Report-for-the-General-Plan-Update</a> , accessed March 2021.) |
| FMC                  | City of Fontana, <i>Fontana Code of Ordinances</i> . (Available at <a href="https://library.municode.com/ca/fontana/codes/code_of_ordinances?nodeId=THCOFOCA">https://library.municode.com/ca/fontana/codes/code_of_ordinances?nodeId=THCOFOCA</a> , accessed September 5, 2021.)   |
| IEBL                 | Santa Ana Watershed Project Authority, <i>Inland Empire Brineline</i> . (Available at <a href="https://sawpa.org/inland-empire-brine-line/">https://sawpa.org/inland-empire-brine-line/</a> , accessed July 7, 2021.)   |
| JCSD UWMP            | Albert A. Webb Associates, <i>Jurupa Community Services District 2020 Urban Water Management Plan</i> , adopted June 28, 2021. (Available at <a href="https://www.jcsd.us/home/showdocument?id=7229">https://www.jcsd.us/home/showdocument?id=7229</a> , accessed July 28, 2021.)   |
| JVGP                 | City of Jurupa Valley, <i>City of Jurupa Valley 2017 General Plan</i> . September 2017. (Available at <a href="https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF">https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF</a> , accessed March 2021.)   |
| JVMC                 | City of Jurupa Valley, <i>Jurupa Valley Municipal Code</i> . (Available at <a href="https://library.municode.com/ca/jurupa_valley/codes/municipal_code?nodeId=JUVAMUCO">https://library.municode.com/ca/jurupa_valley/codes/municipal_code?nodeId=JUVAMUCO</a> , accessed September 5, 2021.)   |
| LMWTP PDR            | Black and Veatch, <i>Lloyd W. Michael Water Treatment Plant Regulatory Compliance Upgrade Project Preliminary Design Report</i> , November 2011. (Available at Cucamonga Valley Water District, 10440 Ashford St., Rancho Cucamonga, CA 91730-2799.)  |
| ONT ALUCP            | Mead & Hunt, Inc, <i>LA/Ontario International Airport Land Use Compatibility Plan</i> , adopted April 19, 2011. (Available at <a href="https://www.ontarioplan.org/alucp-for-ontario-international-airport/">https://www.ontarioplan.org/alucp-for-ontario-international-airport/</a> , accessed September 17, 2021.)   |

- Order 2009-0009-DWQ State Water Resources Control Board, *Construction General Permit, Order 2009-0009-DWQ, NPDES No. CAS000002*, (Available at [https://www.waterboards.ca.gov/water\\_issues/programs/stormwater/docs/constpermits/wqo\\_2009\\_0009\\_complete.pdf](https://www.waterboards.ca.gov/water_issues/programs/stormwater/docs/constpermits/wqo_2009_0009_complete.pdf), accessed July 7, 2021.)
- Order No. R8-2015-0004 State of California, California Regional Water Quality Control Board Santa Ana Region, June 19, 2015. *Staff Report for the General Waste Discharge Requirements for Insignificant Threat Discharges to Surface Waters* (Available at [https://www.waterboards.ca.gov/santaana/board\\_decisions/adopted\\_orders/orders/2015/R8-2015-0004\\_Updated\\_General\\_WDR\\_for\\_Discharges\\_to\\_Surface\\_Waters\\_that\\_Pose\\_an\\_Insignificant\\_Deminimis\\_Threat\\_to\\_WQ2.pdf](https://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2015/R8-2015-0004_Updated_General_WDR_for_Discharges_to_Surface_Waters_that_Pose_an_Insignificant_Deminimis_Threat_to_WQ2.pdf), accessed July 7, 2021.)
- PaleoWest-A PaleoWest, *Cultural Resources Investigation in Support of the Jurupa Community District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California*, August 30, 2021. (Included as Appendix C.1.)
- PaleoWest-B PaleoWest, *Paleontological Resource Assessment for the Jurupa Community District Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California*, August 30, 2021. (Included as Appendix C.2.)
- PDR Albert A. Webb Associates, *Etiwanda Intervalley Water Quality and Water Resiliency Project Preliminary Design Report*, June 2021. (Available for review during business hours at JCSD's Office at 11201 Harrel Street, Jurupa Valley, CA 91752.)
- Plan RC City of Rancho Cucamonga, *Plan RC, City of Rancho Cucamonga General Plan, Volume 2 Built Environment*, Updated September 10, 2021. (Available at [https://www.cityofrc.us/sites/default/files/2021-09/PlanRC\\_Volume%20RevisedPRD\\_Final\\_pages.pdf](https://www.cityofrc.us/sites/default/files/2021-09/PlanRC_Volume%20RevisedPRD_Final_pages.pdf), accessed September 12, 2021.)
- Plan RC BIO ECR City of Rancho Cucamonga, *Plan RC, City of Rancho Cucamonga General Plan Update Biological Resources Existing Conditions Report*, June 2020. (Available at City of Rancho Cucamonga, *Plan RC, City of Rancho Cucamonga General Plan, Volume 2 Built Environment*, Public Review Draft May 2021. (Available at [https://www.cityofrc.us/sites/default/files/2020-06/PlanRC\\_ExistingConditionsReport\\_BiologicalResources\\_June2020.pdf](https://www.cityofrc.us/sites/default/files/2020-06/PlanRC_ExistingConditionsReport_BiologicalResources_June2020.pdf), accessed July 30, 2021.)
- Plan RC CR ECR City of Rancho Cucamonga, *Plan RC, City of Rancho Cucamonga General Plan Update Cultural Resources Existing Conditions Report*, June 2020. (Available at City of Rancho Cucamonga, *Plan RC, City of Rancho Cucamonga General Plan, Volume 2 Built Environment*, Public Review Draft May 2021. (Available at [https://www.cityofrc.us/sites/default/files/2020-07/PlanRC\\_ExistingConditionsReport\\_CulturalResources\\_June2020.pdf](https://www.cityofrc.us/sites/default/files/2020-07/PlanRC_ExistingConditionsReport_CulturalResources_June2020.pdf), accessed July 15, 2021.)



|                      |  |
|----------------------|--|
| Plan RC DEIR         | City of Rancho Cucamonga, <i>City of Rancho Cucamonga General Plan Update &amp; Climate Action Plan Draft Environmental Impact Report (State Clearinghouse No. 2021050261)</i> , September 2021. (Available at <a href="https://www.cityofrc.us/sites/default/files/2021-09/City%20of%20Rancho%20Cucamonga_GP%20Update%20and%20CAP_Draft%20EIR_September%202021.pdf">https://www.cityofrc.us/sites/default/files/2021-09/City%20of%20Rancho%20Cucamonga_GP%20Update%20and%20CAP_Draft%20EIR_September%202021.pdf</a> , accessed September 15, 2021.)                           |
| Plan RC NH ECR       | City of Rancho Cucamonga, <i>Plan RC, City of Rancho Cucamonga General Plan Update Natural Hazards Existing Conditions Report</i> , May 2020. (Available at City of Rancho Cucamonga, <i>Plan RC, City of Rancho Cucamonga General Plan, Volume 2 Built Environment</i> , Public Review Draft May 2021. (Available at <a href="https://www.cityofrc.us/sites/default/files/2020-06/PlanRC_ExistingConditionsReport_Hazards_May2020.pdf">https://www.cityofrc.us/sites/default/files/2020-06/PlanRC_ExistingConditionsReport_Hazards_May2020.pdf</a> , accessed July 15, 2021.) |
| RCGP                 | City of Rancho Cucamonga General Plan, (Available at <a href="https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf">https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf</a> , accessed March 2021.)   |
| RCMC                 | City of Rancho Cucamonga, <i>Rancho Cucamonga Municipal Code</i> . (Available at <a href="http://qcode.us/codes/ranchocucamonga/?view=desktop&amp;topic=10">http://qcode.us/codes/ranchocucamonga/?view=desktop&amp;topic=10</a> , accessed September 5, 2021.)  |
| Ready RC             | Rancho Cucamonga Fire, <i>Before, During and After a Disaster In Rancho Cucamonga</i> , (Available at <a href="https://www.cityofrc.us/sites/default/files/2019-08/ReadyRCRevisedMarch2017.pdf">https://www.cityofrc.us/sites/default/files/2019-08/ReadyRCRevisedMarch2017.pdf</a> , accessed September 17, 2021.)  |
| SBCP DEIR Aesthetics | County of San Bernardino, <i>San Bernardino Countywide Plan for County of San Bernardino, Draft Environmental Impact Report (State Clearinghouse No. 2017101033)</i> , Section 5.1 Aesthetics, June 2019. (San Bernardino County Available at <a href="http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-01-AE.pdf">http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-01-AE.pdf</a> , accessed March 2021.)  |
| SCAQMD 1993          | South Coast Air Quality Management District, <i>CEQA Air Quality Handbook</i> , November 1993. (Available at SCAQMD.)  |
| SCAQMD 2003          | South Coast Air Quality Management District, <i>White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution</i> , August 2003 (Available at <a href="http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf">http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf</a> , accessed July 30, 2021.)  |
| SCAQMD 2016          | South Coast Air Quality Management District, <i>2016 Air Quality Management Plan, 2017</i> . (Available at <a href="http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15">http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15</a> , accessed July 2021.)  |
| Upgrade Project IS   | Tom Dodson & Associates, <i>Initial Study for the Cucamonga Valley Water District Lloyd W. Michael Water Treatment Plant Regulatory Compliance Upgrade Project</i> , June 2012. (Available at Cucamonga Valley Water District, 10440 Ashford St., Rancho Cucamonga, CA 91730-2799.)  |

|                  |  |
|------------------|--|
| WEBB-A           | Albert A. Webb Associates, <i>Air Quality/Greenhouse Gas Analysis for Etiwanda Intervalley Water Quality and Water Resiliency Project for Jurupa Valley Community Services District (JCSD)</i> , July 28, 2021. (Included as Appendix A)   |
| WEBB-B           | Albert A. Webb Associates, Energy Tables for Etiwanda Pipeline, July 28, 2021. (Included as Appendix D.)   |
| WEI(a)           | Wildermuth Environmental, Inc. <i>Chino Basin Watermaster 2020 Safe Yield Recalculation Final Report</i> . May 15, 2020. (Available at <a href="https://cbwm.syncedtool.com/shares/folder/PaauzoQapiZ/?folder_id=5150753">https://cbwm.syncedtool.com/shares/folder/PaauzoQapiZ/?folder_id=5150753</a> , accessed July 12, 2021.)  |
| WEI(b)           | Wildermuth Environmental, Inc. <i>Storage Framework Investigation Final Report</i> , revised January 2019. (Available at <a href="https://cbwm.syncedtool.com/shares/folder/PaauzoQapiZ/?folder_id=5151115">https://cbwm.syncedtool.com/shares/folder/PaauzoQapiZ/?folder_id=5151115</a> , accessed July 12, 2021.)  |
| Wood-A           | Wood Environment and Infrastructure Solutions, Inc., <i>Biological Resources Assessment for JCSD Northern Feeder Pipeline Project</i> , July 27, 2021. (Included as Appendix B.1.)   |
| Wood-B           | Wood Environment and Infrastructure Solutions, Inc., <i>JCSD Northern Feeder Pipeline Project Focused Surveys for Burrowing Owl</i> , July 21, 2021. (Included as Appendix B.2.)   |
| Wood-C           | Wood Environment and Infrastructure Solutions, Inc., <i>JCSD Northern Feeder Pipeline Project Delineation of Jurisdictional Waters</i> , July 2021. (Included as Appendix B.3.)  |
| WQ 2014-0194-DWQ | State Water Resources Control Board, <i>Statewide National Pollutant Discharge Elimination System (NPDES) for Drinking Water System Discharges to Waters of the United States</i> , November 18, 2014. (Available at <a href="https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0194_dwq.pdf">https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0194_dwq.pdf</a> , accessed July 7, 2021.) |

## INITIAL STUDY PREPARERS

Albert A. Webb Associates  
3788 McCray Street,  
Riverside, CA 92506  
(951) 686-1070

Cheryl DeGano, Principal Environmental Analyst  
Eliza Laws, Senior Environmental Analyst  
Autumn DeWoody, Senior Environmental Analyst  
Noemi Avila, Assistant Environmental Analyst  
Jacqueline Gamboa, Assistant Environmental Analyst

## **APPENDIX A**

### **Air Quality and Greenhouse Gas Analysis**

## Technical Memorandum

To: Chander Lettule, Jurupa Community Services District

From: Eliza Laws, Senior Environmental Analyst  
Noemi Avila, Assistant Environmental Analyst

Date: July 28, 2021

Re: Air Quality/Greenhouse Gas Analysis for the Etiwanda Intervalley Water Quality and Water Resiliency Project for Jurupa Valley Community Services District (JCSD)

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The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of construction and operation of the proposed Project would cause exceedances of the South Coast Air Quality Management District's (SCAQMD) thresholds for air quality in the Project area. The greenhouse gas (GHG) assessment was prepared to evaluate whether the expected criteria GHG emissions generated as a result of construction and operation of the proposed Project would exceed the SCAQMD draft screening significance thresholds. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 *et seq.*). The methodology follows the *CEQA Air Quality Handbook* prepared by the SCAQMD for quantification of emissions and evaluation of potential impacts to air resources. As recommended by SCAQMD staff, the **California Emissions Estimator Model**<sup>®</sup> version 2020.4.0 (CalEEMod) was used to quantify Project-related emissions.

The analysis herein evaluates the construction and operation of the Etiwanda Pipeline ("Project"), one of the components identified in the Etiwanda Intervalley Water Quality and Water Resiliency Project. The Etiwanda Pipeline entails will include construction and operation of 36-inch diameter welded street water transmission pipeline from an existing JCSD 30-inch diameter water pipeline in Country Village Road north of State Route (SR) 60 in the City of Jurupa Valley to either the Cucamonga Valley Water District (CVWD) Royer Nesbit Water Treatment Plant (RNWTP) or the Lloyd Michael Water Treatment Plant (LMWTP) in the City of Rancho Cucamonga. The RNWTP is located at Coyote Drive approximately 1,150 northeast of Day Creek Boulevard in Rancho Cucamonga. The LMWTP is located at Etiwanda Avenue and Wilson Avenue in Rancho Cucamonga. Depending on the final alignment selected and the treatment plant location, the estimated maximum pipeline length will be up to approximately 73,120 linear feet (LF) in length and will traverse through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga.

The Project will be constructed in three phases commencing in the south and traversing north. Phase 1 will be approximately 32,000 LF commencing at an existing JCSD 30-inch diameter pipeline approximately 1000 LF south of the access road to JCSD's 1110 and 980 Pressure Zone (PZ) tanks located in the Jurupa Hills. Phase 1 will connect to an existing CVWD water pipeline in Fourth Street approximately 2,450 feet west of the intersection of Fourth St./San Bernardino Avenue/Etiwanda Avenue in Rancho Cucamonga. Phase 1 of the Etiwanda Pipeline will be located within or along Country Village Road, Mulberry Avenue, Slover Avenue, Calabash Avenue, San Bernardino Avenue, and Fourth Street traversing through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga.

Phase 1 construction will require crossing: (i) the Riverside County Flood Control and Water Conservation District (RCFCWCD) Declez Channel at Country Village Road; (ii) I-10 and the Union Pacific Railroad (UPRR) at Calabash Avenue; and (iii) the San Sevaine Channel at Etiwanda Avenue. Construction at these crossings is proposed to be via the trenchless jack-and-bore method.

Phase 2 will be approximately 23,320 LF traversing the cities of Fontana and Rancho Cucamonga connecting Phase 1 to CVWD’s Reservoir 2C in Rancho Cucamonga. Phase 2 will be located within or along the intersection of Fourth St./San Bernardino Avenue/Etiwanda Avenue and continue north along the San Sevaine Channel (within San Bernardino County Flood Control right-of-way), west in Arrow Route, north in Etiwanda Avenue to Reservoir 2C. Phase 2 construction will require crossing Interstate-15 (I-15) via jack-and-bore.

Phase 3 will be approximately 15,100 LF with a possible alternate route that would add 2,700 LF from Reservoir 2C to either the RNWTP or LMWTP in the city of Rancho Cucamonga. Phase 3 construction will traverse north within or along Etiwanda Avenue, west in Highland Avenue, north in Day Creek Boulevard, northwest in Coyote Drive to the LMWTP. If the Etiwanda Pipeline connects to the RNWTP, Phase 3 continue north in Etiwanda Avenue, west in Highland Avenue, north in Day Creek Boulevard, and west in Wilson Avenue to the RNWTP. Regardless of which of the two water treatment plants (LMWTP or RNWTP) is the ultimate point of connection for the Etiwanda Pipeline, construction will entail crossing State Route (SR) 210 at Day Creek Boulevard. Crossing SR-210 will be either via jack-and-bore or open cut trenching.

▪ **Regional Significance Thresholds**

The thresholds contained in the *SCAQMD CEQA Air Quality Handbook*<sup>1</sup> (SCAQMD 1993) are considered regional thresholds and are shown in **Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**, below. These regional thresholds were developed based on the SCAQMD’s treatment of a major stationary source.

**Table 1 – SCAQMD CEQA Daily Regional Significance Thresholds**

| <b>Emission Threshold</b> | <b>Units</b> | <b>VOC</b> | <b>NO<sub>x</sub></b> | <b>CO</b> | <b>SO<sub>x</sub></b> | <b>PM-10</b> | <b>PM-2.5</b> |
|---------------------------|--------------|------------|-----------------------|-----------|-----------------------|--------------|---------------|
| Construction              | lbs/day      | 75         | 100                   | 550       | 150                   | 150          | 55            |
| Operation                 | lbs/day      | 55         | 55                    | 550       | 150                   | 150          | 55            |

Air quality impacts can be described in a short- and long-term perspective. Short-term impacts occur during site grading and Project construction and consist of fugitive dust and other particulate matter, as well as exhaust emissions generated by construction-related vehicles. Long-term air quality impacts occur once the Project is in operation. The Project consists of the construction of the Etiwanda Pipeline. Operational emissions related to the pipelines would be primarily from the infrequent visits by vehicles driven by maintenance personnel and are considered negligible; therefore, only short-term impacts were evaluated for the pipeline.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as the application of water or chemical stabilizers to disturbed soils, reducing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 or more acres or more of soil, or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD.

<sup>1</sup> South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993. (Available at SCAQMD.)

Based on the size of this Project’s disturbance area (approximately 42 acres total), a Fugitive Dust Control Plan or a Large Operation Notification Form would not be required.

### Short-Term Analysis

Short-term emissions from Project construction were evaluated using the CalEEMod program. The estimated construction period for the proposed Project is approximately one year and 10 months as identified below. The default parameters within CalEEMod were used, except as identified below, and these default values generally reflect a worst-case scenario, which means that Project emissions are expected to be equal to or less than the estimated emissions. In addition to the default values used (shown in the CalEEMod output Attachment to this memo), assumptions for the Project relevant to model inputs for short-term construction emission estimates used are:

- Construction of the water transmission pipeline is anticipated to begin in March 2022 with Phase 1 and ending Phase 3 in December 2023. The modeled construction schedule for each Project Phase is shown below:

| Phase   | Construction Activity | Start Date      | End Date          | Total Working Days |
|---------|-----------------------|-----------------|-------------------|--------------------|
| Phase 1 | Pipeline Installation | March 01,2022   | March 01,2023     | 262 days           |
|         | Paving                | March 01,2022   | March 01,2023     | 262 days           |
| Phase 2 | Pipeline Installation | October 3, 2022 | August 25, 2023   | 235 days           |
|         | Paving                | October 3, 2022 | August 25, 2023   | 235 days           |
| Phase 3 | Pipeline Installation | June 01, 2023   | December 28, 2023 | 151 days           |
|         | Paving                | June 01, 2023   | December 28, 2023 | 151 days           |

Note: The schedule for each activity includes both the traditional open trenching method and the jack-and-bore method used at each crossing. The exact schedule for each construction method unknown but has been assumed to be concurrent for analysis purposes and to be conservative.

- The off-road equipment to be used by each crew during the construction of the Project is shown below based on engineering estimates and assumes all equipment operate 8-hours per day:

| Construction Activity | Off-Road Equipment        | Trenching Crew Unit Amount | Jack and Bore Crew Unit Amount |
|-----------------------|---------------------------|----------------------------|--------------------------------|
| Pipeline Installation | Concrete/Industrial Saws  | 1                          | 1                              |
|                       | Excavators                | 1                          | 1                              |
|                       | Rubber Tired Dozers       | 1                          | 1                              |
|                       | Tractors/Loaders/Backhoes | 1                          | 1                              |
|                       | Welders                   | 1                          | 1                              |
|                       | Bore/Drill Rig            | 0                          | 1                              |
| Pipeline Paving       | Pavers                    | 1                          | 1                              |
|                       | Paving Equipment          | 1                          | 1                              |
|                       | Rollers                   | 1                          | 1                              |

- Installation includes approximately 13.8 miles of 36-inch diameter water transmission pipeline within existing rights-of-way, primarily within paved roadways. The construction footprint is estimated to be 25-foot wide with a trench width between six- to seven-foot wide. To be conservative, the entire construction footprint (42-acres) was assumed to be paved.
- Construction of each Phase assumes two crews working concurrently using the open trench construction method and jack-and-bore method, with each crew operating the equipment listed above. This is conservative because the jack-and-bore crews only work in specific areas of the alignment.

- Each of the (fourteen (14) jack-and-bore pit locations (two for each of the seven crossings) where trenchless construction methods (i.e., jack-and-bore operations) are proposed are estimated to disturb 800 square feet, totaling 11,200 square feet. The total disturbance area for the trenchless operations was included in each respective Phase of construction.
- To evaluate Project compliance with SCAQMD Rule 403 for fugitive dust control, the Project utilized the mitigation option of watering the Project site three times daily which achieves a control efficiency of 61 percent for PM-10 and PM-2.5 emissions.
- Two (2) one-way vendor trips per day were added to the pipeline installation and paving activities for each crew to account for water truck trips.
- Two (2) one way vendor trips per day were added to the pipeline installation activities for each crew to account for the crew trucks.
- Eight (8) one way hauling trips per day were added to the pipeline installation phase to account for one truckload of soil import per day and one truckload of material handling (pipes and building materials), for each crew.

The results of this analysis are summarized below. The results are shown in **Table 2**. Since the construction schedule of each Project Phase indicates the possibility that Phases will overlap, the maximum daily emissions from these overlapping construction schedules are provided in **Table 3**.

**Table 2 –Unmitigated Estimated Daily Construction Emissions**

| Activity                                    | Peak Daily Emissions (lb/day) |                 |              |                 |             |             |
|---|-------------------------------|-----------------|--------------|-----------------|-------------|-------------|
|   | VOC                           | NO <sub>x</sub> | CO           | SO <sub>2</sub> | PM-10       | PM-2.5      |
| <b>SCAQMD Daily Construction Thresholds</b> | <b>75</b>                     | <b>100</b>      | <b>550</b>   | <b>150</b>      | <b>150</b>  | <b>55</b>   |
| <b>Phase 1</b>                              |                               |                 |              |                 |             |             |
| Pipeline Installation 2022                  | <b>4.04</b>                   | <b>36.90</b>    | <b>32.34</b> | <b>0.07</b>     | <b>2.18</b> | <b>1.73</b> |
| Pipeline Installation 2023                  | 3.56                          | 31.72           | 31.20        | 0.07            | 1.87        | 1.43        |
| Paving 2022                                 | <b>1.35</b>                   | <b>11.36</b>    | <b>15.21</b> | <b>0.03</b>     | <b>0.76</b> | <b>0.58</b> |
| Paving 2023                                 | 1.27                          | 10.38           | 15.16        | 0.03            | 0.71        | 0.52        |
| <b>Maximum</b>                              | <b>5.39</b>                   | <b>48.26</b>    | <b>47.55</b> | <b>0.10</b>     | <b>2.94</b> | <b>2.31</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |
| <b>Phase 2</b>                              |                               |                 |              |                 |             |             |
| Pipeline Installation 2022                  | <b>4.04</b>                   | <b>36.90</b>    | <b>32.34</b> | <b>0.07</b>     | <b>2.18</b> | <b>1.73</b> |
| Pipeline Installation 2023                  | 3.56                          | 31.72           | 31.20        | 0.07            | 1.87        | 1.43        |
| Paving 2022                                 | <b>1.31</b>                   | <b>11.36</b>    | <b>15.21</b> | <b>0.03</b>     | <b>0.76</b> | <b>0.58</b> |
| Paving 2023                                 | 1.24                          | 10.38           | 15.16        | 0.03            | 0.71        | 0.52        |
| <b>Maximum</b>                              | <b>5.35</b>                   | <b>48.26</b>    | <b>47.55</b> | <b>0.10</b>     | <b>2.94</b> | <b>2.31</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |

| Activity                                    | Peak Daily Emissions (lb/day) |                 |              |                 |             |             |
|---|-------------------------------|-----------------|--------------|-----------------|-------------|-------------|
|   | VOC                           | NO <sub>x</sub> | CO           | SO <sub>2</sub> | PM-10       | PM-2.5      |
| <b>SCAQMD Daily Construction Thresholds</b> | <b>75</b>                     | <b>100</b>      | <b>550</b>   | <b>150</b>      | <b>150</b>  | <b>55</b>   |
| <b>Phase 3</b>                              |                               |                 |              |                 |             |             |
| Pipeline Installation 2023                  | <b>3.56</b>                   | <b>31.73</b>    | <b>31.21</b> | <b>0.07</b>     | <b>1.87</b> | <b>1.44</b> |
| Paving 2023                                 | <b>1.27</b>                   | <b>10.38</b>    | <b>15.16</b> | <b>0.03</b>     | <b>0.71</b> | <b>0.52</b> |
| <b>Maximum</b>                              | <b>4.83</b>                   | <b>42.11</b>    | <b>46.37</b> | <b>0.10</b>     | <b>2.58</b> | <b>1.96</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |

Note: Maximum emissions for each Phase are the sum of Pipeline Installation and Paving in 2022 or 2023 because these activities overlap. Maximum emissions are shown in bold.

**Table 3 – Unmitigated Estimated Maximum Daily Construction Emissions by Year**

| Activity                                    | Peak Daily Emissions (lb/day) |                 |              |                 |             |             |
|---|-------------------------------|-----------------|--------------|-----------------|-------------|-------------|
|   | VOC                           | NO <sub>x</sub> | CO           | SO <sub>2</sub> | PM-10       | PM-2.5      |
| <b>SCAQMD Daily Construction Thresholds</b> | <b>75</b>                     | <b>100</b>      | <b>550</b>   | <b>150</b>      | <b>150</b>  | <b>55</b>   |
| <b>2022<sup>1</sup></b>                     |                               |                 |              |                 |             |             |
| Phase 1 Pipeline Installation               | 4.04                          | 36.90           | 32.34        | 0.07            | 2.18        | 1.73        |
| Phase 1 Paving                              | 1.35                          | 11.36           | 15.21        | 0.03            | 0.76        | 0.58        |
| Phase 2 Pipeline Installation               | 4.04                          | 36.90           | 32.34        | 0.07            | 2.18        | 1.73        |
| Phase 2 Paving                              | 1.31                          | 11.36           | 15.21        | 0.03            | 0.76        | 0.58        |
| <b>Maximum<sup>1</sup></b>                  | <b>10.74</b>                  | <b>96.52</b>    | <b>95.10</b> | <b>0.20</b>     | <b>5.88</b> | <b>4.62</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |
| <b>2023<sup>2</sup></b>                     |                               |                 |              |                 |             |             |
| Phase 1 Pipeline Installation               | <b>3.56</b>                   | 31.72           | 31.20        | <b>0.07</b>     | <b>1.87</b> | 1.43        |
| Phase 1 Paving                              | <b>1.27</b>                   | 10.38           | 15.16        | <b>0.03</b>     | <b>0.71</b> | 0.52        |
| Phase 2 Pipeline Installation               | <b>3.56</b>                   | <b>31.72</b>    | <b>31.20</b> | <b>0.07</b>     | <b>1.87</b> | <b>1.43</b> |
| Phase 2 Paving                              | <b>1.24</b>                   | <b>10.38</b>    | <b>15.16</b> | <b>0.03</b>     | <b>0.71</b> | <b>0.52</b> |
| Phase 3 Pipeline Installation               | 3.56                          | <b>31.73</b>    | <b>31.21</b> | 0.07            | 1.87        | <b>1.44</b> |
| Phase 3 Paving                              | 1.27                          | <b>10.38</b>    | <b>15.16</b> | 0.03            | 0.71        | <b>0.52</b> |
| <b>Maximum<sup>2</sup></b>                  | <b>9.63</b>                   | <b>84.21</b>    | <b>92.73</b> | <b>0.20</b>     | <b>5.16</b> | <b>3.91</b> |
| <b>Exceeds Threshold?</b>                   | <b>No</b>                     | <b>No</b>       | <b>No</b>    | <b>No</b>       | <b>No</b>   | <b>No</b>   |

Note: <sup>1</sup>Maximum emissions in 2022 are the sum of all Phase 1 and Phase 2 activities because they overlap.

<sup>2</sup>Maximum emissions in 2023 are the greater of either: 1) the sum of all Phase 1 and Phase 2 activity; or 2) the sum of all Phase 2 and Phase 3 activities because they overlap. Maximum emissions are shown in bold. For overlapping activities generating the same amount emissions, the emissions from the earlier Phase was used in the total.

As shown in **Table 3**, above, the emissions from construction of the Project are below the SCAQMD daily construction thresholds for all the criteria pollutants in 2022 and 2023.



## Long-Term Analysis

Long-term air quality impacts occur once the Project is in operation. Operations emissions refer to a full range of activities that can or may generate pollutant emissions when the development is functioning in its intended use, and typically include vehicle emissions, area source emissions that include stationary combustion of natural gas used for space and water heating, landscape maintenance, use of consumer products, and energy use.

Operational emissions related to the water transmission pipelines would be primarily from the infrequent visits by vehicles driven by maintenance personnel and are considered negligible.

### ▪ Localized Significance Threshold Analysis

#### Background

As part of the SCAQMD's environmental justice program, attention has been focused on localized effects of air quality. Staff at SCAQMD has developed localized significance threshold (LST) methodology<sup>2</sup> that can be used by public agencies to determine whether or not a project may generate significant adverse localized air quality impacts (both short- and long-term). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The Project will traverse SRA 23, 32, and 34.

#### Short-Term Analysis

According to the LST methodology, only on-site emissions need to be analyzed. Emissions associated with vendor and worker trips are mobile source emissions that occur off site. The emissions analyzed under the LST methodology are NO<sub>2</sub>, CO, PM-10, and PM-2.5. SCAQMD has provided LST lookup tables<sup>3</sup> to allow users to readily determine if the daily emissions for proposed construction or operational activities could result in significant localized air quality impacts for projects five acres or smaller. The LST tables can be used as a screening tool to determine if dispersion modeling would be necessary. If project-related emissions are below the LST table emissions, no further analysis is necessary. As a linear facility, the water transmission pipeline disturbance area is approximately 0.1 acres per day (160 feet per day by a 25-foot trench width for the trenching crew plus 800 square feet for a jack-and-bore crew that could be operating in the same area). While the equipment for both pipeline crews would result in a daily disturbance area of two acres, consistent with SCAQMD guidance, the LST for a one-acre site was used.<sup>4</sup>

The LST thresholds are estimated using the maximum daily disturbed area (in acres) and the distance of the Project to the nearest sensitive receptors (in meters). There are several sensitive receptors located adjacent to the nearly 14-miles of pipeline alignment, which include housing tracks and scattered residential area lots adjacent to the pipeline along Country Village Road, Etiwanda Avenue, Highland Avenue, Day Creek Boulevard and 24<sup>th</sup> Street/Wilson Avenue in the cities of Jurupa Valley, Fontana and Rancho Cucamonga; schools, churches and parks are also adjacent to portions of the pipeline alignment. According to LST methodology, projects with boundaries closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters. Therefore, a receptor distance of 25 meters (85 feet) was used for the analysis. The results are summarized in **Table 4**.

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<sup>2</sup> South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, Revised July 2008. (Available at <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>, accessed July 2021.)

<sup>3</sup> <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>

<sup>4</sup> <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2>

**Table 4 –Unmitigated LST Results for Daily Construction Emissions**

| Pollutant                                      | Peak Daily Emissions (lb/day) |              |             |             |
|--|-------------------------------|--------------|-------------|-------------|
|  | NO <sub>x</sub>               | CO           | PM-10       | PM-2.5      |
| <b>LST for 1-acre at 25 meters<sup>1</sup></b> | <b>118</b>                    | <b>602</b>   | <b>4</b>    | <b>3</b>    |
| Phase 1  | <b>46.41</b>                  | <b>45.49</b> | <b>2.26</b> | <b>2.11</b> |
| Phase 2  | 46.41                         | 45.49        | 2.26        | 2.11        |
| Phase 3  | 40.67                         | 44.49        | 1.89        | 1.77        |
| <b>Maximum<sup>2</sup></b>                     | <b>46.41</b>                  | <b>45.49</b> | <b>2.26</b> | <b>2.11</b> |
| <b>Exceeds Threshold?</b>                      | <b>No</b>                     | <b>No</b>    | <b>No</b>   | <b>No</b>   |

Note: <sup>1</sup> The most conservative LST was used for the respective SRA's that the Project traverses.

<sup>2</sup> Each phase shows higher or greater emissions between the years of construction. Maximum emissions show the greater emissions between phases for a single location because each phase analyzes two crews operating at one time and no more than two crews would be located within the same construction area at a given time.

As shown in **Table 4**, emissions from construction of the Project are below the most conservative LST established by SCAQMD.

### Long-Term Analysis

The Project involves construction of a water transmission pipeline. The long-term emissions from the pipeline, as discussed previously, are primarily in the form of mobile source emissions, with no stationary sources of emissions present. According to the LST methodology, LSTs only apply to the operational phase if a project includes stationary sources or on-site mobile equipment generating on-site emissions. The proposed Project does not include such uses. Therefore, no long-term LST analysis is needed.

### Greenhouse Gas Analysis

Greenhouse gases (GHG) are not presented in lbs/day like criteria pollutants; they are typically evaluated on an annual basis using the metric system. Several agencies, at various levels, have proposed draft GHG significance thresholds for use in CEQA documents. SCAQMD has been working on GHG thresholds for development projects. In December 2008, the SCAQMD adopted a threshold of 10,000 metric tonnes per year of carbon dioxide equivalents (MTCO<sub>2</sub>E/yr) for stationary source projects where SCAQMD is the lead agency. The most recent draft proposal was in September 2010<sup>5</sup> and included screening significance thresholds for residential, commercial, and mixed-use projects at 3,500, 1,400, and 3,000 MTCO<sub>2</sub>E/yr, respectively. Alternatively, a lead agency has the option to use 3,000 MTCO<sub>2</sub>E/yr as a threshold for all non-industrial projects. Although both options are recommended by SCAQMD, a lead agency is advised to use only one option and to use it consistently. The SCAQMD significance thresholds also evaluate construction emissions by amortizing them over an expected project life of 30 years. If emissions are above the screening level threshold, additional analysis may be required. The analysis herein uses the threshold of 3,000 MTCO<sub>2</sub>E/yr.

### Short-Term Analysis

#### Construction-Related Emissions

The CalEEMod model calculates GHG emissions from fuel usage by construction equipment and construction-related activities, like construction worker trips, for the Project. The CalEEMod estimate does not analyze emissions from construction-related electricity or natural gas. Construction-related electricity and natural gas emissions vary based on the amount of electric power used during construction and other unknown factors which make them too speculative to quantify. The CalEEMod

<sup>5</sup> [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2)

output results for construction-related GHG emissions provide for CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and CO<sub>2</sub>E<sup>6</sup> as shown on **Table 5**.

**Table 5 – Project Construction Equipment GHG Emissions**

| Year         | Metric Tons per year (MT/yr) |                       |                              |                         |
|--------------|------------------------------|-----------------------|------------------------------|-------------------------|
|              | Total CO <sub>2</sub>        | Total CH <sub>4</sub> | Total N <sub>2</sub> O       | Total CO <sub>2</sub> E |
| 2022         | 1,172.61                     | 0.29                  | 0.01                         | 1,184.42                |
| 2023         | 1,495.01                     | 0.36                  | 0.00                         | 1,509.78                |
| <b>Total</b> | 2,667.62                     | 0.65                  | 0.01                         | 2,694.20                |
|              |                              |                       | <b>Amortized<sup>1</sup></b> | <b>79.24</b>            |

Note: <sup>1</sup>Construction emissions were amortized over a 30-year period, as recommended by SCAQMD.

Results indicate that an estimated 79.24 MTCO<sub>2</sub>E will occur from Project construction equipment over the course of the estimated approximately 22-month construction period. The draft SCAQMD GHG threshold guidance document released in October 2008<sup>7</sup> recommends that construction emissions be amortized for a project lifetime of 30 years to ensure that GHG reduction measures address construction GHG emissions as part of the operational reduction strategies.

The proposed Project does not fit into the categories provided (industrial, commercial, and residential) in the draft thresholds from SCAQMD. The Project's emissions were compared to whichever threshold is more conservative. Since the draft SCAQMD GHG threshold Guidance document released in October 2008 (SCAQMD 2008b, p. 3-8) recommends that construction emissions be amortized for a project lifetime of 30 years to, the total GHG emissions from Project construction were amortized and are below the SCAQMD recommended screening level of 3,000 MTCO<sub>2</sub>E/yr. Due to the lack of adopted emissions thresholds, the estimated amount of emissions from Project construction and negligible operational emissions from infrequent maintenance vehicles related to the pipeline the proposed Project will not generate GHG emissions that exceed the screening threshold.

## ▪ Conclusion

The conclusion of this analysis indicates that construction of the proposed Project will not exceed criteria pollutant thresholds established by SCAQMD on a regional or localized level. The Project will not generate GHG emissions that exceed the SCAQMD screening threshold. No mitigation is required.

Should you have any questions, please contact me at (951) 686-1070.

<sup>6</sup> CO<sub>2</sub>E is the sum of CO<sub>2</sub> emissions estimated plus the sum of CH<sub>4</sub> and N<sub>2</sub>O emissions estimated multiplied by their respective global warming potential (GWP).

<sup>7</sup> [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf?sfvrsn=2)

## **CALEEMOD OUTPUT FILES**

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**Etiwanda Pipeline Phase 1  
South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 18.50 | Acre   | 18.50       | 805,860.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 390.98                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.033 | <b>N2O Intensity (lb/MW hr)</b>  | 0.004 |

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

- Project Characteristics -
- Land Use - Per PDR
- Construction Phase - Per Engineers
- Off-road Equipment - Per Engineer Modeled for Trenching and Jack and Bore crew.
- Off-road Equipment - modeled for Trenching and Jack and Bore crew
- Trips and VMT - water truck trips and crew trucks added to grading and paving activities. Hauling trips account for soil import and material handling.
- Construction Off-road Equipment Mitigation - Per rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 262.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 2,104.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

|                |                  |      |      |
|----------------|------------------|------|------|
| tbITripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
|----------------|------------------|------|------|

**2.0 Emissions Summary**

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Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O           | CO2e              |
|----------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| Year           | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |               |                   |
| 2022           | 1.4842        | 12.8968        | 16.6428        | 0.0336        | 0.6723        | 2.2726        | 1.2572        | 0.1807         | 2.1256        | 0.7193        | 0.0000        | 3,351.3109        | 3,351.3109        | 0.7635        | 0.1202        | 3,406.2137        |
| 2023           | 1.3793        | 11.5646        | 16.4719        | 0.0331        | 0.6723        | 1.8994        | 1.1937        | 0.1807         | 1.7771        | 0.6608        | 0.0000        | 3,299.2806        | 3,299.2806        | 0.7614        | 0.1135        | 3,352.1472        |
| <b>Maximum</b> | <b>1.4842</b> | <b>12.8968</b> | <b>16.6428</b> | <b>0.0336</b> | <b>0.6723</b> | <b>2.2726</b> | <b>1.2572</b> | <b>0.1807</b>  | <b>2.1256</b> | <b>0.7193</b> | <b>0.0000</b> | <b>3,351.3109</b> | <b>3,351.3109</b> | <b>0.7635</b> | <b>0.1202</b> | <b>3,406.2137</b> |

**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        |                   |                   |               |               |                   |
| 2022           | 1.4842        | 12.8968        | 16.6428        | 0.0336        | 0.6723        | 2.2726        | 1.2572        | 0.1807         | 2.1256        | 0.7193        | 0.0000        | 3,351.3109        | 3,351.3109        | 0.7635        | 0.1202        | 3,406.2137        |
| 2023           | 1.3793        | 11.5646        | 16.4719        | 0.0331        | 0.6723        | 1.8994        | 1.1937        | 0.1807         | 1.7771        | 0.6608        | 0.0000        | 3,299.2806        | 3,299.2806        | 0.7614        | 0.1135        | 3,352.1472        |
| <b>Maximum</b> | <b>1.4842</b> | <b>12.8968</b> | <b>16.6428</b> | <b>0.0336</b> | <b>0.6723</b> | <b>2.2726</b> | <b>1.2572</b> | <b>0.1807</b>  | <b>2.1256</b> | <b>0.7193</b> | <b>0.0000</b> | <b>3,351.3109</b> | <b>3,351.3109</b> | <b>0.7635</b> | <b>0.1202</b> | <b>3,406.2137</b> |





Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.3470        | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        |               | 4.3100e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.0000</b>  | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>4.3100e-003</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         | 0.3470        | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        |               | 4.3100e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.0000</b>  | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>4.3100e-003</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |
| 2            | Paving                | Paving     | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 18.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 0.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 0.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

|        |                  |   |      |     |      |
|--------|------------------|---|------|-----|------|
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers          | 2 | 8.00 | 80  | 0.38 |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 2,104.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2022**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        |          | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> |          | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0351        | 1.2909        | 0.3069        | 4.9000e-003        | 0.1404        | 0.0103        | 0.1507        | 0.0385         | 9.8500e-003   | 0.0483        |          | 539.3210        | 539.3210        | 0.0319        | 0.0857        | 565.6596        |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003   | 0.0275        | 7.3700e-003    | 1.8400e-003   | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003   | 0.0120        | 86.2702         |
| Worker       | 0.0955        | 0.0674        | 1.0608        | 2.8300e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 285.9205        | 285.9205        | 7.4800e-003   | 6.8300e-003   | 288.1417        |
| <b>Total</b> | <b>0.1379</b> | <b>1.5471</b> | <b>1.4309</b> | <b>8.5000e-003</b> | <b>0.4790</b> | <b>0.0141</b> | <b>0.4931</b> | <b>0.1289</b>  | <b>0.0134</b> | <b>0.1423</b> |          | <b>907.8602</b> | <b>907.8602</b> | <b>0.0424</b> | <b>0.1045</b> | <b>940.0715</b> |

**3.2 Pipeline Installation - 2022**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        | 0.0000        | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> | <b>0.0000</b> | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0351        | 1.2909        | 0.3069        | 4.9000e-003        | 0.1404        | 0.0103        | 0.1507        | 0.0385         | 9.8500e-003   | 0.0483        |          | 539.3210        | 539.3210        | 0.0319        | 0.0857        | 565.6596        |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003   | 0.0275        | 7.3700e-003    | 1.8400e-003   | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003   | 0.0120        | 86.2702         |
| Worker       | 0.0955        | 0.0674        | 1.0608        | 2.8300e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 285.9205        | 285.9205        | 7.4800e-003   | 6.8300e-003   | 288.1417        |
| <b>Total</b> | <b>0.1379</b> | <b>1.5471</b> | <b>1.4309</b> | <b>8.5000e-003</b> | <b>0.4790</b> | <b>0.0141</b> | <b>0.4931</b> | <b>0.1289</b>  | <b>0.0134</b> | <b>0.1423</b> |          | <b>907.8602</b> | <b>907.8602</b> | <b>0.0424</b> | <b>0.1045</b> | <b>940.0715</b> |

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        |          | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> |          | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9886        | 0.2760        | 4.6100e-003        | 0.1404        | 6.9300e-003        | 0.1474        | 0.0385         | 6.6300e-003        | 0.0451        |          | 509.4842        | 509.4842        | 0.0313        | 0.0810        | 534.4147        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1098</b> | <b>1.1946</b> | <b>1.3085</b> | <b>8.0800e-003</b> | <b>0.4790</b> | <b>9.5000e-003</b> | <b>0.4885</b> | <b>0.1289</b>  | <b>9.0200e-003</b> | <b>0.1379</b> |          | <b>864.8267</b> | <b>864.8267</b> | <b>0.0409</b> | <b>0.0988</b> | <b>895.2758</b> |

**3.2 Pipeline Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        | 0.0000        | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> | <b>0.0000</b> | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9886        | 0.2760        | 4.6100e-003        | 0.1404        | 6.9300e-003        | 0.1474        | 0.0385         | 6.6300e-003        | 0.0451        |          | 509.4842        | 509.4842        | 0.0313        | 0.0810        | 534.4147        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1098</b> | <b>1.1946</b> | <b>1.3085</b> | <b>8.0800e-003</b> | <b>0.4790</b> | <b>9.5000e-003</b> | <b>0.4885</b> | <b>0.1289</b>  | <b>9.0200e-003</b> | <b>0.1379</b> |          | <b>864.8267</b> | <b>864.8267</b> | <b>0.0409</b> | <b>0.0988</b> | <b>895.2758</b> |

**3.3 Paving - 2022**

**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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2878</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.3 Paving - 2022**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003        | 0.0275        | 7.3700e-003    | 1.8400e-003        | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003        | 0.0120        | 86.2702         |
| Worker       | 0.0512        | 0.0361        | 0.5683        | 1.5200e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 153.1717        | 153.1717        | 4.0100e-003        | 3.6600e-003   | 154.3616        |
| <b>Total</b> | <b>0.0585</b> | <b>0.2249</b> | <b>0.6314</b> | <b>2.2900e-003</b> | <b>0.1933</b> | <b>2.9200e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7600e-003</b> | <b>0.0546</b> |          | <b>235.7904</b> | <b>235.7904</b> | <b>7.0500e-003</b> | <b>0.0157</b> | <b>240.6318</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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2878</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |



Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.3 Paving - 2022**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003        | 0.0275        | 7.3700e-003    | 1.8400e-003        | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003        | 0.0120        | 86.2702         |
| Worker       | 0.0512        | 0.0361        | 0.5683        | 1.5200e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 153.1717        | 153.1717        | 4.0100e-003        | 3.6600e-003   | 154.3616        |
| <b>Total</b> | <b>0.0585</b> | <b>0.2249</b> | <b>0.6314</b> | <b>2.2900e-003</b> | <b>0.1933</b> | <b>2.9200e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7600e-003</b> | <b>0.0546</b> |          | <b>235.7904</b> | <b>235.7904</b> | <b>7.0500e-003</b> | <b>0.0157</b> | <b>240.6318</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2177</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2177</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**5.2 Energy by Land Use - Natural Gas**

Mitigated

|                        | Natural Gas 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   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.3470 | 2.0000e-005 | 1.8900e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 |          | 4.0500e-003 | 4.0500e-003 | 1.0000e-005 |     | 4.3100e-003 |
| Unmitigated | 0.3470 | 2.0000e-005 | 1.8900e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 |          | 4.0500e-003 | 4.0500e-003 | 1.0000e-005 |     | 4.3100e-003 |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O                | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|-----------|--------------------|--------------------|--------------------|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |           |                    |                    |                    |                    |
| Architectural Coating | 0.0614        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Consumer Products     | 0.2854        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Landscaping           | 1.7000e-004   | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          |           | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        | 4.3100e-003        |
| <b>Total</b>          | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> |               | <b>1.0000e-005</b> | <b>1.0000e-005</b> |                | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          |           | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>4.3100e-003</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O                | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|-----------|--------------------|--------------------|--------------------|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |           |                    |                    |                    |                    |
| Architectural Coating | 0.0614        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Consumer Products     | 0.2854        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Landscaping           | 1.7000e-004   | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          |           | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        | 4.3100e-003        |
| <b>Total</b>          | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> |               | <b>1.0000e-005</b> | <b>1.0000e-005</b> |                | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          |           | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>4.3100e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**



Etiwanda Pipeline Phase 1 - South Coast Air Basin, Summer

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**Etiwanda Pipeline Phase 1  
South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 18.50 | Acre   | 18.50       | 805,860.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics -

Land Use - Per PDR

Construction Phase - Per Engineers

Off-road Equipment - Per Engineer Modeled for Trenching and Jack and Bore crew.

Off-road Equipment - modeled for Trenching and Jack and Bore crew

Trips and VMT - water truck trips and crew trucks added to grading and paving activities. Hauling trips account for soil import and material handling.

Construction Off-road Equipment Mitigation - Per rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 262.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 2,104.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

|                |                  |      |      |
|----------------|------------------|------|------|
| tbITripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
|----------------|------------------|------|------|

**2.0 Emissions Summary**

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Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**2.1 Overall Construction (Maximum Daily Emission)**

**Unmitigated Construction**

|                | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2              | Total CO2              | CH4           | N2O           | CO2e                   |
|----------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|------------------------|------------------------|---------------|---------------|------------------------|
| Year           | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                        |                        |               |               |                        |
| 2022           | 1.4922        | 12.9761        | 16.5070        | 0.0333        | 0.6723        | 2.2726        | 1.2572        | 0.1807         | 2.1256        | 0.7194        | 0.0000        | 3,326.998<br>2         | 3,326.998<br>2         | 0.7636        | 0.1209        | 3,382.116<br>5         |
| 2023           | 1.3867        | 11.6317        | 16.3466        | 0.0329        | 0.6723        | 1.8994        | 1.1938        | 0.1807         | 1.7771        | 0.6608        | 0.0000        | 3,276.384<br>5         | 3,276.384<br>5         | 0.7615        | 0.1143        | 3,329.476<br>4         |
| <b>Maximum</b> | <b>1.4922</b> | <b>12.9761</b> | <b>16.5070</b> | <b>0.0333</b> | <b>0.6723</b> | <b>2.2726</b> | <b>1.2572</b> | <b>0.1807</b>  | <b>2.1256</b> | <b>0.7194</b> | <b>0.0000</b> | <b>3,326.998<br/>2</b> | <b>3,326.998<br/>2</b> | <b>0.7636</b> | <b>0.1209</b> | <b>3,382.116<br/>5</b> |

**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        |                        |                        |               |               |                        |
| 2022           | 1.4922        | 12.9761        | 16.5070        | 0.0333        | 0.6723        | 2.2726        | 1.2572        | 0.1807         | 2.1256        | 0.7194        | 0.0000        | 3,326.998<br>2         | 3,326.998<br>2         | 0.7636        | 0.1209        | 3,382.116<br>5         |
| 2023           | 1.3867        | 11.6317        | 16.3466        | 0.0329        | 0.6723        | 1.8994        | 1.1938        | 0.1807         | 1.7771        | 0.6608        | 0.0000        | 3,276.384<br>5         | 3,276.384<br>5         | 0.7615        | 0.1143        | 3,329.476<br>4         |
| <b>Maximum</b> | <b>1.4922</b> | <b>12.9761</b> | <b>16.5070</b> | <b>0.0333</b> | <b>0.6723</b> | <b>2.2726</b> | <b>1.2572</b> | <b>0.1807</b>  | <b>2.1256</b> | <b>0.7194</b> | <b>0.0000</b> | <b>3,326.998<br/>2</b> | <b>3,326.998<br/>2</b> | <b>0.7636</b> | <b>0.1209</b> | <b>3,382.116<br/>5</b> |



Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.3470        | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        |               | 4.3100e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.0000</b>  | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>4.3100e-003</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         | 0.3470        | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        |               | 4.3100e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000         | 0.0000             | 0.0000             |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> | <b>0.0000</b> | <b>1.0000e-005</b> | <b>1.0000e-005</b> | <b>0.0000</b>  | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>4.3100e-003</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|----------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |
| 2            | Paving                | Paving     | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 18.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 0.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 0.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

|        |                  |   |      |     |      |
|--------|------------------|---|------|-----|------|
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers          | 2 | 8.00 | 80  | 0.38 |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 2,104.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2022**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        |          | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> |          | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |



Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0342        | 1.3445        | 0.3123        | 4.9000e-003        | 0.1404        | 0.0103        | 0.1507        | 0.0385         | 9.8700e-003   | 0.0484        |          | 539.4722        | 539.4722        | 0.0319        | 0.0857        | 565.8173        |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003   | 0.0275        | 7.3700e-003    | 1.8500e-003   | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003   | 0.0120        | 86.3039         |
| Worker       | 0.1014        | 0.0740        | 0.9660        | 2.6700e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 269.9515        | 269.9515        | 7.5800e-003   | 7.2600e-003   | 272.3039        |
| <b>Total</b> | <b>0.1428</b> | <b>1.6150</b> | <b>1.3436</b> | <b>8.3400e-003</b> | <b>0.4790</b> | <b>0.0141</b> | <b>0.4931</b> | <b>0.1289</b>  | <b>0.0135</b> | <b>0.1423</b> |          | <b>892.0723</b> | <b>892.0723</b> | <b>0.0425</b> | <b>0.1050</b> | <b>924.4251</b> |

**3.2 Pipeline Installation - 2022**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        | 0.0000        | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> | <b>0.0000</b> | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0342        | 1.3445        | 0.3123        | 4.9000e-003        | 0.1404        | 0.0103        | 0.1507        | 0.0385         | 9.8700e-003   | 0.0484        |          | 539.4722        | 539.4722        | 0.0319        | 0.0857        | 565.8173        |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003   | 0.0275        | 7.3700e-003    | 1.8500e-003   | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003   | 0.0120        | 86.3039         |
| Worker       | 0.1014        | 0.0740        | 0.9660        | 2.6700e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 269.9515        | 269.9515        | 7.5800e-003   | 7.2600e-003   | 272.3039        |
| <b>Total</b> | <b>0.1428</b> | <b>1.6150</b> | <b>1.3436</b> | <b>8.3400e-003</b> | <b>0.4790</b> | <b>0.0141</b> | <b>0.4931</b> | <b>0.1289</b>  | <b>0.0135</b> | <b>0.1423</b> |          | <b>892.0723</b> | <b>892.0723</b> | <b>0.0425</b> | <b>0.1050</b> | <b>924.4251</b> |

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        |          | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> |          | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0159        | 1.0331        | 0.2798        | 4.6200e-003        | 0.1404        | 6.9500e-003        | 0.1474        | 0.0385         | 6.6500e-003        | 0.0451        |          | 510.0082        | 510.0082        | 0.0312        | 0.0811        | 534.9624        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1143</b> | <b>1.2518</b> | <b>1.2277</b> | <b>7.9400e-003</b> | <b>0.4790</b> | <b>9.5200e-003</b> | <b>0.4885</b> | <b>0.1289</b>  | <b>9.0500e-003</b> | <b>0.1379</b> |          | <b>850.0608</b> | <b>850.0608</b> | <b>0.0409</b> | <b>0.0993</b> | <b>880.6625</b> |

**3.2 Pipeline Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day        |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        | 0.0000        | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> | <b>0.0000</b> | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0159        | 1.0331        | 0.2798        | 4.6200e-003        | 0.1404        | 6.9500e-003        | 0.1474        | 0.0385         | 6.6500e-003        | 0.0451        |          | 510.0082        | 510.0082        | 0.0312        | 0.0811        | 534.9624        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1143</b> | <b>1.2518</b> | <b>1.2277</b> | <b>7.9400e-003</b> | <b>0.4790</b> | <b>9.5200e-003</b> | <b>0.4885</b> | <b>0.1289</b>  | <b>9.0500e-003</b> | <b>0.1379</b> |          | <b>850.0608</b> | <b>850.0608</b> | <b>0.0409</b> | <b>0.0993</b> | <b>880.6625</b> |

**3.3 Paving - 2022**

**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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2878</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.3 Paving - 2022**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003        | 0.0275        | 7.3700e-003    | 1.8500e-003        | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003        | 0.0120        | 86.3039         |
| Worker       | 0.0543        | 0.0396        | 0.5175        | 1.4300e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 144.6169        | 144.6169        | 4.0600e-003        | 3.8900e-003   | 145.8771        |
| <b>Total</b> | <b>0.0615</b> | <b>0.2362</b> | <b>0.5829</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>2.9300e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7700e-003</b> | <b>0.0546</b> |          | <b>227.2656</b> | <b>227.2656</b> | <b>7.0900e-003</b> | <b>0.0159</b> | <b>232.1810</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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2878</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.3 Paving - 2022**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003        | 0.0275        | 7.3700e-003    | 1.8500e-003        | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003        | 0.0120        | 86.3039         |
| Worker       | 0.0543        | 0.0396        | 0.5175        | 1.4300e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 144.6169        | 144.6169        | 4.0600e-003        | 3.8900e-003   | 145.8771        |
| <b>Total</b> | <b>0.0615</b> | <b>0.2362</b> | <b>0.5829</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>2.9300e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7700e-003</b> | <b>0.0546</b> |          | <b>227.2656</b> | <b>227.2656</b> | <b>7.0900e-003</b> | <b>0.0159</b> | <b>232.1810</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2177</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1850        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2177</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</b> |



Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |      |
| Other Asphalt Surfaces | 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        |      |
| <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> |      |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**5.2 Energy by Land Use - NaturalGas**

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.3470 | 2.0000e-005 | 1.8900e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 |          | 4.0500e-003 | 4.0500e-003 | 1.0000e-005 |     | 4.3100e-003 |
| Unmitigated | 0.3470 | 2.0000e-005 | 1.8900e-003 | 0.0000 |               | 1.0000e-005  | 1.0000e-005 |                | 1.0000e-005   | 1.0000e-005 |          | 4.0500e-003 | 4.0500e-003 | 1.0000e-005 |     | 4.3100e-003 |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O                | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|-----------|--------------------|--------------------|--------------------|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |           |                    |                    |                    |                    |
| Architectural Coating | 0.0614        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Consumer Products     | 0.2854        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Landscaping           | 1.7000e-004   | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          |           | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        | 4.3100e-003        |
| <b>Total</b>          | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> |               | <b>1.0000e-005</b> | <b>1.0000e-005</b> |                | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          |           | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>4.3100e-003</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10       | PM10 Total         | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2 | NBio- CO2 | Total CO2          | CH4                | N2O                | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|----------|-----------|--------------------|--------------------|--------------------|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |                    |                    |                |                    |                    | lb/day   |           |                    |                    |                    |                    |
| Architectural Coating | 0.0614        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Consumer Products     | 0.2854        |                    |                    |               |               | 0.0000             | 0.0000             |                | 0.0000             | 0.0000             |          |           | 0.0000             |                    |                    | 0.0000             |
| Landscaping           | 1.7000e-004   | 2.0000e-005        | 1.8900e-003        | 0.0000        |               | 1.0000e-005        | 1.0000e-005        |                | 1.0000e-005        | 1.0000e-005        |          |           | 4.0500e-003        | 4.0500e-003        | 1.0000e-005        | 4.3100e-003        |
| <b>Total</b>          | <b>0.3470</b> | <b>2.0000e-005</b> | <b>1.8900e-003</b> | <b>0.0000</b> |               | <b>1.0000e-005</b> | <b>1.0000e-005</b> |                | <b>1.0000e-005</b> | <b>1.0000e-005</b> |          |           | <b>4.0500e-003</b> | <b>4.0500e-003</b> | <b>1.0000e-005</b> | <b>4.3100e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Winter

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

**Etiwanda Pipeline Phase 1  
South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 18.50 | Acre   | 18.50       | 805,860.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 390.98                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.033 | <b>N2O Intensity (lb/MW hr)</b>  | 0.004 |

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

Project Characteristics -

Land Use - Per PDR

Construction Phase - Per Engineers

Off-road Equipment - Per Engineer Modeled for Trenching and Jack and Bore crew.

Off-road Equipment - modeled for Trenching and Jack and Bore crew

Trips and VMT - water truck trips and crew trucks added to grading and paving activities. Hauling trips account for soil import and material handling.

Construction Off-road Equipment Mitigation - Per rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 262.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 2,104.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

|                |                  |      |      |
|----------------|------------------|------|------|
| tbITripsAndVMT | VendorTripNumber | 0.00 | 4.00 |
|----------------|------------------|------|------|

**2.0 Emissions Summary**

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Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

**2.1 Overall Construction**

**Unmitigated Construction**

|                | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Year           | tons/yr       |               |               |               |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| 2022           | 0.5894        | 5.2871        | 5.1960        | 0.0103        | 0.0723        | 0.2489        | 0.3212        | 0.0195         | 0.2328        | 0.2522        | 0.0000        | 904.2801        | 904.2801        | 0.2212        | 0.0120        | 913.3938        |
| 2023           | 0.1036        | 0.9055        | 0.9948        | 2.0100e-003   | 0.0142        | 0.0408        | 0.0550        | 3.8200e-003    | 0.0382        | 0.0420        | 0.0000        | 176.6063        | 176.6063        | 0.0432        | 2.2300e-003   | 178.3511        |
| <b>Maximum</b> | <b>0.5894</b> | <b>5.2871</b> | <b>5.1960</b> | <b>0.0103</b> | <b>0.0723</b> | <b>0.2489</b> | <b>0.3212</b> | <b>0.0195</b>  | <b>0.2328</b> | <b>0.2522</b> | <b>0.0000</b> | <b>904.2801</b> | <b>904.2801</b> | <b>0.2212</b> | <b>0.0120</b> | <b>913.3938</b> |

**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         |                 |                 |               |               |                 |
| 2022           | 0.5894        | 5.2871        | 5.1960        | 0.0103        | 0.0723        | 0.2489        | 0.3212        | 0.0195         | 0.2328        | 0.2522        | 0.0000        | 904.2792        | 904.2792        | 0.2212        | 0.0120        | 913.3929        |
| 2023           | 0.1036        | 0.9055        | 0.9948        | 2.0100e-003   | 0.0142        | 0.0408        | 0.0550        | 3.8200e-003    | 0.0382        | 0.0420        | 0.0000        | 176.6061        | 176.6061        | 0.0432        | 2.2300e-003   | 178.3509        |
| <b>Maximum</b> | <b>0.5894</b> | <b>5.2871</b> | <b>5.1960</b> | <b>0.0103</b> | <b>0.0723</b> | <b>0.2489</b> | <b>0.3212</b> | <b>0.0195</b>  | <b>0.2328</b> | <b>0.2522</b> | <b>0.0000</b> | <b>904.2792</b> | <b>904.2792</b> | <b>0.2212</b> | <b>0.0120</b> | <b>913.3929</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

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

| Quarter | Start Date | End Date   | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 1       | 3-1-2022   | 5-31-2022  | 1.7611                                       | 1.7611                                     |
| 2       | 6-1-2022   | 8-31-2022  | 1.7601                                       | 1.7601                                     |
| 3       | 9-1-2022   | 11-30-2022 | 1.7429                                       | 1.7429                                     |
| 4       | 12-1-2022  | 2-28-2023  | 1.5830                                       | 1.5830                                     |
| 5       | 3-1-2023   | 5-31-2023  | 0.0168                                       | 0.0168                                     |
|         |            | Highest    | 1.7611                                       | 1.7611                                     |

**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         | 0.0633        | 0.0000        | 2.4000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 4.6000e-004        | 4.6000e-004        | 0.0000        | 0.0000        | 4.9000e-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        | 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>0.0633</b> | <b>0.0000</b> | <b>2.4000e-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>0.0000</b> | <b>4.6000e-004</b> | <b>4.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>4.9000e-004</b> |

Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

**2.2 Overall Operational**

**Mitigated Operational**

|              | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Area         | 0.0633        | 0.0000        | 2.4000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 4.6000e-004        | 4.6000e-004        | 0.0000        | 0.0000        | 4.9000e-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        | 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>0.0633</b> | <b>0.0000</b> | <b>2.4000e-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>0.0000</b> | <b>4.6000e-004</b> | <b>4.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>4.9000e-004</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            | Pipeline Installation | Trenching  | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |
| 2            | Paving                | Paving     | 3/1/2022   | 3/1/2023 | 5             | 262      |                   |

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

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 18.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 0.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 0.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 2,104.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

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

**3.2 Pipeline Installation - 2022**

**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     | 0.4272        | 3.8639        | 3.3849        | 6.6500e-003        |               | 0.1848        | 0.1848        |                | 0.1738        | 0.1738        | 0.0000        | 573.2151        | 573.2151        | 0.1453        | 0.0000        | 576.8484        |
| <b>Total</b> | <b>0.4272</b> | <b>3.8639</b> | <b>3.3849</b> | <b>6.6500e-003</b> |               | <b>0.1848</b> | <b>0.1848</b> |                | <b>0.1738</b> | <b>0.1738</b> | <b>0.0000</b> | <b>573.2151</b> | <b>573.2151</b> | <b>0.1453</b> | <b>0.0000</b> | <b>576.8484</b> |

**3.2 Pipeline Installation - 2022**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |                    |               |                |
| Hauling      | 3.8000e-003   | 0.1489        | 0.0338        | 5.4000e-004        | 0.0151        | 1.1300e-003        | 0.0163        | 4.1500e-003    | 1.0800e-003        | 5.2300e-003   | 0.0000        | 53.5807        | 53.5807        | 3.1700e-003        | 8.5200e-003   | 56.1974        |
| Vendor       | 7.9000e-004   | 0.0217        | 7.0200e-003   | 8.0000e-005        | 2.7600e-003   | 2.1000e-004        | 2.9700e-003   | 8.0000e-004    | 2.0000e-004        | 1.0000e-003   | 0.0000        | 8.2083         | 8.2083         | 3.0000e-004        | 1.1900e-003   | 8.5714         |
| Worker       | 0.0103        | 8.3000e-003   | 0.1085        | 3.0000e-004        | 0.0336        | 2.1000e-004        | 0.0338        | 8.9300e-003    | 1.9000e-004        | 9.1200e-003   | 0.0000        | 27.1964        | 27.1964        | 7.5000e-004        | 7.3000e-004   | 27.4337        |
| <b>Total</b> | <b>0.0149</b> | <b>0.1789</b> | <b>0.1494</b> | <b>9.2000e-004</b> | <b>0.0515</b> | <b>1.5500e-003</b> | <b>0.0531</b> | <b>0.0139</b>  | <b>1.4700e-003</b> | <b>0.0154</b> | <b>0.0000</b> | <b>88.9854</b> | <b>88.9854</b> | <b>4.2200e-003</b> | <b>0.0104</b> | <b>92.2025</b> |

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

**3.2 Pipeline Installation - 2022**

**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     | 0.4272        | 3.8639        | 3.3849        | 6.6500e-003        |               | 0.1848        | 0.1848        |                | 0.1738        | 0.1738        | 0.0000        | 573.2144        | 573.2144        | 0.1453        | 0.0000        | 576.8477        |
| <b>Total</b> | <b>0.4272</b> | <b>3.8639</b> | <b>3.3849</b> | <b>6.6500e-003</b> |               | <b>0.1848</b> | <b>0.1848</b> |                | <b>0.1738</b> | <b>0.1738</b> | <b>0.0000</b> | <b>573.2144</b> | <b>573.2144</b> | <b>0.1453</b> | <b>0.0000</b> | <b>576.8477</b> |

**3.2 Pipeline Installation - 2022**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |                    |               |                |                    |               | MT/yr         |                |                |                    |               |                |
| Hauling      | 3.8000e-003   | 0.1489        | 0.0338        | 5.4000e-004        | 0.0151        | 1.1300e-003        | 0.0163        | 4.1500e-003    | 1.0800e-003        | 5.2300e-003   | 0.0000        | 53.5807        | 53.5807        | 3.1700e-003        | 8.5200e-003   | 56.1974        |
| Vendor       | 7.9000e-004   | 0.0217        | 7.0200e-003   | 8.0000e-005        | 2.7600e-003   | 2.1000e-004        | 2.9700e-003   | 8.0000e-004    | 2.0000e-004        | 1.0000e-003   | 0.0000        | 8.2083         | 8.2083         | 3.0000e-004        | 1.1900e-003   | 8.5714         |
| Worker       | 0.0103        | 8.3000e-003   | 0.1085        | 3.0000e-004        | 0.0336        | 2.1000e-004        | 0.0338        | 8.9300e-003    | 1.9000e-004        | 9.1200e-003   | 0.0000        | 27.1964        | 27.1964        | 7.5000e-004        | 7.3000e-004   | 27.4337        |
| <b>Total</b> | <b>0.0149</b> | <b>0.1789</b> | <b>0.1494</b> | <b>9.2000e-004</b> | <b>0.0515</b> | <b>1.5500e-003</b> | <b>0.0531</b> | <b>0.0139</b>  | <b>1.4700e-003</b> | <b>0.0154</b> | <b>0.0000</b> | <b>88.9854</b> | <b>88.9854</b> | <b>4.2200e-003</b> | <b>0.0104</b> | <b>92.2025</b> |

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0740        | 0.6552        | 0.6427        | 1.3100e-003        |               | 0.0296        | 0.0296        |                | 0.0279        | 0.0279        | 0.0000        | 112.6004        | 112.6004        | 0.0283        | 0.0000        | 113.3090        |
| <b>Total</b> | <b>0.0740</b> | <b>0.6552</b> | <b>0.6427</b> | <b>1.3100e-003</b> |               | <b>0.0296</b> | <b>0.0296</b> |                | <b>0.0279</b> | <b>0.0279</b> | <b>0.0000</b> | <b>112.6004</b> | <b>112.6004</b> | <b>0.0283</b> | <b>0.0000</b> | <b>113.3090</b> |

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |                    |                |
| Hauling      | 3.5000e-004        | 0.0224        | 5.9700e-003   | 1.0000e-004        | 2.9700e-003   | 1.5000e-004        | 3.1200e-003   | 8.2000e-004        | 1.4000e-004        | 9.6000e-004        | 0.0000        | 9.9415         | 9.9415         | 6.1000e-004        | 1.5800e-003        | 10.4280        |
| Vendor       | 9.0000e-005        | 3.3000e-003   | 1.2300e-003   | 2.0000e-005        | 5.4000e-004   | 2.0000e-005        | 5.6000e-004   | 1.6000e-004        | 2.0000e-005        | 1.7000e-004        | 0.0000        | 1.5348         | 1.5348         | 6.0000e-005        | 2.2000e-004        | 1.6026         |
| Worker       | 1.8700e-003        | 1.4400e-003   | 0.0196        | 6.0000e-005        | 6.6000e-003   | 4.0000e-005        | 6.6400e-003   | 1.7500e-003        | 3.0000e-005        | 1.7900e-003        | 0.0000        | 5.1684         | 5.1684         | 1.3000e-004        | 1.3000e-004        | 5.2113         |
| <b>Total</b> | <b>2.3100e-003</b> | <b>0.0271</b> | <b>0.0268</b> | <b>1.8000e-004</b> | <b>0.0101</b> | <b>2.1000e-004</b> | <b>0.0103</b> | <b>2.7300e-003</b> | <b>1.9000e-004</b> | <b>2.9200e-003</b> | <b>0.0000</b> | <b>16.6446</b> | <b>16.6446</b> | <b>8.0000e-004</b> | <b>1.9300e-003</b> | <b>17.2418</b> |

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0740        | 0.6552        | 0.6427        | 1.3100e-003        |               | 0.0296        | 0.0296        |                | 0.0279        | 0.0279        | 0.0000        | 112.6003        | 112.6003        | 0.0283        | 0.0000        | 113.3089        |
| <b>Total</b> | <b>0.0740</b> | <b>0.6552</b> | <b>0.6427</b> | <b>1.3100e-003</b> |               | <b>0.0296</b> | <b>0.0296</b> |                | <b>0.0279</b> | <b>0.0279</b> | <b>0.0000</b> | <b>112.6003</b> | <b>112.6003</b> | <b>0.0283</b> | <b>0.0000</b> | <b>113.3089</b> |

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG                | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5     | Exhaust PM2.5      | PM2.5 Total        | Bio- CO2      | NBio- CO2      | Total CO2      | CH4                | N2O                | CO2e           |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|--------------------|----------------|
| Category     | tons/yr            |               |               |                    |               |                    |               |                    |                    |                    | MT/yr         |                |                |                    |                    |                |
| Hauling      | 3.5000e-004        | 0.0224        | 5.9700e-003   | 1.0000e-004        | 2.9700e-003   | 1.5000e-004        | 3.1200e-003   | 8.2000e-004        | 1.4000e-004        | 9.6000e-004        | 0.0000        | 9.9415         | 9.9415         | 6.1000e-004        | 1.5800e-003        | 10.4280        |
| Vendor       | 9.0000e-005        | 3.3000e-003   | 1.2300e-003   | 2.0000e-005        | 5.4000e-004   | 2.0000e-005        | 5.6000e-004   | 1.6000e-004        | 2.0000e-005        | 1.7000e-004        | 0.0000        | 1.5348         | 1.5348         | 6.0000e-005        | 2.2000e-004        | 1.6026         |
| Worker       | 1.8700e-003        | 1.4400e-003   | 0.0196        | 6.0000e-005        | 6.6000e-003   | 4.0000e-005        | 6.6400e-003   | 1.7500e-003        | 3.0000e-005        | 1.7900e-003        | 0.0000        | 5.1684         | 5.1684         | 1.3000e-004        | 1.3000e-004        | 5.2113         |
| <b>Total</b> | <b>2.3100e-003</b> | <b>0.0271</b> | <b>0.0268</b> | <b>1.8000e-004</b> | <b>0.0101</b> | <b>2.1000e-004</b> | <b>0.0103</b> | <b>2.7300e-003</b> | <b>1.9000e-004</b> | <b>2.9200e-003</b> | <b>0.0000</b> | <b>16.6446</b> | <b>16.6446</b> | <b>8.0000e-004</b> | <b>1.9300e-003</b> | <b>17.2418</b> |



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

**3.3 Paving - 2022**

**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     | 0.1208        | 1.2182        | 1.5966        | 2.5000e-003        |               | 0.0622        | 0.0622        |                | 0.0572        | 0.0572        | 0.0000        | 219.3018        | 219.3018        | 0.0709        | 0.0000        | 221.0749        |
| Paving       | 0.0203        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.1410</b> | <b>1.2182</b> | <b>1.5966</b> | <b>2.5000e-003</b> |               | <b>0.0622</b> | <b>0.0622</b> |                | <b>0.0572</b> | <b>0.0572</b> | <b>0.0000</b> | <b>219.3018</b> | <b>219.3018</b> | <b>0.0709</b> | <b>0.0000</b> | <b>221.0749</b> |

**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       | 7.9000e-004        | 0.0217        | 7.0200e-003   | 8.0000e-005        | 2.7600e-003   | 2.1000e-004        | 2.9700e-003   | 8.0000e-004        | 2.0000e-004        | 1.0000e-003        | 0.0000        | 8.2083         | 8.2083         | 3.0000e-004        | 1.1900e-003        | 8.5714         |
| Worker       | 5.5000e-003        | 4.4500e-003   | 0.0581        | 1.6000e-004        | 0.0180        | 1.1000e-004        | 0.0181        | 4.7900e-003        | 1.0000e-004        | 4.8900e-003        | 0.0000        | 14.5695        | 14.5695        | 4.0000e-004        | 3.9000e-004        | 14.6966        |
| <b>Total</b> | <b>6.2900e-003</b> | <b>0.0261</b> | <b>0.0651</b> | <b>2.4000e-004</b> | <b>0.0208</b> | <b>3.2000e-004</b> | <b>0.0211</b> | <b>5.5900e-003</b> | <b>3.0000e-004</b> | <b>5.8900e-003</b> | <b>0.0000</b> | <b>22.7778</b> | <b>22.7778</b> | <b>7.0000e-004</b> | <b>1.5800e-003</b> | <b>23.2680</b> |

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

**3.3 Paving - 2022**

**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     | 0.1208        | 1.2182        | 1.5966        | 2.5000e-003        |               | 0.0622        | 0.0622        |                | 0.0572        | 0.0572        | 0.0000        | 219.3015        | 219.3015        | 0.0709        | 0.0000        | 221.0747        |
| Paving       | 0.0203        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.1410</b> | <b>1.2182</b> | <b>1.5966</b> | <b>2.5000e-003</b> |               | <b>0.0622</b> | <b>0.0622</b> |                | <b>0.0572</b> | <b>0.0572</b> | <b>0.0000</b> | <b>219.3015</b> | <b>219.3015</b> | <b>0.0709</b> | <b>0.0000</b> | <b>221.0747</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       | 7.9000e-004        | 0.0217        | 7.0200e-003   | 8.0000e-005        | 2.7600e-003   | 2.1000e-004        | 2.9700e-003   | 8.0000e-004        | 2.0000e-004        | 1.0000e-003        | 0.0000        | 8.2083         | 8.2083         | 3.0000e-004        | 1.1900e-003        | 8.5714         |
| Worker       | 5.5000e-003        | 4.4500e-003   | 0.0581        | 1.6000e-004        | 0.0180        | 1.1000e-004        | 0.0181        | 4.7900e-003        | 1.0000e-004        | 4.8900e-003        | 0.0000        | 14.5695        | 14.5695        | 4.0000e-004        | 3.9000e-004        | 14.6966        |
| <b>Total</b> | <b>6.2900e-003</b> | <b>0.0261</b> | <b>0.0651</b> | <b>2.4000e-004</b> | <b>0.0208</b> | <b>3.2000e-004</b> | <b>0.0211</b> | <b>5.5900e-003</b> | <b>3.0000e-004</b> | <b>5.8900e-003</b> | <b>0.0000</b> | <b>22.7778</b> | <b>22.7778</b> | <b>7.0000e-004</b> | <b>1.5800e-003</b> | <b>23.2680</b> |

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

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0222        | 0.2191        | 0.3136        | 4.9000e-004        |               | 0.0110        | 0.0110        |                | 0.0101        | 0.0101        | 0.0000        | 43.0578        | 43.0578        | 0.0139        | 0.0000        | 43.4059        |
| Paving       | 3.9800e-003   |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0262</b> | <b>0.2191</b> | <b>0.3136</b> | <b>4.9000e-004</b> |               | <b>0.0110</b> | <b>0.0110</b> |                | <b>0.0101</b> | <b>0.0101</b> | <b>0.0000</b> | <b>43.0578</b> | <b>43.0578</b> | <b>0.0139</b> | <b>0.0000</b> | <b>43.4059</b> |

**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       | 9.0000e-005        | 3.3000e-003        | 1.2300e-003   | 2.0000e-005        | 5.4000e-004        | 2.0000e-005        | 5.6000e-004        | 1.6000e-004        | 2.0000e-005        | 1.7000e-004        | 0.0000        | 1.5348        | 1.5348        | 6.0000e-005        | 2.2000e-004        | 1.6026        |
| Worker       | 1.0000e-003        | 7.7000e-004        | 0.0105        | 3.0000e-005        | 3.5400e-003        | 2.0000e-005        | 3.5600e-003        | 9.4000e-004        | 2.0000e-005        | 9.6000e-004        | 0.0000        | 2.7688        | 2.7688        | 7.0000e-005        | 7.0000e-005        | 2.7918        |
| <b>Total</b> | <b>1.0900e-003</b> | <b>4.0700e-003</b> | <b>0.0117</b> | <b>5.0000e-005</b> | <b>4.0800e-003</b> | <b>4.0000e-005</b> | <b>4.1200e-003</b> | <b>1.1000e-003</b> | <b>4.0000e-005</b> | <b>1.1300e-003</b> | <b>0.0000</b> | <b>4.3035</b> | <b>4.3035</b> | <b>1.3000e-004</b> | <b>2.9000e-004</b> | <b>4.3943</b> |

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

**3.3 Paving - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2      | Total CO2      | CH4           | N2O           | CO2e           |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                |                |               |               |                |
| Off-Road     | 0.0222        | 0.2191        | 0.3136        | 4.9000e-004        |               | 0.0110        | 0.0110        |                | 0.0101        | 0.0101        | 0.0000        | 43.0577        | 43.0577        | 0.0139        | 0.0000        | 43.4059        |
| Paving       | 3.9800e-003   |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0262</b> | <b>0.2191</b> | <b>0.3136</b> | <b>4.9000e-004</b> |               | <b>0.0110</b> | <b>0.0110</b> |                | <b>0.0101</b> | <b>0.0101</b> | <b>0.0000</b> | <b>43.0577</b> | <b>43.0577</b> | <b>0.0139</b> | <b>0.0000</b> | <b>43.4059</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       | 9.0000e-005        | 3.3000e-003        | 1.2300e-003   | 2.0000e-005        | 5.4000e-004        | 2.0000e-005        | 5.6000e-004        | 1.6000e-004        | 2.0000e-005        | 1.7000e-004        | 0.0000        | 1.5348        | 1.5348        | 6.0000e-005        | 2.2000e-004        | 1.6026        |
| Worker       | 1.0000e-003        | 7.7000e-004        | 0.0105        | 3.0000e-005        | 3.5400e-003        | 2.0000e-005        | 3.5600e-003        | 9.4000e-004        | 2.0000e-005        | 9.6000e-004        | 0.0000        | 2.7688        | 2.7688        | 7.0000e-005        | 7.0000e-005        | 2.7918        |
| <b>Total</b> | <b>1.0900e-003</b> | <b>4.0700e-003</b> | <b>0.0117</b> | <b>5.0000e-005</b> | <b>4.0800e-003</b> | <b>4.0000e-005</b> | <b>4.1200e-003</b> | <b>1.1000e-003</b> | <b>4.0000e-005</b> | <b>1.1300e-003</b> | <b>0.0000</b> | <b>4.3035</b> | <b>4.3035</b> | <b>1.3000e-004</b> | <b>2.9000e-004</b> | <b>4.3943</b> |

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |





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

5.3 Energy by Land Use - Electricity

Unmitigated

| Land Use               | Electricity Use | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------------|-----------|--------|--------|--------|
| Land Use               | kWh/yr          | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0               | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Total                  |                 | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| Land Use               | Electricity Use | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------------|-----------|--------|--------|--------|
| Land Use               | kWh/yr          | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0               | 0.0000    | 0.0000 | 0.0000 | 0.0000 |
| Total                  |                 | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area



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

|             | ROG     | NOx    | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | tons/yr |        |             |        |               |              |            |                |               |             | MT/yr    |             |             |        |        |             |
| Mitigated   | 0.0633  | 0.0000 | 2.4000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 4.6000e-004 | 4.6000e-004 | 0.0000 | 0.0000 | 4.9000e-004 |
| Unmitigated | 0.0633  | 0.0000 | 2.4000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 4.6000e-004 | 4.6000e-004 | 0.0000 | 0.0000 | 4.9000e-004 |

**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 | 0.0112        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0521        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 2.0000e-005   | 0.0000        | 2.4000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 4.6000e-004        | 4.6000e-004        | 0.0000        | 0.0000        | 4.9000e-004        |
| <b>Total</b>          | <b>0.0633</b> | <b>0.0000</b> | <b>2.4000e-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>4.6000e-004</b> | <b>4.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>4.9000e-004</b> |

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Architectural Coating | 0.0112        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0521        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 2.0000e-005   | 0.0000        | 2.4000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 4.6000e-004        | 4.6000e-004        | 0.0000        | 0.0000        | 4.9000e-004        |
| <b>Total</b>          | <b>0.0633</b> | <b>0.0000</b> | <b>2.4000e-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>4.6000e-004</b> | <b>4.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>4.9000e-004</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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

|             | 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         |               |               |               |
| Other Asphalt Surfaces | 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> |

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

**7.2 Water by Land Use**

Mitigated

|                        | Indoor/Outdoor Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | MT/yr         |               |               |               |
| Other Asphalt Surfaces | 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 |

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

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**8.2 Waste by Land Use**

**Unmitigated**

| Waste Disposed         | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|---------------|---------------|---------------|---------------|
| 0                      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Land Use               | tons          | MT/yr         |               |               |
| Other Asphalt Surfaces | 0             | 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          |
|------------------------|---------------|---------------|---------------|---------------|
| 0                      | 0.0000        | 0.0000        | 0.0000        | 0.0000        |
| Land Use               | tons          | MT/yr         |               |               |
| Other Asphalt Surfaces | 0             | 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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

## Etiwanda Pipeline Phase 1 - South Coast Air Basin, Annual

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**Etiwanda Pipeline Phase 2  
South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 13.50 | Acre   | 13.50       | 588,060.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 390.98                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.033 | <b>N2O Intensity (lb/MW hr)</b>  | 0.004 |

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

Project Characteristics -  
 Land Use - Per PDR.  
 Construction Phase - Per Engineers.  
 Off-road Equipment - Per Engineers  
 Trips and VMT - water truck trips and crew truck added to grading and paving activities. Hauling trips account for soil import and material handling.  
 Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 235.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 1,880.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**2.0 Emissions Summary**

**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        |                   |                   |               |               |                   |
| 2022           | 5.3510        | 48.1790        | 47.5539        | 0.0943        | 0.6717        | 2.2726        | 2.9443        | 0.1806         | 2.1255        | 2.3061        | 0.0000        | 9,119.6850        | 9,119.6850        | 2.2264        | 0.1199        | 9,211.0631        |
| 2023           | 4.7856        | 42.0329        | 46.3652        | 0.0938        | 0.6717        | 1.8994        | 2.5711        | 0.1806         | 1.7771        | 1.9576        | 0.0000        | 9,070.3991        | 9,070.3991        | 2.2145        | 0.1132        | 9,159.5017        |
| <b>Maximum</b> | <b>5.3510</b> | <b>48.1790</b> | <b>47.5539</b> | <b>0.0943</b> | <b>0.6717</b> | <b>2.2726</b> | <b>2.9443</b> | <b>0.1806</b>  | <b>2.1255</b> | <b>2.3061</b> | <b>0.0000</b> | <b>9,119.6850</b> | <b>9,119.6850</b> | <b>2.2264</b> | <b>0.1199</b> | <b>9,211.0631</b> |

**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        |                   |                   |               |               |                   |
| 2022           | 5.3510        | 48.1790        | 47.5539        | 0.0943        | 0.6717        | 2.2726        | 2.9443        | 0.1806         | 2.1255        | 2.3061        | 0.0000        | 9,119.6850        | 9,119.6850        | 2.2264        | 0.1199        | 9,211.0631        |
| 2023           | 4.7856        | 42.0329        | 46.3652        | 0.0938        | 0.6717        | 1.8994        | 2.5711        | 0.1806         | 1.7771        | 1.9576        | 0.0000        | 9,070.3991        | 9,070.3991        | 2.2145        | 0.1132        | 9,159.5017        |
| <b>Maximum</b> | <b>5.3510</b> | <b>48.1790</b> | <b>47.5539</b> | <b>0.0943</b> | <b>0.6717</b> | <b>2.2726</b> | <b>2.9443</b> | <b>0.1806</b>  | <b>2.1255</b> | <b>2.3061</b> | <b>0.0000</b> | <b>9,119.6850</b> | <b>9,119.6850</b> | <b>2.2264</b> | <b>0.1199</b> | <b>9,211.0631</b> |





Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.2532        | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |               | 3.1500e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</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>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.1500e-003</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         | 0.2532        | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |               | 3.1500e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</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>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.1500e-003</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|-----------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |
| 2            | Paving                | Paving     | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 13.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 8.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 8.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

|        |                  |   |      |     |      |
|--------|------------------|---|------|-----|------|
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers          | 2 | 8.00 | 80  | 0.38 |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,880.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2022**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        |          | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> |          | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0350        | 1.2860        | 0.3057        | 4.8800e-003        | 0.1399        | 0.0103        | 0.1501        | 0.0383         | 9.8100e-003   | 0.0482        |          | 537.2704        | 537.2704        | 0.0318        | 0.0854        | 563.5088        |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003   | 0.0275        | 7.3700e-003    | 1.8400e-003   | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003   | 0.0120        | 86.2702         |
| Worker       | 0.0955        | 0.0674        | 1.0608        | 2.8300e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 285.9205        | 285.9205        | 7.4800e-003   | 6.8300e-003   | 288.1417        |
| <b>Total</b> | <b>0.1378</b> | <b>1.5422</b> | <b>1.4297</b> | <b>8.4800e-003</b> | <b>0.4785</b> | <b>0.0140</b> | <b>0.4925</b> | <b>0.1287</b>  | <b>0.0134</b> | <b>0.1421</b> |          | <b>905.8096</b> | <b>905.8096</b> | <b>0.0423</b> | <b>0.1042</b> | <b>937.9207</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     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        | 0.0000        | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> | <b>0.0000</b> | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0350        | 1.2860        | 0.3057        | 4.8800e-003        | 0.1399        | 0.0103        | 0.1501        | 0.0383         | 9.8100e-003   | 0.0482        |          | 537.2704        | 537.2704        | 0.0318        | 0.0854        | 563.5088        |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003   | 0.0275        | 7.3700e-003    | 1.8400e-003   | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003   | 0.0120        | 86.2702         |
| Worker       | 0.0955        | 0.0674        | 1.0608        | 2.8300e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 285.9205        | 285.9205        | 7.4800e-003   | 6.8300e-003   | 288.1417        |
| <b>Total</b> | <b>0.1378</b> | <b>1.5422</b> | <b>1.4297</b> | <b>8.4800e-003</b> | <b>0.4785</b> | <b>0.0140</b> | <b>0.4925</b> | <b>0.1287</b>  | <b>0.0134</b> | <b>0.1421</b> |          | <b>905.8096</b> | <b>905.8096</b> | <b>0.0423</b> | <b>0.1042</b> | <b>937.9207</b> |

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        |          | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> |          | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9848        | 0.2750        | 4.5900e-003        | 0.1399        | 6.9100e-003        | 0.1468        | 0.0383         | 6.6100e-003        | 0.0450        |          | 507.5470        | 507.5470        | 0.0312        | 0.0807        | 532.3827        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1097</b> | <b>1.1909</b> | <b>1.3074</b> | <b>8.0600e-003</b> | <b>0.4785</b> | <b>9.4800e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0000e-003</b> | <b>0.1377</b> |          | <b>862.8895</b> | <b>862.8895</b> | <b>0.0408</b> | <b>0.0984</b> | <b>893.2438</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     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        | 0.0000        | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> | <b>0.0000</b> | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9848        | 0.2750        | 4.5900e-003        | 0.1399        | 6.9100e-003        | 0.1468        | 0.0383         | 6.6100e-003        | 0.0450        |          | 507.5470        | 507.5470        | 0.0312        | 0.0807        | 532.3827        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1097</b> | <b>1.1909</b> | <b>1.3074</b> | <b>8.0600e-003</b> | <b>0.4785</b> | <b>9.4800e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0000e-003</b> | <b>0.1377</b> |          | <b>862.8895</b> | <b>862.8895</b> | <b>0.0408</b> | <b>0.0984</b> | <b>893.2438</b> |

**3.3 Paving - 2022**

**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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2533</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.3 Paving - 2022**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003        | 0.0275        | 7.3700e-003    | 1.8400e-003        | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003        | 0.0120        | 86.2702         |
| Worker       | 0.0512        | 0.0361        | 0.5683        | 1.5200e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 153.1717        | 153.1717        | 4.0100e-003        | 3.6600e-003   | 154.3616        |
| <b>Total</b> | <b>0.0585</b> | <b>0.2249</b> | <b>0.6314</b> | <b>2.2900e-003</b> | <b>0.1933</b> | <b>2.9200e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7600e-003</b> | <b>0.0546</b> |          | <b>235.7904</b> | <b>235.7904</b> | <b>7.0500e-003</b> | <b>0.0157</b> | <b>240.6318</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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2533</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.3 Paving - 2022**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.3000e-003   | 0.1887        | 0.0631        | 7.7000e-004        | 0.0256        | 1.9200e-003        | 0.0275        | 7.3700e-003    | 1.8400e-003        | 9.2100e-003   |          | 82.6187         | 82.6187         | 3.0400e-003        | 0.0120        | 86.2702         |
| Worker       | 0.0512        | 0.0361        | 0.5683        | 1.5200e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 153.1717        | 153.1717        | 4.0100e-003        | 3.6600e-003   | 154.3616        |
| <b>Total</b> | <b>0.0585</b> | <b>0.2249</b> | <b>0.6314</b> | <b>2.2900e-003</b> | <b>0.1933</b> | <b>2.9200e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7600e-003</b> | <b>0.0546</b> |          | <b>235.7904</b> | <b>235.7904</b> | <b>7.0500e-003</b> | <b>0.0157</b> | <b>240.6318</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1833</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1833</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**5.2 Energy by Land Use - NaturalGas**

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.2532 | 1.0000e-005 | 1.3800e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.9500e-003 | 2.9500e-003 | 1.0000e-005 |     | 3.1500e-003 |
| Unmitigated | 0.2532 | 1.0000e-005 | 1.3800e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.9500e-003 | 2.9500e-003 | 1.0000e-005 |     | 3.1500e-003 |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0448        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.2083        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.3000e-004   | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |     | 3.1500e-003        |
| <b>Total</b>          | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> |     | <b>3.1500e-003</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0448        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.2083        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.3000e-004   | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |     | 3.1500e-003        |
| <b>Total</b>          | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> |     | <b>3.1500e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Summer

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**Etiwanda Pipeline Phase 2  
South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 13.50 | Acre   | 13.50       | 588,060.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 390.98                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.033 | <b>N2O Intensity (lb/MW hr)</b>  | 0.004 |

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

Project Characteristics -

Land Use - Per PDR.

Construction Phase - Per Engineers.

Off-road Equipment - Per Engineers

Trips and VMT - water truck trips and crew truck added to grading and paving activities. Hauling trips account for soil import and material handling.

Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 235.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 1,880.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**2.0 Emissions Summary**

**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        |                   |                   |               |               |                   |
| 2022           | 5.3590        | 48.2581        | 47.4180        | 0.0940        | 0.6717        | 2.2726        | 2.9443        | 0.1806         | 2.1256        | 2.3061        | 0.0000        | 9,095.3717        | 9,095.3717        | 2.2265        | 0.1206        | 9,186.9652        |
| 2023           | 4.7930        | 42.0999        | 46.2399        | 0.0936        | 0.6717        | 1.8994        | 2.5711        | 0.1806         | 1.7771        | 1.9576        | 0.0000        | 9,047.5010        | 9,047.5010        | 2.2146        | 0.1140        | 9,136.8288        |
| <b>Maximum</b> | <b>5.3590</b> | <b>48.2581</b> | <b>47.4180</b> | <b>0.0940</b> | <b>0.6717</b> | <b>2.2726</b> | <b>2.9443</b> | <b>0.1806</b>  | <b>2.1256</b> | <b>2.3061</b> | <b>0.0000</b> | <b>9,095.3717</b> | <b>9,095.3717</b> | <b>2.2265</b> | <b>0.1206</b> | <b>9,186.9652</b> |

**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        |                   |                   |               |               |                   |
| 2022           | 5.3590        | 48.2581        | 47.4180        | 0.0940        | 0.6717        | 2.2726        | 2.9443        | 0.1806         | 2.1256        | 2.3061        | 0.0000        | 9,095.3717        | 9,095.3717        | 2.2265        | 0.1206        | 9,186.9652        |
| 2023           | 4.7930        | 42.0999        | 46.2399        | 0.0936        | 0.6717        | 1.8994        | 2.5711        | 0.1806         | 1.7771        | 1.9576        | 0.0000        | 9,047.5010        | 9,047.5010        | 2.2146        | 0.1140        | 9,136.8288        |
| <b>Maximum</b> | <b>5.3590</b> | <b>48.2581</b> | <b>47.4180</b> | <b>0.0940</b> | <b>0.6717</b> | <b>2.2726</b> | <b>2.9443</b> | <b>0.1806</b>  | <b>2.1256</b> | <b>2.3061</b> | <b>0.0000</b> | <b>9,095.3717</b> | <b>9,095.3717</b> | <b>2.2265</b> | <b>0.1206</b> | <b>9,186.9652</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.2532        | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |               | 3.1500e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</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>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.1500e-003</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         | 0.2532        | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |               | 3.1500e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</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>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>3.1500e-003</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date  | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|-----------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |
| 2            | Paving                | Paving     | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 13.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 8.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 8.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

|        |                  |   |      |     |      |
|--------|------------------|---|------|-----|------|
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers          | 2 | 8.00 | 80  | 0.38 |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,880.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2022**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        |          | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> |          | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0341        | 1.3394        | 0.3111        | 4.8800e-003        | 0.1399        | 0.0103        | 0.1502        | 0.0383         | 9.8300e-003   | 0.0482        |          | 537.4209        | 537.4209        | 0.0318        | 0.0854        | 563.6659        |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003   | 0.0275        | 7.3700e-003    | 1.8500e-003   | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003   | 0.0120        | 86.3039         |
| Worker       | 0.1014        | 0.0740        | 0.9660        | 2.6700e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 269.9515        | 269.9515        | 7.5800e-003   | 7.2600e-003   | 272.3039        |
| <b>Total</b> | <b>0.1427</b> | <b>1.6099</b> | <b>1.3424</b> | <b>8.3200e-003</b> | <b>0.4785</b> | <b>0.0141</b> | <b>0.4925</b> | <b>0.1287</b>  | <b>0.0134</b> | <b>0.1421</b> |          | <b>890.0211</b> | <b>890.0211</b> | <b>0.0424</b> | <b>0.1047</b> | <b>922.2737</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     | 3.9014        | 35.2871        | 30.9123        | 0.0607        |               | 1.6877        | 1.6877        |                | 1.5869        | 1.5869        | 0.0000        | 5,770.4247        | 5,770.4247        | 1.4630        |     | 5,807.0002        |
| <b>Total</b> | <b>3.9014</b> | <b>35.2871</b> | <b>30.9123</b> | <b>0.0607</b> |               | <b>1.6877</b> | <b>1.6877</b> |                | <b>1.5869</b> | <b>1.5869</b> | <b>0.0000</b> | <b>5,770.4247</b> | <b>5,770.4247</b> | <b>1.4630</b> |     | <b>5,807.0002</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2022**

**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      | 0.0341        | 1.3394        | 0.3111        | 4.8800e-003        | 0.1399        | 0.0103        | 0.1502        | 0.0383         | 9.8300e-003   | 0.0482        |          | 537.4209        | 537.4209        | 0.0318        | 0.0854        | 563.6659        |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003   | 0.0275        | 7.3700e-003    | 1.8500e-003   | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003   | 0.0120        | 86.3039         |
| Worker       | 0.1014        | 0.0740        | 0.9660        | 2.6700e-003        | 0.3130        | 1.8700e-003   | 0.3149        | 0.0830         | 1.7300e-003   | 0.0847        |          | 269.9515        | 269.9515        | 7.5800e-003   | 7.2600e-003   | 272.3039        |
| <b>Total</b> | <b>0.1427</b> | <b>1.6099</b> | <b>1.3424</b> | <b>8.3200e-003</b> | <b>0.4785</b> | <b>0.0141</b> | <b>0.4925</b> | <b>0.1287</b>  | <b>0.0134</b> | <b>0.1421</b> |          | <b>890.0211</b> | <b>890.0211</b> | <b>0.0424</b> | <b>0.1047</b> | <b>922.2737</b> |

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        |          | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> |          | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0158        | 1.0291        | 0.2787        | 4.6000e-003        | 0.1399        | 6.9200e-003        | 0.1468        | 0.0383         | 6.6200e-003        | 0.0450        |          | 508.0690        | 508.0690        | 0.0311        | 0.0808        | 532.9284        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1142</b> | <b>1.2478</b> | <b>1.2266</b> | <b>7.9200e-003</b> | <b>0.4785</b> | <b>9.4900e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0200e-003</b> | <b>0.1377</b> |          | <b>848.1216</b> | <b>848.1216</b> | <b>0.0408</b> | <b>0.0989</b> | <b>878.6284</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     | 3.4409        | 30.4721        | 29.8943        | 0.0607        |               | 1.3779        | 1.3779        |                | 1.2970        | 1.2970        | 0.0000        | 5,773.0558        | 5,773.0558        | 1.4532        |     | 5,809.3865        |
| <b>Total</b> | <b>3.4409</b> | <b>30.4721</b> | <b>29.8943</b> | <b>0.0607</b> |               | <b>1.3779</b> | <b>1.3779</b> |                | <b>1.2970</b> | <b>1.2970</b> | <b>0.0000</b> | <b>5,773.0558</b> | <b>5,773.0558</b> | <b>1.4532</b> |     | <b>5,809.3865</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

Mitigated Construction Off-Site

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0158        | 1.0291        | 0.2787        | 4.6000e-003        | 0.1399        | 6.9200e-003        | 0.1468        | 0.0383         | 6.6200e-003        | 0.0450        |          | 508.0690        | 508.0690        | 0.0311        | 0.0808        | 532.9284        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1142</b> | <b>1.2478</b> | <b>1.2266</b> | <b>7.9200e-003</b> | <b>0.4785</b> | <b>9.4900e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0200e-003</b> | <b>0.1377</b> |          | <b>848.1216</b> | <b>848.1216</b> | <b>0.0408</b> | <b>0.0989</b> | <b>878.6284</b> |

**3.3 Paving - 2022**

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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        |          | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2533</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> |          | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.3 Paving - 2022**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003        | 0.0275        | 7.3700e-003    | 1.8500e-003        | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003        | 0.0120        | 86.3039         |
| Worker       | 0.0543        | 0.0396        | 0.5175        | 1.4300e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 144.6169        | 144.6169        | 4.0600e-003        | 3.8900e-003   | 145.8771        |
| <b>Total</b> | <b>0.0615</b> | <b>0.2362</b> | <b>0.5829</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>2.9300e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7700e-003</b> | <b>0.0546</b> |          | <b>227.2656</b> | <b>227.2656</b> | <b>7.0900e-003</b> | <b>0.0159</b> | <b>232.1810</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     | 1.1028        | 11.1249        | 14.5805        | 0.0228        |               | 0.5679        | 0.5679        |                | 0.5225        | 0.5225        | 0.0000        | 2,207.6603        | 2,207.6603        | 0.7140        |     | 2,225.5104        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2533</b> | <b>11.1249</b> | <b>14.5805</b> | <b>0.0228</b> |               | <b>0.5679</b> | <b>0.5679</b> |                | <b>0.5225</b> | <b>0.5225</b> | <b>0.0000</b> | <b>2,207.6603</b> | <b>2,207.6603</b> | <b>0.7140</b> |     | <b>2,225.5104</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.3 Paving - 2022**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 7.2000e-003   | 0.1966        | 0.0654        | 7.7000e-004        | 0.0256        | 1.9300e-003        | 0.0275        | 7.3700e-003    | 1.8500e-003        | 9.2200e-003   |          | 82.6487         | 82.6487         | 3.0300e-003        | 0.0120        | 86.3039         |
| Worker       | 0.0543        | 0.0396        | 0.5175        | 1.4300e-003        | 0.1677        | 1.0000e-003        | 0.1687        | 0.0445         | 9.2000e-004        | 0.0454        |          | 144.6169        | 144.6169        | 4.0600e-003        | 3.8900e-003   | 145.8771        |
| <b>Total</b> | <b>0.0615</b> | <b>0.2362</b> | <b>0.5829</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>2.9300e-003</b> | <b>0.1962</b> | <b>0.0518</b>  | <b>2.7700e-003</b> | <b>0.0546</b> |          | <b>227.2656</b> | <b>227.2656</b> | <b>7.0900e-003</b> | <b>0.0159</b> | <b>232.1810</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1833</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1505        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.1833</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**5.2 Energy by Land Use - NaturalGas**

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.2532 | 1.0000e-005 | 1.3800e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.9500e-003 | 2.9500e-003 | 1.0000e-005 |     | 3.1500e-003 |
| Unmitigated | 0.2532 | 1.0000e-005 | 1.3800e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.9500e-003 | 2.9500e-003 | 1.0000e-005 |     | 3.1500e-003 |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0448        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.2083        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.3000e-004   | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |     | 3.1500e-003        |
| <b>Total</b>          | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> |     | <b>3.1500e-003</b> |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0448        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.2083        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.3000e-004   | 1.0000e-005        | 1.3800e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.9500e-003        | 2.9500e-003        | 1.0000e-005        |     | 3.1500e-003        |
| <b>Total</b>          | <b>0.2532</b> | <b>1.0000e-005</b> | <b>1.3800e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.9500e-003</b> | <b>2.9500e-003</b> | <b>1.0000e-005</b> |     | <b>3.1500e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Winter

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Etiwanda Pipeline Phase 2 - South Coast Air Basin, Annual

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

**Etiwanda Pipeline Phase 2  
South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 13.50 | Acre   | 13.50       | 588,060.00         | 0          |

**1.2 Other Project Characteristics**

|                                 |                            |                                 |       |                                  |       |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>             | Urban                      | <b>Wind Speed (m/s)</b>         | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>             | 10                         |                                 |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>          | Southern California Edison |                                 |       |                                  |       |
| <b>CO2 Intensity (lb/MW hr)</b> | 390.98                     | <b>CH4 Intensity (lb/MW hr)</b> | 0.033 | <b>N2O Intensity (lb/MW hr)</b>  | 0.004 |

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

Project Characteristics -  
 Land Use - Per PDR.  
 Construction Phase - Per Engineers.  
 Off-road Equipment - Per Engineers  
 Trips and VMT - water truck trips and crew truck added to grading and paving activities. Hauling trips account for soil import and material handling.  
 Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name       | Default Value | New Value |
|----------------------|-------------------|---------------|-----------|
| tblConstructionPhase | NumDays           | 20.00         | 235.00    |
| tblTripsAndVMT       | HaulingTripNumber | 0.00          | 1,880.00  |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |
| tblTripsAndVMT       | VendorTripNumber  | 0.00          | 4.00      |

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Annual

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

**2.0 Emissions Summary**

**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         |                 |                 |               |                    |                 |
| 2022           | 0.1738        | 1.5691        | 1.5421        | 3.0600e-003        | 0.0214        | 0.0739        | 0.0953        | 5.7700e-003    | 0.0691        | 0.0749        | 0.0000        | 268.3332        | 268.3332        | 0.0657        | 3.5600e-003        | 271.0352        |
| 2023           | 0.4065        | 3.5795        | 3.9330        | 7.9600e-003        | 0.0561        | 0.1615        | 0.2175        | 0.0151         | 0.1511        | 0.1662        | 0.0000        | 698.0615        | 698.0615        | 0.1708        | 8.8000e-003        | 704.9520        |
| <b>Maximum</b> | <b>0.4065</b> | <b>3.5795</b> | <b>3.9330</b> | <b>7.9600e-003</b> | <b>0.0561</b> | <b>0.1615</b> | <b>0.2175</b> | <b>0.0151</b>  | <b>0.1511</b> | <b>0.1662</b> | <b>0.0000</b> | <b>698.0615</b> | <b>698.0615</b> | <b>0.1708</b> | <b>8.8000e-003</b> | <b>704.9520</b> |

**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         |                 |                 |               |                    |                 |
| 2022           | 0.1738        | 1.5691        | 1.5421        | 3.0600e-003        | 0.0214        | 0.0739        | 0.0953        | 5.7700e-003    | 0.0691        | 0.0749        | 0.0000        | 268.3329        | 268.3329        | 0.0657        | 3.5600e-003        | 271.0349        |
| 2023           | 0.4065        | 3.5795        | 3.9330        | 7.9600e-003        | 0.0561        | 0.1615        | 0.2175        | 0.0151         | 0.1511        | 0.1662        | 0.0000        | 698.0608        | 698.0608        | 0.1708        | 8.8000e-003        | 704.9513        |
| <b>Maximum</b> | <b>0.4065</b> | <b>3.5795</b> | <b>3.9330</b> | <b>7.9600e-003</b> | <b>0.0561</b> | <b>0.1615</b> | <b>0.2175</b> | <b>0.0151</b>  | <b>0.1511</b> | <b>0.1662</b> | <b>0.0000</b> | <b>698.0608</b> | <b>698.0608</b> | <b>0.1708</b> | <b>8.8000e-003</b> | <b>704.9513</b> |



Etiwanda Pipeline Phase 2 - South Coast Air Basin, Annual

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

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

| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1       | 10-3-2022  | 1-2-2023  | 1.7569                                       | 1.7569                                     |
| 2       | 1-3-2023   | 4-2-2023  | 1.5072                                       | 1.5072                                     |
| 3       | 4-3-2023   | 7-2-2023  | 1.5216                                       | 1.5216                                     |
| 4       | 7-3-2023   | 9-30-2023 | 0.9029                                       | 0.9029                                     |
|         |            | Highest   | 1.7569                                       | 1.7569                                     |

**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         | 0.0462        | 0.0000        | 1.7000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 3.4000e-004        | 3.4000e-004        | 0.0000        | 0.0000        | 3.6000e-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        | 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>0.0462</b> | <b>0.0000</b> | <b>1.7000e-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>0.0000</b> | <b>3.4000e-004</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>3.6000e-004</b> |

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

**2.2 Overall Operational**

**Mitigated Operational**

|              | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Area         | 0.0462        | 0.0000        | 1.7000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 3.4000e-004        | 3.4000e-004        | 0.0000        | 0.0000        | 3.6000e-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        | 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>0.0462</b> | <b>0.0000</b> | <b>1.7000e-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>0.0000</b> | <b>3.4000e-004</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>3.6000e-004</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            | Pipeline Installation | Trenching  | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |
| 2            | Paving                | Paving     | 10/3/2022  | 8/25/2023 | 5             | 235      |                   |

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

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 13.5**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 8.00        | 187         | 0.41        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 8.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |

**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 |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,880.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

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

**3.2 Pipeline Installation - 2022**

**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     | 0.1268        | 1.1468        | 1.0047        | 1.9700e-003        |               | 0.0549        | 0.0549        |                | 0.0516        | 0.0516        | 0.0000        | 170.1323        | 170.1323        | 0.0431        | 0.0000        | 171.2107        |
| <b>Total</b> | <b>0.1268</b> | <b>1.1468</b> | <b>1.0047</b> | <b>1.9700e-003</b> |               | <b>0.0549</b> | <b>0.0549</b> |                | <b>0.0516</b> | <b>0.0516</b> | <b>0.0000</b> | <b>170.1323</b> | <b>170.1323</b> | <b>0.0431</b> | <b>0.0000</b> | <b>171.2107</b> |

**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      | 1.1200e-003        | 0.0440        | 0.0100        | 1.6000e-004        | 4.4700e-003   | 3.3000e-004        | 4.8100e-003   | 1.2300e-003        | 3.2000e-004        | 1.5500e-003        | 0.0000        | 15.8425        | 15.8425        | 9.4000e-004        | 2.5200e-003        | 16.6162        |
| Vendor       | 2.4000e-004        | 6.4400e-003   | 2.0800e-003   | 2.0000e-005        | 8.2000e-004   | 6.0000e-005        | 8.8000e-004   | 2.4000e-004        | 6.0000e-005        | 3.0000e-004        | 0.0000        | 2.4363         | 2.4363         | 9.0000e-005        | 3.5000e-004        | 2.5440         |
| Worker       | 3.0400e-003        | 2.4600e-003   | 0.0322        | 9.0000e-005        | 9.9800e-003   | 6.0000e-005        | 0.0100        | 2.6500e-003        | 6.0000e-005        | 2.7100e-003        | 0.0000        | 8.0720         | 8.0720         | 2.2000e-004        | 2.2000e-004        | 8.1424         |
| <b>Total</b> | <b>4.4000e-003</b> | <b>0.0529</b> | <b>0.0443</b> | <b>2.7000e-004</b> | <b>0.0153</b> | <b>4.5000e-004</b> | <b>0.0157</b> | <b>4.1200e-003</b> | <b>4.4000e-004</b> | <b>4.5600e-003</b> | <b>0.0000</b> | <b>26.3507</b> | <b>26.3507</b> | <b>1.2500e-003</b> | <b>3.0900e-003</b> | <b>27.3026</b> |

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

**3.2 Pipeline Installation - 2022**

**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     | 0.1268        | 1.1468        | 1.0047        | 1.9700e-003        |               | 0.0549        | 0.0549        |                | 0.0516        | 0.0516        | 0.0000        | 170.1321        | 170.1321        | 0.0431        | 0.0000        | 171.2105        |
| <b>Total</b> | <b>0.1268</b> | <b>1.1468</b> | <b>1.0047</b> | <b>1.9700e-003</b> |               | <b>0.0549</b> | <b>0.0549</b> |                | <b>0.0516</b> | <b>0.0516</b> | <b>0.0000</b> | <b>170.1321</b> | <b>170.1321</b> | <b>0.0431</b> | <b>0.0000</b> | <b>171.2105</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      | 1.1200e-003        | 0.0440        | 0.0100        | 1.6000e-004        | 4.4700e-003   | 3.3000e-004        | 4.8100e-003   | 1.2300e-003        | 3.2000e-004        | 1.5500e-003        | 0.0000        | 15.8425        | 15.8425        | 9.4000e-004        | 2.5200e-003        | 16.6162        |
| Vendor       | 2.4000e-004        | 6.4400e-003   | 2.0800e-003   | 2.0000e-005        | 8.2000e-004   | 6.0000e-005        | 8.8000e-004   | 2.4000e-004        | 6.0000e-005        | 3.0000e-004        | 0.0000        | 2.4363         | 2.4363         | 9.0000e-005        | 3.5000e-004        | 2.5440         |
| Worker       | 3.0400e-003        | 2.4600e-003   | 0.0322        | 9.0000e-005        | 9.9800e-003   | 6.0000e-005        | 0.0100        | 2.6500e-003        | 6.0000e-005        | 2.7100e-003        | 0.0000        | 8.0720         | 8.0720         | 2.2000e-004        | 2.2000e-004        | 8.1424         |
| <b>Total</b> | <b>4.4000e-003</b> | <b>0.0529</b> | <b>0.0443</b> | <b>2.7000e-004</b> | <b>0.0153</b> | <b>4.5000e-004</b> | <b>0.0157</b> | <b>4.1200e-003</b> | <b>4.4000e-004</b> | <b>4.5600e-003</b> | <b>0.0000</b> | <b>26.3507</b> | <b>26.3507</b> | <b>1.2500e-003</b> | <b>3.0900e-003</b> | <b>27.3026</b> |

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.2925        | 2.5901        | 2.5410        | 5.1600e-003        |               | 0.1171        | 0.1171        |                | 0.1103        | 0.1103        | 0.0000        | 445.1644        | 445.1644        | 0.1121        | 0.0000        | 447.9659        |
| <b>Total</b> | <b>0.2925</b> | <b>2.5901</b> | <b>2.5410</b> | <b>5.1600e-003</b> |               | <b>0.1171</b> | <b>0.1171</b> |                | <b>0.1103</b> | <b>0.1103</b> | <b>0.0000</b> | <b>445.1644</b> | <b>445.1644</b> | <b>0.1121</b> | <b>0.0000</b> | <b>447.9659</b> |

**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      | 1.4000e-003        | 0.0882        | 0.0235        | 3.9000e-004        | 0.0117        | 5.9000e-004        | 0.0123        | 3.2100e-003    | 5.6000e-004        | 3.7700e-003   | 0.0000        | 39.1542        | 39.1542        | 2.4000e-003        | 6.2300e-003        | 41.0701        |
| Vendor       | 3.6000e-004        | 0.0131        | 4.8500e-003   | 6.0000e-005        | 2.1400e-003   | 7.0000e-005        | 2.2100e-003   | 6.2000e-004    | 7.0000e-005        | 6.8000e-004   | 0.0000        | 6.0676         | 6.0676         | 2.2000e-004        | 8.8000e-004        | 6.3357         |
| Worker       | 7.3900e-003        | 5.7000e-003   | 0.0776        | 2.2000e-004        | 0.0261        | 1.5000e-004        | 0.0263        | 6.9300e-003    | 1.4000e-004        | 7.0700e-003   | 0.0000        | 20.4330        | 20.4330        | 5.3000e-004        | 5.3000e-004        | 20.6028        |
| <b>Total</b> | <b>9.1500e-003</b> | <b>0.1070</b> | <b>0.1059</b> | <b>6.7000e-004</b> | <b>0.0400</b> | <b>8.1000e-004</b> | <b>0.0408</b> | <b>0.0108</b>  | <b>7.7000e-004</b> | <b>0.0115</b> | <b>0.0000</b> | <b>65.6549</b> | <b>65.6549</b> | <b>3.1500e-003</b> | <b>7.6400e-003</b> | <b>68.0085</b> |

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.2925        | 2.5901        | 2.5410        | 5.1600e-003        |               | 0.1171        | 0.1171        |                | 0.1103        | 0.1103        | 0.0000        | 445.1639        | 445.1639        | 0.1121        | 0.0000        | 447.9653        |
| <b>Total</b> | <b>0.2925</b> | <b>2.5901</b> | <b>2.5410</b> | <b>5.1600e-003</b> |               | <b>0.1171</b> | <b>0.1171</b> |                | <b>0.1103</b> | <b>0.1103</b> | <b>0.0000</b> | <b>445.1639</b> | <b>445.1639</b> | <b>0.1121</b> | <b>0.0000</b> | <b>447.9653</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      | 1.4000e-003        | 0.0882        | 0.0235        | 3.9000e-004        | 0.0117        | 5.9000e-004        | 0.0123        | 3.2100e-003    | 5.6000e-004        | 3.7700e-003   | 0.0000        | 39.1542        | 39.1542        | 2.4000e-003        | 6.2300e-003        | 41.0701        |
| Vendor       | 3.6000e-004        | 0.0131        | 4.8500e-003   | 6.0000e-005        | 2.1400e-003   | 7.0000e-005        | 2.2100e-003   | 6.2000e-004    | 7.0000e-005        | 6.8000e-004   | 0.0000        | 6.0676         | 6.0676         | 2.2000e-004        | 8.8000e-004        | 6.3357         |
| Worker       | 7.3900e-003        | 5.7000e-003   | 0.0776        | 2.2000e-004        | 0.0261        | 1.5000e-004        | 0.0263        | 6.9300e-003    | 1.4000e-004        | 7.0700e-003   | 0.0000        | 20.4330        | 20.4330        | 5.3000e-004        | 5.3000e-004        | 20.6028        |
| <b>Total</b> | <b>9.1500e-003</b> | <b>0.1070</b> | <b>0.1059</b> | <b>6.7000e-004</b> | <b>0.0400</b> | <b>8.1000e-004</b> | <b>0.0408</b> | <b>0.0108</b>  | <b>7.7000e-004</b> | <b>0.0115</b> | <b>0.0000</b> | <b>65.6549</b> | <b>65.6549</b> | <b>3.1500e-003</b> | <b>7.6400e-003</b> | <b>68.0085</b> |

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

**3.3 Paving - 2022**

**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     | 0.0358        | 0.3616        | 0.4739        | 7.4000e-004        |               | 0.0185        | 0.0185        |                | 0.0170        | 0.0170        | 0.0000        | 65.0896        | 65.0896        | 0.0211        | 0.0000        | 65.6158        |
| Paving       | 4.8900e-003   |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0407</b> | <b>0.3616</b> | <b>0.4739</b> | <b>7.4000e-004</b> |               | <b>0.0185</b> | <b>0.0185</b> |                | <b>0.0170</b> | <b>0.0170</b> | <b>0.0000</b> | <b>65.0896</b> | <b>65.0896</b> | <b>0.0211</b> | <b>0.0000</b> | <b>65.6158</b> |

**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       | 2.4000e-004        | 6.4400e-003        | 2.0800e-003   | 2.0000e-005        | 8.2000e-004        | 6.0000e-005        | 8.8000e-004        | 2.4000e-004        | 6.0000e-005        | 3.0000e-004        | 0.0000        | 2.4363        | 2.4363        | 9.0000e-005        | 3.5000e-004        | 2.5440        |
| Worker       | 1.6300e-003        | 1.3200e-003        | 0.0173        | 5.0000e-005        | 5.3500e-003        | 3.0000e-005        | 5.3800e-003        | 1.4200e-003        | 3.0000e-005        | 1.4500e-003        | 0.0000        | 4.3243        | 4.3243        | 1.2000e-004        | 1.2000e-004        | 4.3620        |
| <b>Total</b> | <b>1.8700e-003</b> | <b>7.7600e-003</b> | <b>0.0193</b> | <b>7.0000e-005</b> | <b>6.1700e-003</b> | <b>9.0000e-005</b> | <b>6.2600e-003</b> | <b>1.6600e-003</b> | <b>9.0000e-005</b> | <b>1.7500e-003</b> | <b>0.0000</b> | <b>6.7605</b> | <b>6.7605</b> | <b>2.1000e-004</b> | <b>4.7000e-004</b> | <b>6.9060</b> |



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

**3.3 Paving - 2022**

**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     | 0.0358        | 0.3616        | 0.4739        | 7.4000e-004        |               | 0.0185        | 0.0185        |                | 0.0170        | 0.0170        | 0.0000        | 65.0895        | 65.0895        | 0.0211        | 0.0000        | 65.6158        |
| Paving       | 4.8900e-003   |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000         | 0.0000        | 0.0000        | 0.0000         |
| <b>Total</b> | <b>0.0407</b> | <b>0.3616</b> | <b>0.4739</b> | <b>7.4000e-004</b> |               | <b>0.0185</b> | <b>0.0185</b> |                | <b>0.0170</b> | <b>0.0170</b> | <b>0.0000</b> | <b>65.0895</b> | <b>65.0895</b> | <b>0.0211</b> | <b>0.0000</b> | <b>65.6158</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       | 2.4000e-004        | 6.4400e-003        | 2.0800e-003   | 2.0000e-005        | 8.2000e-004        | 6.0000e-005        | 8.8000e-004        | 2.4000e-004        | 6.0000e-005        | 3.0000e-004        | 0.0000        | 2.4363        | 2.4363        | 9.0000e-005        | 3.5000e-004        | 2.5440        |
| Worker       | 1.6300e-003        | 1.3200e-003        | 0.0173        | 5.0000e-005        | 5.3500e-003        | 3.0000e-005        | 5.3800e-003        | 1.4200e-003        | 3.0000e-005        | 1.4500e-003        | 0.0000        | 4.3243        | 4.3243        | 1.2000e-004        | 1.2000e-004        | 4.3620        |
| <b>Total</b> | <b>1.8700e-003</b> | <b>7.7600e-003</b> | <b>0.0193</b> | <b>7.0000e-005</b> | <b>6.1700e-003</b> | <b>9.0000e-005</b> | <b>6.2600e-003</b> | <b>1.6600e-003</b> | <b>9.0000e-005</b> | <b>1.7500e-003</b> | <b>0.0000</b> | <b>6.7605</b> | <b>6.7605</b> | <b>2.1000e-004</b> | <b>4.7000e-004</b> | <b>6.9060</b> |

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

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0878        | 0.8663        | 1.2397        | 1.9400e-003        |               | 0.0434        | 0.0434        |                | 0.0399        | 0.0399        | 0.0000        | 170.2284        | 170.2284        | 0.0551        | 0.0000        | 171.6048        |
| Paving       | 0.0128        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.1006</b> | <b>0.8663</b> | <b>1.2397</b> | <b>1.9400e-003</b> |               | <b>0.0434</b> | <b>0.0434</b> |                | <b>0.0399</b> | <b>0.0399</b> | <b>0.0000</b> | <b>170.2284</b> | <b>170.2284</b> | <b>0.0551</b> | <b>0.0000</b> | <b>171.6048</b> |

**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       | 3.6000e-004        | 0.0131        | 4.8500e-003   | 6.0000e-005        | 2.1400e-003   | 7.0000e-005        | 2.2100e-003   | 6.2000e-004        | 7.0000e-005        | 6.8000e-004        | 0.0000        | 6.0676         | 6.0676         | 2.2000e-004        | 8.8000e-004        | 6.3357         |
| Worker       | 3.9600e-003        | 3.0500e-003   | 0.0416        | 1.2000e-004        | 0.0140        | 8.0000e-005        | 0.0141        | 3.7100e-003        | 7.0000e-005        | 3.7900e-003        | 0.0000        | 10.9463        | 10.9463        | 2.8000e-004        | 2.8000e-004        | 11.0372        |
| <b>Total</b> | <b>4.3200e-003</b> | <b>0.0161</b> | <b>0.0464</b> | <b>1.8000e-004</b> | <b>0.0161</b> | <b>1.5000e-004</b> | <b>0.0163</b> | <b>4.3300e-003</b> | <b>1.4000e-004</b> | <b>4.4700e-003</b> | <b>0.0000</b> | <b>17.0139</b> | <b>17.0139</b> | <b>5.0000e-004</b> | <b>1.1600e-003</b> | <b>17.3729</b> |

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

**3.3 Paving - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0878        | 0.8663        | 1.2397        | 1.9400e-003        |               | 0.0434        | 0.0434        |                | 0.0399        | 0.0399        | 0.0000        | 170.2282        | 170.2282        | 0.0551        | 0.0000        | 171.6045        |
| Paving       | 0.0128        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.1006</b> | <b>0.8663</b> | <b>1.2397</b> | <b>1.9400e-003</b> |               | <b>0.0434</b> | <b>0.0434</b> |                | <b>0.0399</b> | <b>0.0399</b> | <b>0.0000</b> | <b>170.2282</b> | <b>170.2282</b> | <b>0.0551</b> | <b>0.0000</b> | <b>171.6045</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       | 3.6000e-004        | 0.0131        | 4.8500e-003   | 6.0000e-005        | 2.1400e-003   | 7.0000e-005        | 2.2100e-003   | 6.2000e-004        | 7.0000e-005        | 6.8000e-004        | 0.0000        | 6.0676         | 6.0676         | 2.2000e-004        | 8.8000e-004        | 6.3357         |
| Worker       | 3.9600e-003        | 3.0500e-003   | 0.0416        | 1.2000e-004        | 0.0140        | 8.0000e-005        | 0.0141        | 3.7100e-003        | 7.0000e-005        | 3.7900e-003        | 0.0000        | 10.9463        | 10.9463        | 2.8000e-004        | 2.8000e-004        | 11.0372        |
| <b>Total</b> | <b>4.3200e-003</b> | <b>0.0161</b> | <b>0.0464</b> | <b>1.8000e-004</b> | <b>0.0161</b> | <b>1.5000e-004</b> | <b>0.0163</b> | <b>4.3300e-003</b> | <b>1.4000e-004</b> | <b>4.4700e-003</b> | <b>0.0000</b> | <b>17.0139</b> | <b>17.0139</b> | <b>5.0000e-004</b> | <b>1.1600e-003</b> | <b>17.3729</b> |

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |





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

5.3 Energy by Land Use - Electricity

Unmitigated

| Electricity Use        | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------|--------|--------|--------|
| Land Use               | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0         | 0.0000 | 0.0000 | 0.0000 |
| Total                  | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| Electricity Use        | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------|--------|--------|--------|
| Land Use               | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0         | 0.0000 | 0.0000 | 0.0000 |
| Total                  | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

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

|             | ROG     | NOx    | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | tons/yr |        |             |        |               |              |            |                |               |             | MT/yr    |             |             |        |        |             |
| Mitigated   | 0.0462  | 0.0000 | 1.7000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 3.4000e-004 | 3.4000e-004 | 0.0000 | 0.0000 | 3.6000e-004 |
| Unmitigated | 0.0462  | 0.0000 | 1.7000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 3.4000e-004 | 3.4000e-004 | 0.0000 | 0.0000 | 3.6000e-004 |

**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 | 8.1800e-003   |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0380        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 2.0000e-005   | 0.0000        | 1.7000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 3.4000e-004        | 3.4000e-004        | 0.0000        | 0.0000        | 3.6000e-004        |
| <b>Total</b>          | <b>0.0462</b> | <b>0.0000</b> | <b>1.7000e-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>3.4000e-004</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>3.6000e-004</b> |



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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Architectural Coating | 8.1800e-003   |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0380        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 2.0000e-005   | 0.0000        | 1.7000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 3.4000e-004        | 3.4000e-004        | 0.0000        | 0.0000        | 3.6000e-004        |
| <b>Total</b>          | <b>0.0462</b> | <b>0.0000</b> | <b>1.7000e-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>3.4000e-004</b> | <b>3.4000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>3.6000e-004</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

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

|             | 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         |               |               |               |
| Other Asphalt Surfaces | 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> |

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

**7.2 Water by Land Use**

Mitigated

|                        | Indoor/Outdoor Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | MT/yr         |               |               |               |
| Other Asphalt Surfaces | 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 |

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

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**8.2 Waste by Land Use**

**Unmitigated**

| Waste Disposed         | Total CO2 | CH4           | N2O           | CO2e          |
|------------------------|-----------|---------------|---------------|---------------|
| Land Use               | tons      | MT/yr         |               |               |
| Other Asphalt Surfaces | 0         | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</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         |               |               |
| Other Asphalt Surfaces | 0         | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

Etiwanda Pipeline Phase 2 - South Coast Air Basin, Annual

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

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**Eiwanda Pipeline Phase 3  
South Coast Air Basin, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 10.30 | Acre   | 10.30       | 448,668.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics -  
 Land Use - Phase 3 and Phase 3 Alt/Opt.  
 Construction Phase - Per Engineer.  
 Off-road Equipment - Per Engineers.  
 Off-road Equipment -  
 Trips and VMT - water truck trips and crew truck added to grading and paving. Hauling trips account for soil import and material handling.  
 Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name  | Default Value | New Value  |
|----------------------|--------------|---------------|------------|
| tblConstructionPhase | NumDays      | 20.00         | 151.00     |
| tblConstructionPhase | PhaseEndDate | 8/23/2023     | 12/28/2023 |
| tblConstructionPhase | PhaseEndDate | 11/13/2024    | 12/28/2023 |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

|                      |                      |            |                          |
|----------------------|----------------------|------------|--------------------------|
| tblConstructionPhase | PhaseStartDate       | 7/13/2023  | 6/1/2023                 |
| tblConstructionPhase | PhaseStartDate       | 10/17/2024 | 6/1/2023                 |
| tblOffRoadEquipment  | LoadFactor           | 0.50       | 0.50                     |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Bore/Drill Rigs          |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Concrete/Industrial Saws |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Welders                  |
| tblTripsAndVMT       | HaulingTripNumber    | 0.00       | 1,208.00                 |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |

**2.0 Emissions Summary**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.1932        | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |               | 2.4000e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</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>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>2.4000e-003</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         | 0.1932        | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |               | 2.4000e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</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>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>2.4000e-003</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|------------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |
| 2            | Paving                | Paving     | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 10.3**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs          | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Welders                  | 2      | 8.00        | 46          | 0.45        |
| Pipeline Installation | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                  | 0      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                   | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment         | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                  | 2      | 8.00        | 80          | 0.38        |
| Pipeline Installation | Rubber Tired Dozers      | 2      | 8.00        | 247         | 0.40        |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Pipeline Installation | Scrapers                  | 0 | 8.00 | 367 | 0.48 |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,208.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4420        | 30.4823        | 29.9045        | 0.0608        |               | 1.3783        | 1.3783        |                | 1.2973        | 1.2973        |          | 5,777.6328        | 5,777.6328        | 1.4547        |     | 5,814.0005        |
| <b>Total</b> | <b>3.4420</b> | <b>30.4823</b> | <b>29.9045</b> | <b>0.0608</b> |               | <b>1.3783</b> | <b>1.3783</b> |                | <b>1.2973</b> | <b>1.2973</b> |          | <b>5,777.6328</b> | <b>5,777.6328</b> | <b>1.4547</b> |     | <b>5,814.0005</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9848        | 0.2750        | 4.5900e-003        | 0.1399        | 6.9100e-003        | 0.1468        | 0.0383         | 6.6100e-003        | 0.0450        |          | 507.5470        | 507.5470        | 0.0312        | 0.0807        | 532.3827        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1097</b> | <b>1.1909</b> | <b>1.3074</b> | <b>8.0600e-003</b> | <b>0.4785</b> | <b>9.4800e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0000e-003</b> | <b>0.1377</b> |          | <b>862.8895</b> | <b>862.8895</b> | <b>0.0408</b> | <b>0.0984</b> | <b>893.2438</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     | 3.4420        | 30.4823        | 29.9045        | 0.0608        |               | 1.3783        | 1.3783        |                | 1.2973        | 1.2973        | 0.0000        | 5,777.6328        | 5,777.6328        | 1.4547        |     | 5,814.0005        |
| <b>Total</b> | <b>3.4420</b> | <b>30.4823</b> | <b>29.9045</b> | <b>0.0608</b> |               | <b>1.3783</b> | <b>1.3783</b> |                | <b>1.2973</b> | <b>1.2973</b> | <b>0.0000</b> | <b>5,777.6328</b> | <b>5,777.6328</b> | <b>1.4547</b> |     | <b>5,814.0005</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0169        | 0.9848        | 0.2750        | 4.5900e-003        | 0.1399        | 6.9100e-003        | 0.1468        | 0.0383         | 6.6100e-003        | 0.0450        |          | 507.5470        | 507.5470        | 0.0312        | 0.0807        | 532.3827        |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003   | 0.0114        | 82.1034         |
| Worker       | 0.0886        | 0.0597        | 0.9763        | 2.7400e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 276.7104        | 276.7104        | 6.7100e-003   | 6.3100e-003   | 278.7577        |
| <b>Total</b> | <b>0.1097</b> | <b>1.1909</b> | <b>1.3074</b> | <b>8.0600e-003</b> | <b>0.4785</b> | <b>9.4800e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0000e-003</b> | <b>0.1377</b> |          | <b>862.8895</b> | <b>862.8895</b> | <b>0.0408</b> | <b>0.0984</b> | <b>893.2438</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1787        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2115</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1787        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2115</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.2900e-003   | 0.1464        | 0.0562        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.7000e-004        | 8.1500e-003   |          | 78.6321         | 78.6321         | 2.9100e-003        | 0.0114        | 82.1034         |
| Worker       | 0.0474        | 0.0320        | 0.5230        | 1.4700e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 148.2377        | 148.2377        | 3.6000e-003        | 3.3800e-003   | 149.3345        |
| <b>Total</b> | <b>0.0517</b> | <b>0.1783</b> | <b>0.5792</b> | <b>2.2000e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6400e-003</b> | <b>0.0535</b> |          | <b>226.8698</b> | <b>226.8698</b> | <b>6.5100e-003</b> | <b>0.0148</b> | <b>231.4379</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |



Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**5.2 Energy by Land Use - NaturalGas**

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.1932 | 1.0000e-005 | 1.0500e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.2500e-003 | 2.2500e-003 | 1.0000e-005 |     | 2.4000e-003 |
| Unmitigated | 0.1932 | 1.0000e-005 | 1.0500e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.2500e-003 | 2.2500e-003 | 1.0000e-005 |     | 2.4000e-003 |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0342        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.1589        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.0000e-004   | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |     | 2.4000e-003        |
| <b>Total</b>          | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> |     | <b>2.4000e-003</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0342        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.1589        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.0000e-004   | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |     | 2.4000e-003        |
| <b>Total</b>          | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> |     | <b>2.4000e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Summer

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**Eiwanda Pipeline Phase 3  
South Coast Air Basin, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 10.30 | Acre   | 10.30       | 448,668.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics -  
 Land Use - Phase 3 and Phase 3 Alt/Opt.  
 Construction Phase - Per Engineer.  
 Off-road Equipment - Per Engineers.  
 Off-road Equipment -  
 Trips and VMT - water truck trips and crew truck added to grading and paving. Hauling trips account for soil import and material handling.  
 Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name  | Default Value | New Value  |
|----------------------|--------------|---------------|------------|
| tblConstructionPhase | NumDays      | 20.00         | 151.00     |
| tblConstructionPhase | PhaseEndDate | 8/23/2023     | 12/28/2023 |
| tblConstructionPhase | PhaseEndDate | 11/13/2024    | 12/28/2023 |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

|                      |                      |            |                          |
|----------------------|----------------------|------------|--------------------------|
| tblConstructionPhase | PhaseStartDate       | 7/13/2023  | 6/1/2023                 |
| tblConstructionPhase | PhaseStartDate       | 10/17/2024 | 6/1/2023                 |
| tblOffRoadEquipment  | LoadFactor           | 0.50       | 0.50                     |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Bore/Drill Rigs          |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Concrete/Industrial Saws |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Welders                  |
| tblTripsAndVMT       | HaulingTripNumber    | 0.00       | 1,208.00                 |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |

**2.0 Emissions Summary**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**2.2 Overall Operational**

**Unmitigated Operational**

|              | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O           | CO2e               |
|--------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|---------------|--------------------|
| Category     | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |               |                    |
| Area         | 0.1932        | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |               | 2.4000e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</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>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>2.4000e-003</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         | 0.1932        | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |               | 2.4000e-003        |
| Energy       | 0.0000        | 0.0000             | 0.0000             | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| Mobile       | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000        | 0.0000        | 0.0000         | 0.0000        | 0.0000        |          | 0.0000             | 0.0000             | 0.0000             | 0.0000        | 0.0000             |
| <b>Total</b> | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</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>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> | <b>0.0000</b> | <b>2.4000e-003</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

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

**3.0 Construction Detail**

**Construction Phase**

| Phase Number | Phase Name            | Phase Type | Start Date | End Date   | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|------------|------------|------------|---------------|----------|-------------------|
| 1            | Pipeline Installation | Trenching  | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |
| 2            | Paving                | Paving     | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 10.3**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type   | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|--------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs          | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Welders                  | 2      | 8.00        | 46          | 0.45        |
| Pipeline Installation | Excavators               | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                  | 0      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                   | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment         | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                  | 2      | 8.00        | 80          | 0.38        |
| Pipeline Installation | Rubber Tired Dozers      | 2      | 8.00        | 247         | 0.40        |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

|                       |                           |   |      |     |      |
|-----------------------|---------------------------|---|------|-----|------|
| Pipeline Installation | Scrapers                  | 0 | 8.00 | 367 | 0.48 |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2 | 8.00 | 97  | 0.37 |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,208.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 3.4420        | 30.4823        | 29.9045        | 0.0608        |               | 1.3783        | 1.3783        |                | 1.2973        | 1.2973        |          | 5,777.6328        | 5,777.6328        | 1.4547        |     | 5,814.0005        |
| <b>Total</b> | <b>3.4420</b> | <b>30.4823</b> | <b>29.9045</b> | <b>0.0608</b> |               | <b>1.3783</b> | <b>1.3783</b> |                | <b>1.2973</b> | <b>1.2973</b> |          | <b>5,777.6328</b> | <b>5,777.6328</b> | <b>1.4547</b> |     | <b>5,814.0005</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0158        | 1.0291        | 0.2787        | 4.6000e-003        | 0.1399        | 6.9200e-003        | 0.1468        | 0.0383         | 6.6200e-003        | 0.0450        |          | 508.0690        | 508.0690        | 0.0311        | 0.0808        | 532.9284        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1142</b> | <b>1.2478</b> | <b>1.2266</b> | <b>7.9200e-003</b> | <b>0.4785</b> | <b>9.4900e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0200e-003</b> | <b>0.1377</b> |          | <b>848.1216</b> | <b>848.1216</b> | <b>0.0408</b> | <b>0.0989</b> | <b>878.6284</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     | 3.4420        | 30.4823        | 29.9045        | 0.0608        |               | 1.3783        | 1.3783        |                | 1.2973        | 1.2973        | 0.0000        | 5,777.6328        | 5,777.6328        | 1.4547        |     | 5,814.0005        |
| <b>Total</b> | <b>3.4420</b> | <b>30.4823</b> | <b>29.9045</b> | <b>0.0608</b> |               | <b>1.3783</b> | <b>1.3783</b> |                | <b>1.2973</b> | <b>1.2973</b> | <b>0.0000</b> | <b>5,777.6328</b> | <b>5,777.6328</b> | <b>1.4547</b> |     | <b>5,814.0005</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |               |               |                 |
| Hauling      | 0.0158        | 1.0291        | 0.2787        | 4.6000e-003        | 0.1399        | 6.9200e-003        | 0.1468        | 0.0383         | 6.6200e-003        | 0.0450        |          | 508.0690        | 508.0690        | 0.0311        | 0.0808        | 532.9284        |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003   | 0.0114        | 82.2422         |
| Worker       | 0.0943        | 0.0654        | 0.8900        | 2.5900e-003        | 0.3130        | 1.7600e-003        | 0.3147        | 0.0830         | 1.6200e-003        | 0.0846        |          | 261.2899        | 261.2899        | 6.8100e-003   | 6.7000e-003   | 263.4579        |
| <b>Total</b> | <b>0.1142</b> | <b>1.2478</b> | <b>1.2266</b> | <b>7.9200e-003</b> | <b>0.4785</b> | <b>9.4900e-003</b> | <b>0.4880</b> | <b>0.1287</b>  | <b>9.0200e-003</b> | <b>0.1377</b> |          | <b>848.1216</b> | <b>848.1216</b> | <b>0.0408</b> | <b>0.0989</b> | <b>878.6284</b> |

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx            | CO             | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2         | Total CO2         | CH4           | N2O | CO2e              |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category     | lb/day        |                |                |               |               |               |               |                |               |               | lb/day   |                   |                   |               |     |                   |
| Off-Road     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        |          | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1787        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2115</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> |          | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Unmitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</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     | 1.0327        | 10.1917        | 14.5842        | 0.0228        |               | 0.5102        | 0.5102        |                | 0.4694        | 0.4694        | 0.0000        | 2,207.5841        | 2,207.5841        | 0.7140        |     | 2,225.4336        |
| Paving       | 0.1787        |                |                |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |               |                   | 0.0000            |               |     | 0.0000            |
| <b>Total</b> | <b>1.2115</b> | <b>10.1917</b> | <b>14.5842</b> | <b>0.0228</b> |               | <b>0.5102</b> | <b>0.5102</b> |                | <b>0.4694</b> | <b>0.4694</b> | <b>0.0000</b> | <b>2,207.5841</b> | <b>2,207.5841</b> | <b>0.7140</b> |     | <b>2,225.4336</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**3.3 Paving - 2023**

**Mitigated Construction Off-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10       | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5      | PM2.5 Total   | Bio- CO2 | NBio- CO2       | Total CO2       | CH4                | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|---------------|-----------------|
| Category     | lb/day        |               |               |                    |               |                    |               |                |                    |               | lb/day   |                 |                 |                    |               |                 |
| Hauling      | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000        | 0.0000             | 0.0000        | 0.0000         | 0.0000             | 0.0000        |          | 0.0000          | 0.0000          | 0.0000             | 0.0000        | 0.0000          |
| Vendor       | 4.1200e-003   | 0.1533        | 0.0580        | 7.3000e-004        | 0.0256        | 8.1000e-004        | 0.0264        | 7.3700e-003    | 7.8000e-004        | 8.1500e-003   |          | 78.7628         | 78.7628         | 2.9000e-003        | 0.0114        | 82.2422         |
| Worker       | 0.0505        | 0.0351        | 0.4768        | 1.3800e-003        | 0.1677        | 9.4000e-004        | 0.1686        | 0.0445         | 8.7000e-004        | 0.0453        |          | 139.9767        | 139.9767        | 3.6500e-003        | 3.5900e-003   | 141.1381        |
| <b>Total</b> | <b>0.0546</b> | <b>0.1883</b> | <b>0.5347</b> | <b>2.1100e-003</b> | <b>0.1933</b> | <b>1.7500e-003</b> | <b>0.1950</b> | <b>0.0518</b>  | <b>1.6500e-003</b> | <b>0.0535</b> |          | <b>218.7395</b> | <b>218.7395</b> | <b>6.5500e-003</b> | <b>0.0150</b> | <b>223.3804</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

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

**4.2 Trip Summary Information**

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |



Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

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

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**5.2 Energy by Land Use - NaturalGas**

Mitigated

|                        | NaturalGas Use | ROG           | NOx           | CO            | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2     | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|---------------|---------------|---------------|---------------|---------------|
| Land Use               | kBTU/yr        | lb/day        |               |               |               |               |               |               |                |               |               | lb/day   |               |               |               |               |               |
| Other Asphalt Surfaces | 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   | 0.1932 | 1.0000e-005 | 1.0500e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.2500e-003 | 2.2500e-003 | 1.0000e-005 |     | 2.4000e-003 |
| Unmitigated | 0.1932 | 1.0000e-005 | 1.0500e-003 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      |          | 2.2500e-003 | 2.2500e-003 | 1.0000e-005 |     | 2.4000e-003 |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

**Unmitigated**

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0342        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.1589        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.0000e-004   | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |     | 2.4000e-003        |
| <b>Total</b>          | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> |     | <b>2.4000e-003</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx                | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2 | NBio- CO2          | Total CO2          | CH4                | N2O | CO2e               |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|--------------------|--------------------|--------------------|-----|--------------------|
| SubCategory           | lb/day        |                    |                    |               |               |               |               |                |               |               | lb/day   |                    |                    |                    |     |                    |
| Architectural Coating | 0.0342        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Consumer Products     | 0.1589        |                    |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          |                    | 0.0000             |                    |     | 0.0000             |
| Landscaping           | 1.0000e-004   | 1.0000e-005        | 1.0500e-003        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        |          | 2.2500e-003        | 2.2500e-003        | 1.0000e-005        |     | 2.4000e-003        |
| <b>Total</b>          | <b>0.1932</b> | <b>1.0000e-005</b> | <b>1.0500e-003</b> | <b>0.0000</b> |               | <b>0.0000</b> | <b>0.0000</b> |                | <b>0.0000</b> | <b>0.0000</b> |          | <b>2.2500e-003</b> | <b>2.2500e-003</b> | <b>1.0000e-005</b> |     | <b>2.4000e-003</b> |

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Winter

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

**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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|

**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 |
|----------------|--------|-----------|------------|-------------|-------------|-----------|
|----------------|--------|-----------|------------|-------------|-------------|-----------|

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**Eiwanda Pipeline Phase 3  
South Coast Air Basin, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

| Land Uses              | Size  | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|-------|--------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 10.30 | Acre   | 10.30       | 448,668.00         | 0          |

**1.2 Other Project Characteristics**

|                                |                            |                                |       |                                  |       |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| <b>Urbanization</b>            | Urban                      | <b>Wind Speed (m/s)</b>        | 2.2   | <b>Precipitation Freq (Days)</b> | 31    |
| <b>Climate Zone</b>            | 10                         |                                |       | <b>Operational Year</b>          | 2023  |
| <b>Utility Company</b>         | Southern California Edison |                                |       |                                  |       |
| <b>CO2 Intensity (lb/MWhr)</b> | 390.98                     | <b>CH4 Intensity (lb/MWhr)</b> | 0.033 | <b>N2O Intensity (lb/MWhr)</b>   | 0.004 |

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

Project Characteristics -

Land Use - Phase 3 and Phase 3 Alt/Opt.

Construction Phase - Per Engineer.

Off-road Equipment - Per Engineers.

Off-road Equipment -

Trips and VMT - water truck trips and crew truck added to grading and paving. Hauling trips account for soil import and material handling.

Construction Off-road Equipment Mitigation - Per Rule 403

| Table Name           | Column Name  | Default Value | New Value  |
|----------------------|--------------|---------------|------------|
| tblConstructionPhase | NumDays      | 20.00         | 151.00     |
| tblConstructionPhase | PhaseEndDate | 8/23/2023     | 12/28/2023 |
| tblConstructionPhase | PhaseEndDate | 11/13/2024    | 12/28/2023 |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

|                      |                      |            |                          |
|----------------------|----------------------|------------|--------------------------|
| tblConstructionPhase | PhaseStartDate       | 7/13/2023  | 6/1/2023                 |
| tblConstructionPhase | PhaseStartDate       | 10/17/2024 | 6/1/2023                 |
| tblOffRoadEquipment  | LoadFactor           | 0.50       | 0.50                     |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Bore/Drill Rigs          |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Concrete/Industrial Saws |
| tblOffRoadEquipment  | OffRoadEquipmentType |            | Welders                  |
| tblTripsAndVMT       | HaulingTripNumber    | 0.00       | 1,208.00                 |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |
| tblTripsAndVMT       | VendorTripNumber     | 0.00       | 4.00                     |

**2.0 Emissions Summary**

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Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

| Quarter | Start Date | End Date  | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1       | 6-1-2023   | 8-31-2023 | 1.5396                                       | 1.5396                                     |
| 2       | 9-1-2023   | 9-30-2023 | 0.5021                                       | 0.5021                                     |
|         |            | Highest   | 1.5396                                       | 1.5396                                     |

**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         | 0.0353        | 0.0000        | 1.3000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.6000e-004        | 2.6000e-004        | 0.0000        | 0.0000        | 2.7000e-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        | 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>0.0353</b> | <b>0.0000</b> | <b>1.3000e-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>0.0000</b> | <b>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.7000e-004</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**2.2 Overall Operational**

**Mitigated Operational**

|              | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|--------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| Category     | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Area         | 0.0353        | 0.0000        | 1.3000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.6000e-004        | 2.6000e-004        | 0.0000        | 0.0000        | 2.7000e-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        | 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>0.0353</b> | <b>0.0000</b> | <b>1.3000e-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>0.0000</b> | <b>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.7000e-004</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            | Pipeline Installation | Trenching  | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |
| 2            | Paving                | Paving     | 6/1/2023   | 12/28/2023 | 5             | 151      |                   |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 0**

**Acres of Paving: 10.3**

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

**OffRoad Equipment**

| Phase Name            | Offroad Equipment Type    | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Pipeline Installation | Bore/Drill Rigs           | 1      | 8.00        | 221         | 0.50        |
| Pipeline Installation | Concrete/Industrial Saws  | 2      | 8.00        | 81          | 0.73        |
| Pipeline Installation | Welders                   | 2      | 8.00        | 46          | 0.45        |
| Pipeline Installation | Excavators                | 2      | 8.00        | 158         | 0.38        |
| Pipeline Installation | Graders                   | 0      | 8.00        | 187         | 0.41        |
| Paving                | Pavers                    | 2      | 8.00        | 130         | 0.42        |
| Paving                | Paving Equipment          | 2      | 8.00        | 132         | 0.36        |
| Paving                | Rollers                   | 2      | 8.00        | 80          | 0.38        |
| Pipeline Installation | Rubber Tired Dozers       | 2      | 8.00        | 247         | 0.40        |
| Pipeline Installation | Scrapers                  | 0      | 8.00        | 367         | 0.48        |
| Pipeline Installation | Tractors/Loaders/Backhoes | 2      | 8.00        | 97          | 0.37        |

**Trips and VMT**

| Phase Name            | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Pipeline Installation | 11                      | 28.00              | 4.00               | 1,208.00            | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |
| Paving                | 6                       | 15.00              | 4.00               | 0.00                | 14.70              | 6.90               | 20.00               | LD_Mix               | HDT_Mix              | HHDT                  |

**3.1 Mitigation Measures Construction**

Water Exposed Area

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**3.2 Pipeline Installation - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.2599        | 2.3014        | 2.2578        | 4.5900e-003        |               | 0.1041        | 0.1041        |                | 0.0980        | 0.0980        | 0.0000        | 395.7242        | 395.7242        | 0.0996        | 0.0000        | 398.2151        |
| <b>Total</b> | <b>0.2599</b> | <b>2.3014</b> | <b>2.2578</b> | <b>4.5900e-003</b> |               | <b>0.1041</b> | <b>0.1041</b> |                | <b>0.0980</b> | <b>0.0980</b> | <b>0.0000</b> | <b>395.7242</b> | <b>395.7242</b> | <b>0.0996</b> | <b>0.0000</b> | <b>398.2151</b> |

**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      | 1.2400e-003        | 0.0784        | 0.0209        | 3.5000e-004        | 0.0104        | 5.2000e-004        | 0.0109        | 2.8500e-003        | 5.0000e-004        | 3.3500e-003   | 0.0000        | 34.7781        | 34.7781        | 2.1300e-003        | 5.5300e-003        | 36.4799        |
| Vendor       | 3.2000e-004        | 0.0116        | 4.3000e-003   | 6.0000e-005        | 1.9000e-003   | 6.0000e-005        | 1.9700e-003   | 5.5000e-004        | 6.0000e-005        | 6.1000e-004   | 0.0000        | 5.3895         | 5.3895         | 2.0000e-004        | 7.8000e-004        | 5.6276         |
| Worker       | 6.5700e-003        | 5.0600e-003   | 0.0689        | 2.0000e-004        | 0.0232        | 1.3000e-004        | 0.0233        | 6.1600e-003        | 1.2000e-004        | 6.2800e-003   | 0.0000        | 18.1493        | 18.1493        | 4.7000e-004        | 4.7000e-004        | 18.3001        |
| <b>Total</b> | <b>8.1300e-003</b> | <b>0.0950</b> | <b>0.0941</b> | <b>6.1000e-004</b> | <b>0.0355</b> | <b>7.1000e-004</b> | <b>0.0362</b> | <b>9.5600e-003</b> | <b>6.8000e-004</b> | <b>0.0102</b> | <b>0.0000</b> | <b>58.3170</b> | <b>58.3170</b> | <b>2.8000e-003</b> | <b>6.7800e-003</b> | <b>60.4076</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**3.2 Pipeline Installation - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.2599        | 2.3014        | 2.2578        | 4.5900e-003        |               | 0.1041        | 0.1041        |                | 0.0980        | 0.0980        | 0.0000        | 395.7237        | 395.7237        | 0.0996        | 0.0000        | 398.2147        |
| <b>Total</b> | <b>0.2599</b> | <b>2.3014</b> | <b>2.2578</b> | <b>4.5900e-003</b> |               | <b>0.1041</b> | <b>0.1041</b> |                | <b>0.0980</b> | <b>0.0980</b> | <b>0.0000</b> | <b>395.7237</b> | <b>395.7237</b> | <b>0.0996</b> | <b>0.0000</b> | <b>398.2147</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      | 1.2400e-003        | 0.0784        | 0.0209        | 3.5000e-004        | 0.0104        | 5.2000e-004        | 0.0109        | 2.8500e-003        | 5.0000e-004        | 3.3500e-003   | 0.0000        | 34.7781        | 34.7781        | 2.1300e-003        | 5.5300e-003        | 36.4799        |
| Vendor       | 3.2000e-004        | 0.0116        | 4.3000e-003   | 6.0000e-005        | 1.9000e-003   | 6.0000e-005        | 1.9700e-003   | 5.5000e-004        | 6.0000e-005        | 6.1000e-004   | 0.0000        | 5.3895         | 5.3895         | 2.0000e-004        | 7.8000e-004        | 5.6276         |
| Worker       | 6.5700e-003        | 5.0600e-003   | 0.0689        | 2.0000e-004        | 0.0232        | 1.3000e-004        | 0.0233        | 6.1600e-003        | 1.2000e-004        | 6.2800e-003   | 0.0000        | 18.1493        | 18.1493        | 4.7000e-004        | 4.7000e-004        | 18.3001        |
| <b>Total</b> | <b>8.1300e-003</b> | <b>0.0950</b> | <b>0.0941</b> | <b>6.1000e-004</b> | <b>0.0355</b> | <b>7.1000e-004</b> | <b>0.0362</b> | <b>9.5600e-003</b> | <b>6.8000e-004</b> | <b>0.0102</b> | <b>0.0000</b> | <b>58.3170</b> | <b>58.3170</b> | <b>2.8000e-003</b> | <b>6.7800e-003</b> | <b>60.4076</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**3.3 Paving - 2023**

**Unmitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0780        | 0.7695        | 1.1011        | 1.7200e-003        |               | 0.0385        | 0.0385        |                | 0.0354        | 0.0354        | 0.0000        | 151.2028        | 151.2028        | 0.0489        | 0.0000        | 152.4254        |
| Paving       | 0.0135        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.0915</b> | <b>0.7695</b> | <b>1.1011</b> | <b>1.7200e-003</b> |               | <b>0.0385</b> | <b>0.0385</b> |                | <b>0.0354</b> | <b>0.0354</b> | <b>0.0000</b> | <b>151.2028</b> | <b>151.2028</b> | <b>0.0489</b> | <b>0.0000</b> | <b>152.4254</b> |

**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       | 3.2000e-004        | 0.0116        | 4.3000e-003   | 6.0000e-005        | 1.9000e-003   | 6.0000e-005        | 1.9700e-003   | 5.5000e-004        | 6.0000e-005        | 6.1000e-004        | 0.0000        | 5.3895         | 5.3895         | 2.0000e-004        | 7.8000e-004        | 5.6276         |
| Worker       | 3.5200e-003        | 2.7100e-003   | 0.0369        | 1.1000e-004        | 0.0124        | 7.0000e-005        | 0.0125        | 3.3000e-003        | 7.0000e-005        | 3.3700e-003        | 0.0000        | 9.7229         | 9.7229         | 2.5000e-004        | 2.5000e-004        | 9.8036         |
| <b>Total</b> | <b>3.8400e-003</b> | <b>0.0143</b> | <b>0.0412</b> | <b>1.7000e-004</b> | <b>0.0143</b> | <b>1.3000e-004</b> | <b>0.0145</b> | <b>3.8500e-003</b> | <b>1.3000e-004</b> | <b>3.9800e-003</b> | <b>0.0000</b> | <b>15.1123</b> | <b>15.1123</b> | <b>4.5000e-004</b> | <b>1.0300e-003</b> | <b>15.4312</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**3.3 Paving - 2023**

**Mitigated Construction On-Site**

|              | ROG           | NOx           | CO            | SO2                | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2       | Total CO2       | CH4           | N2O           | CO2e            |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category     | tons/yr       |               |               |                    |               |               |               |                |               |               | MT/yr         |                 |                 |               |               |                 |
| Off-Road     | 0.0780        | 0.7695        | 1.1011        | 1.7200e-003        |               | 0.0385        | 0.0385        |                | 0.0354        | 0.0354        | 0.0000        | 151.2027        | 151.2027        | 0.0489        | 0.0000        | 152.4252        |
| Paving       | 0.0135        |               |               |                    |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000          | 0.0000          | 0.0000        | 0.0000        | 0.0000          |
| <b>Total</b> | <b>0.0915</b> | <b>0.7695</b> | <b>1.1011</b> | <b>1.7200e-003</b> |               | <b>0.0385</b> | <b>0.0385</b> |                | <b>0.0354</b> | <b>0.0354</b> | <b>0.0000</b> | <b>151.2027</b> | <b>151.2027</b> | <b>0.0489</b> | <b>0.0000</b> | <b>152.4252</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       | 3.2000e-004        | 0.0116        | 4.3000e-003   | 6.0000e-005        | 1.9000e-003   | 6.0000e-005        | 1.9700e-003   | 5.5000e-004        | 6.0000e-005        | 6.1000e-004        | 0.0000        | 5.3895         | 5.3895         | 2.0000e-004        | 7.8000e-004        | 5.6276         |
| Worker       | 3.5200e-003        | 2.7100e-003   | 0.0369        | 1.1000e-004        | 0.0124        | 7.0000e-005        | 0.0125        | 3.3000e-003        | 7.0000e-005        | 3.3700e-003        | 0.0000        | 9.7229         | 9.7229         | 2.5000e-004        | 2.5000e-004        | 9.8036         |
| <b>Total</b> | <b>3.8400e-003</b> | <b>0.0143</b> | <b>0.0412</b> | <b>1.7000e-004</b> | <b>0.0143</b> | <b>1.3000e-004</b> | <b>0.0145</b> | <b>3.8500e-003</b> | <b>1.3000e-004</b> | <b>3.9800e-003</b> | <b>0.0000</b> | <b>15.1123</b> | <b>15.1123</b> | <b>4.5000e-004</b> | <b>1.0300e-003</b> | <b>15.4312</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

| Land Use               | Average Daily Trip Rate |          |        | Unmitigated | Mitigated  |
|------------------------|-------------------------|----------|--------|-------------|------------|
|                        | Weekday                 | Saturday | Sunday | Annual VMT  | Annual VMT |
| Other Asphalt Surfaces | 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 |
| Other Asphalt Surfaces | 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       |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Other Asphalt Surfaces | 0.544109 | 0.060768 | 0.184625 | 0.129879 | 0.023845 | 0.006339 | 0.011719 | 0.008584 | 0.000815 | 0.000515 | 0.024285 | 0.000743 | 0.003774 |







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

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

| Electricity Use        | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------|--------|--------|--------|
| Land Use               | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0         | 0.0000 | 0.0000 | 0.0000 |
| Total                  | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

Mitigated

| Electricity Use        | Total CO2 | CH4    | N2O    | CO2e   |
|------------------------|-----------|--------|--------|--------|
| Land Use               | MT/yr     |        |        |        |
| Other Asphalt Surfaces | 0         | 0.0000 | 0.0000 | 0.0000 |
| Total                  | 0.0000    | 0.0000 | 0.0000 | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

|             | ROG     | NOx    | CO          | SO2    | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2   | Total CO2   | CH4    | N2O    | CO2e        |
|-------------|---------|--------|-------------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category    | tons/yr |        |             |        |               |              |            |                |               |             | MT/yr    |             |             |        |        |             |
| Mitigated   | 0.0353  | 0.0000 | 1.3000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2.6000e-004 | 2.6000e-004 | 0.0000 | 0.0000 | 2.7000e-004 |
| Unmitigated | 0.0353  | 0.0000 | 1.3000e-004 | 0.0000 |               | 0.0000       | 0.0000     |                | 0.0000        | 0.0000      | 0.0000   | 2.6000e-004 | 2.6000e-004 | 0.0000 | 0.0000 | 2.7000e-004 |

**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 | 6.2400e-003   |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0290        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 1.0000e-005   | 0.0000        | 1.3000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.6000e-004        | 2.6000e-004        | 0.0000        | 0.0000        | 2.7000e-004        |
| <b>Total</b>          | <b>0.0353</b> | <b>0.0000</b> | <b>1.3000e-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>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.7000e-004</b> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**6.2 Area by SubCategory**

Mitigated

|                       | ROG           | NOx           | CO                 | SO2           | Fugitive PM10 | Exhaust PM10  | PM10 Total    | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total   | Bio- CO2      | NBio- CO2          | Total CO2          | CH4           | N2O           | CO2e               |
|-----------------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|
| SubCategory           | tons/yr       |               |                    |               |               |               |               |                |               |               | MT/yr         |                    |                    |               |               |                    |
| Architectural Coating | 6.2400e-003   |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Consumer Products     | 0.0290        |               |                    |               |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 0.0000             | 0.0000             | 0.0000        | 0.0000        | 0.0000             |
| Landscaping           | 1.0000e-005   | 0.0000        | 1.3000e-004        | 0.0000        |               | 0.0000        | 0.0000        |                | 0.0000        | 0.0000        | 0.0000        | 2.6000e-004        | 2.6000e-004        | 0.0000        | 0.0000        | 2.7000e-004        |
| <b>Total</b>          | <b>0.0353</b> | <b>0.0000</b> | <b>1.3000e-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>2.6000e-004</b> | <b>2.6000e-004</b> | <b>0.0000</b> | <b>0.0000</b> | <b>2.7000e-004</b> |

**7.0 Water Detail**

---

**7.1 Mitigation Measures Water**

Eiwanada Pipeline Phase 3 - South Coast Air Basin, Annual

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

|             | 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         |               |               |               |
| Other Asphalt Surfaces | 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> |

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

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

**7.2 Water by Land Use**

Mitigated

|                        | Indoor/Outdoor Use | Total CO2     | CH4           | N2O           | CO2e          |
|------------------------|--------------------|---------------|---------------|---------------|---------------|
| Land Use               | Mgal               | MT/yr         |               |               |               |
| Other Asphalt Surfaces | 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 |

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

Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

**8.2 Waste by Land Use**

**Unmitigated**

| Waste Disposed         | Total CO2 | CH4           | N2O           | CO2e          |
|------------------------|-----------|---------------|---------------|---------------|
| Land Use               | tons      | MT/yr         |               |               |
| Other Asphalt Surfaces | 0         | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</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         |               |               |
| Other Asphalt Surfaces | 0         | 0.0000        | 0.0000        | 0.0000        |
| <b>Total</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 |
|----------------|--------|-----------|-----------|-------------|-------------|-----------|
|----------------|--------|-----------|-----------|-------------|-------------|-----------|



## Eiwanda Pipeline Phase 3 - South Coast Air Basin, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied****10.0 Stationary Equipment**

---

**Fire Pumps and Emergency Generators**

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

**Boilers**

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

**User Defined Equipment**

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

**11.0 Vegetation**

---

**APPENDIX B.1**  
**Biological Resources Assessment Report**

**BIOLOGICAL RESOURCES ASSESSMENT  
JCSD ETIWANDA PIPELINE PROJECT**

**CITIES OF RANCHO CUCAMONGA, FONTANA, ONTARIO, and JURUPA VALLEY  
IN SAN BERNARDINO COUNTY, CALIFORNIA**



Submitted to:

**Albert A. Webb Associates**

3788 McCray St.  
Riverside, CA 92506

(951) 320-6052  
(951) 786-0594 - fax

Cheryl DeGano, Principal Environmental Analyst

Submitted by:

**Wood Environment and Infrastructure Solutions, Inc.**

1845 Chicago Avenue, Suite D  
Riverside, CA 92507

(951) 369-8060

Principal Investigators:

Nathan Moorhatch (nathan.moorhatch@woodplc.com)

Lisa Wadley (lisa.wadley@woodplc.com)

Wood Job # 2055400815

**27 July 2021**

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## **1.0 INTRODUCTION**

At the request of Albert A. Webb Associates (Webb), Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a biological resources assessment for the Jurupa Community Services District (JCSD) Northern Feeder Pipeline Project (project) and alternatives. The biological study area (BSA) for this assessment included the project site plus a 500-foot buffer around it and included portions of the cities of Fontana, Ontario, Rancho Cucamonga, and Jurupa Valley, Riverside in San Bernardino Counties, California (Appendix A, Figure 1).

This document is a review and assessment of the biological resources that have been reported from the vicinity of or have the potential to occur on the project site. It discusses the conservation status of special status species, suitable habitat for these species, and the potential for each to occur on or near the project site. This biological resources assessment consisted of a review of pertinent literature, consultation with biologists having experience on or in close proximity to the site, and a reconnaissance level site survey to perform a general inventory of flora and fauna and determine habitat suitability for special status flora and fauna. A jurisdictional waters delineation was also performed; no other focused surveys for sensitive species was performed.

## **2.0 PROJECT BACKGROUND/SITE DESCRIPTION**

The proposed project is the construction of a 30 to 36-inch diameter steel pipeline. The proposed pipeline alignment begins at the Cucamonga Valley Water (CVWD) District at the terminus of Coyote Drive, west to Day Creek Boulevard (Blvd.), south to the intersection of Day Creek Blvd. and Wilson Avenue (Ave.). At this point, the proposed alignment splits east on Wilson Ave. and south on Day Creek Blvd. One split goes east on Wilson Ave. to the CVWD Treatment Plant located at 24th Street (St.) and Etiwanda Ave., in the City of Rancho Cucamonga. From the treatment plant the pipeline alignment will extend south on Etiwanda Ave. to Valley Blvd. From the intersection of Valley Blvd. and Etiwanda Ave. the pipeline will go east on Valley Blvd. to Calabash Ave., from this intersection the pipeline will go south under Interstate 10 (I-10) to Slover Ave., from this intersection the proposed pipeline would go west on Slover Ave. to Mulberry Ave. at which point the pipeline would go south on Mulberry Ave. (at this point the street changes to Country Village Road (Rd.) at the Riverside County Line). At Country Village Rd. the proposed pipeline will connect into the existing 30" diameter waterline going to the storage reservoirs and connect into JCSD's existing 24" diameter water line going to the storage reservoirs. The total estimated length of the proposed pipeline is approximately 70,420 to 68,600 feet (13.3 to 12.9 miles). The proposed pipeline alignment terminates approximately ½ mile south of the intersection of Philadelphia St. and Country Village Rd. The second split from intersection of Day Creek Blvd. and Wilson Ave. goes south on Day Creek Blvd. to Highland Ave. At the intersection of Highland Ave. and Day Creek Blvd. this section goes east to Etiwanda Ave.

Project elevations range from approximately 810 feet (247 meters) at the intersection of Philadelphia St. and Country Village Rd to 1,673 feet (510 meters) at the CVWD District Treatment Plant. Despite the elevational change, the slope is gentle with the project area appearing flat. The alignment passes through a wide variety of conditions, from undeveloped natural areas to agriculture and vacant lots and from residential to commercial and industrial areas. The project crosses areas mapped on two different United States Geologic Service (USGS) 7.5-minute topographic quadrangle maps Cucamonga Peak and Guasti (Appendix A, Figures 2a-2c).

## **REGULATORY FRAMEWORK**

### **2.1 Federal**

*Endangered Species Act (ESA)* – The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. ESA defines species as “endangered” or “threatened” and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the “take” of listed (i.e., endangered or threatened) species. The ESA definition of take is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct.” Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a) (1) (A) permits (authorized take permits) are issued for scientific purposes. Section 10(a) (1) (B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.
- Section 7 (a) (2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its “critical habitat.”

As defined by the ESA, “individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

*Migratory Bird Treaty Act (MBTA)* – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the republics of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in this document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species. Impacts include direct disturbance to/destruction of nests, eggs, and birds as well as indirect effects such as loud construction noises (e.g., drilling, operation of heavy equipment, etc. in excess of 60 dB over an

hour at the nest site) and increased site activities (e.g., moving vehicles, use of guard dogs, presence of personnel) in close proximity to active nests.

*National Environmental Policy Act (NEPA)* – Portions of the proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers). NEPA establishes certain criteria that must be adhered to for any project that is “financed, assisted, conducted or approved by a federal agency. The federal lead agency is required to “determine whether the proposed action will significantly affect the quality of the human environment.”

*Section 404 of the Clean Water Act* – This section of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into “waters of the United States.” The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold for each of the permits, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

## **2.2 State of California**

*Regional Water Quality Control Board* – The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as WUS but may also include isolated waterbodies. The Porter Cologne Act defines WSC as “surface water or ground water, including saline waters, within the boundaries of the state”.

*Sections 1600-1603 of the State Fish and Game Code* – The California Fish and Game Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel with hydro geomorphology distinct top-of-embankment to top-of-embankment limits, that may or may not support fish or other aquatic biota. Included in this definition are watercourses with surface or subsurface flows that support, or have supported in the past, riparian vegetation. Specifically, Section 1601 governs public projects, while Section 1603 governs private discretionary actions. The California Department of



Fish and Wildlife (CDFW) requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats of at least a 1:1 ratio.

*California Endangered Species Act (CESA)* – This legislation is similar to the federal ESA; however, it is administered by the CDFW. The CDFW is authorized to enter a "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. The CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with the CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

*Section 2081 of the State Fish and Game Code* – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFW. The CDFW shall make this determination based on the best scientific information available and shall include consideration of the species' capability to survive and reproduce.

*California Environmental Quality Act (CEQA)* – The basic goal of the California Environmental Quality Act (CEQA) is to retain a high-quality environment now and in the future. The specific goals are for California's public agencies to:

- Identify the significant environmental effects of their actions; and, either
- Avoid those significant environmental effects, where feasible; or
- Mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. Projects are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires

approvals from more than one public agency, the CEQA requires one of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by the CEQA. The most basic steps of the environmental review process are:

- Determine if the activity is a "project" subject to the CEQA;
- Determine if the "project" is exempt from the CEQA;
- Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant". Based on its findings of "significance", the lead agency prepares one of the following environmental review documents:
  - Negative Declaration if it finds no "significant" impacts;
  - Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
  - Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance", Article 5 of the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The purpose of an EIR is to provide state and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to provide ways in which those effects may be minimized and indicate alternatives to the project.

*Sections of the State Fish and Game Code pertaining to the protection of birds* – Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA.

*The Native Plant Protection Act (NPPA)* – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in the CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under the CESA. The NPPA provides limitations on take as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with

the provisions outlined in the act. If a landowner is notified by the CDFW, pursuant to section 1903.5 that a rare or endangered plant species is growing on their property, the landowner shall notify the CDFW at least 10 days prior to the changing of land uses to allow the CDFW to salvage the plants.

*Natural Community Conservation Planning (NCCP) Program* – The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development and other factors that species listing is required under the CESA. Instead of conserving small, often isolated “islands” of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value “reserve” areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value.

### **2.3 San Bernardino County**

The San Bernardino County general plan states that the county shall encourage use of conservation practices in the management of grading, replacement of ground cover, protection of soils, natural drainage, and the protection and replacement of trees. It establishes 50-100-foot riparian setbacks that prohibit removal of mature natural vegetation. The County plant protection ordinance prohibits removal of vegetation within 200’ of a stream without a tree permit and environmental review with mitigations imposed. It also prohibits changes in grade that undercut roots (University of California 2017).

### **2.4 Cities**

The cities crossed by the BSA also have tree protection plans.

The Rancho Cucamonga Code of Ordinances (RCMC 17.16.080) states that all “heritage trees” are protected under the City’s ordinance, including those on private property. “Heritage trees” means any tree, shrub, or plant” that meets the City’s criteria listed in the city ordinance. “Removal or relocation of a heritage tree, including those on private property, requires a permit. “Remove” includes any act which will cause a heritage tree to die including, but not limited to, acts which inflict damage upon root systems, bark, or other parts of tree by fire, application of toxic substances, operation of equipment or machinery; improper watering; changing natural grade of

land by excavation or filling the drip line area around the trunk or by attachment of signs or artificial material piercing the bark of the tree by means of nails, spikes, other piercing objects.”

The City of Ontario’s Municipal Code Volume II states in Section 10 that “No person shall cut, carve, mutilate, or otherwise do harm to any tree in any park, parkway, or public place, or prune or top such trees except as provided in this chapter, or to apply or allow to exist upon any parkway or tree any substance harmful to such trees” and that “No person shall remove or relocate any parkway tree without prior authorization from the Public Works Agency of the City.”

### **3.0 METHODS**

#### **3.1 Literature Review**

Prior to the field visit, a literature review was conducted of the environmental and regulatory setting for the BSA. The literature review provides a baseline from which to evaluate the biological resources potentially occurring within the BSA, and within the local and regional vicinity.

A literature review was conducted to identify biological resources known from the vicinity (within an approximate 5-mile radius) of the BSA. The BSA consists of the project site plus a 500-foot buffer around it. This included review of literature and searches of the CDFW's California Natural Diversity Data Base (CNDDDB) (CDFW 2020a), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2020), Soil Survey data (USDA 2020), vegetation mapping (USDA 2020), National Wetlands Inventory (USFWS 2020a), the Critical Habitat portal (USFWS 2020b), and pertinent documents from the Wood library and project files. A complete list of literature and references is included in Section 8.

#### **3.2 Biological Resources and Habitat Assessment**

The field reconnaissance survey of the pipeline alignment BSA was conducted on 19 August 2020 by Wood senior biologists Nathan Moorhatch and Lisa Wadley. The pipeline alignment was surveyed by vehicle with frequent stops for photographs and assessment. Areas of the survey where potential habitat was present were surveyed on foot and with binoculars. All flora and fauna detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) within the project alignment during the course of the survey were recorded in field notes and are included in Appendix A. Representative photographs of the project site are included in Appendix B.

#### **3.3 Jurisdictional Waters and Wetlands**

Aerial photography was reviewed prior to conducting general surveys (2019 imagery). The photographs were also used to locate and inspect any potential natural drainage features and water bodies that may be considered under the jurisdiction of either the USACE, RWQCB, CDFW and/or MHSCP. The jurisdictional delineation (JD) was performed by Wood senior biologist Dale Hameister on 7 October 2020 to determine presence or absence of potential jurisdictional wetlands and waters. For a more detailed description of the methods used for identifying jurisdictional waters and wetlands in a separate document (Wood 2021).

### **3.4 Wildlife Corridors**

The ability of the BSA to act as a wildlife corridor was assessed. Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. Corridors mitigate the effects of habitat fragmentation by (1) allowing animals to move between remaining habitats. Wildlife movement usually fall into one of three categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover).

## **4.0 RESULTS**

The literature review and field surveys revealed the following information about critical habitat, wetlands, the MSHCP, soils, vegetation, and special status species in the BSA.

### **4.1 Critical Habitat**

No federally designated critical habitat is present in the BSA (USFWS 2020b).

### **4.2 Soils**

The BSA contains twenty-three (23) different soil mapping units (see Appendix A, Figures 3a-3c):

- Chino silt loam;
- Cieneba rocky sandy loam, 15 to 50% slopes, eroded;
- Daulton rocky silt loam, 8 to 30% slopes, eroded;
- Delhi fine sand;
- Delhi fine sand, 2 to 15% wind-eroded;
- Gorgonio loamy sand, deep, 2 to 8% slopes;
- Grangeville fine sandy loam;
- Hanford sandy loam, 0 to 2%;
- Hanford coarse sandy loam, 2 to 9% slopes;
- Hilmar loamy very fine sand, 0 to 2% slopes;
- Hilmar loamy fine sand;
- Hilmar loamy very fine sand, 0 to 2% slopes;
- Miramar coarse sandy loam, steep, severely eroded;
- Portola loam, moderately well drained variant;
- Psamments, Fluvents, and Frequently flooded soils;
- Riverwash;
- Rincon silty clay loam, 2 to 9 percent slopes, MLRA 14
- Soboba gravelly loamy sand, 0 to 9% slopes;
- Soboba stony loamy sand, 2 to 9% slopes;
- Tuscan cobbly loam, 1 to 5% slopes;

- Tretten fine sandy loam, 3 to 15% slopes;
- Tujunga gravelly loamy sand, 0 to 9% slopes;
- Tujunga loamy sand, 0 to 5% slopes;
- Water

Of these soils, one type is known to be specifically associated with a special status wildlife species. Delhi fine sand is known to provide suitable habitat for the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*).

### **4.3 Wetlands and Jurisdictional Drainages**

No wetland areas were observed within the BSA. There are four (4) jurisdictional drainages and three (3) flood control basins within the BSA. Many of the drainages are developed concrete flood control channels. There is one area with sandy bottomed sandy wash north of I-10 and east of Etiwanda Ave (see Appendix A, Figures 4a-4c). The project will not impact any jurisdictional drainages and the pipeline will use jack and bore construction methods to place the proposed pipeline under the drainage.

### **4.4 Vegetation Communities**

The majority of the BSA contains no naturally occurring vegetation communities present in the BSA. Three naturally occurring vegetation community, Riversidean Alluvial Fan Sage Scrub, Encelia Scrub, and Buckwheat was found within the proposed project vicinity (Holland, 1986). Additionally, a variety of non-native and/or highly disturbed communities were also detected. The seven (7) categories below were used to describe land cover (see Figures 5a through 5c):

#### **4.4.1 Riversidean Alluvial Scrub**

This category represents areas that have coastal sage scrub found on alluvial fans and flood plains of the coastal side of the San Bernardino and San Gabriel Mountains. Soils are complex and may include alluvium composed of boulders, rocks, and sand. This is a natural vegetation community within San Bernardino County.

#### **4.4.2 Buckwheat**

This category represents areas that have a combination of Buckwheat (*Eriogonum fasciculatum*) often with white sage (*Salvia apiana*). This vegetation community is commonly found at elevations below approximately 6,800 feet (2,074 meters) and often forms adjacent to urbanized landscapes and annual grasses and forbs (Holland, 1986).

#### **4.4.3 California sagebrush**

This category represents areas that have California sagebrush (*Artemisia californica*) as the dominated shrub. It is known to occur at lower elevations and is often associated with sage scrub within the ESA.

#### **4.4.4 Eucalyptus**

This category represents areas that are dominated by Eucalyptus (*Eucalyptus* sp.) trees. Historically, groves of eucalyptus trees were used for windbreaks in agriculture areas. Remnant stands were observed within the proposed project alignment.

#### **4.4.5 Non-native Grassland**

This category represents areas that are dominated by non-native, often weedy species such or especially in favorable rainfall years. Mapped areas of this vegetation type are often found in vacant lots amongst urbanized areas. These areas are quite often mowed regularly for fire abatement (Holland, 1986).

#### **4.4.6 Non-native ornamental/shrubs**

This category represents areas that have a mixture of ornamental or non-native conifer or hardwood species. Non-native ornamentals commonly observed may include species such as oleander (*Nerium oleander*), pine trees (*Pinus* sp.), sweetgums (*Liquidambar* sp.), and pepper trees (*Schinus mole*).

#### **4.4.7 Urban/Developed**

This category represents areas that have been disked, cleared, or otherwise altered and include roadways, existing buildings, city parks, cemeteries, and other structures. Disturbed lands may include ornamental plantings for landscaping, or ruderal vegetation dominated by non-native, weedy species.

### **4.5 Plants and Wildlife**

Species encountered during field visits in the BSA included a mix of native and non-native (introduced) species common to inland southern California and occurring in a wide variety of habitats. A complete list of the flora and fauna observed during the field visits is included in Appendix A.

Plant species observed in the BSA were generally dominated by non-native weedy species. These included but were not limited to: shortpod mustard (*Hirschfeldia incana*), Sahara mustard (*Brassica*



*tournefortii*), Russian thistle (*Salsola tragus*), redstem filaree (*Erodium cicutarium*), riggut grass (*Bromus diandrus*), white pigweed (*Amaranthus albus*), Eucalyptus (*Eucalyptus globulus*), Peruvian pepper (*Schinus mole*), totalote (*Centaurea melitensis*), prickly lettuce (*Lactuca serriola*), golden crownbeard (*Verbesina encelioides* ssp. *exauriculata*), spotted spurge (*Euphorbia maculate*), castor bean (*Ricinus communis*), redstem filaree (*Erodium cicutarium*), slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), riggut grass (*Bromus diandrus*), and puncture vine (*Tribulus terrestris*). Native plants were, however, present, particularly in the area east of Etiwanda and east of I-10, where Riversidean alluvial fan sage scrub was present. Native plants observed along the alignment included brittlebush (*Encelia farinosa*), horseweed (*Erigeron canadensis*), mule fat (*Baccharis salicifolia*), sunflower (*Helianthus annuus*), telegraph weed (*Heterotheca grandiflora*), scalebroom (*Lepidospartum squamatum*), California croton (*Croton californicus*), dove weed (*Croton setiger*), California buckwheat (*Eriogonum fasciculatum*), sacred datura (*Datura wrightii*), Southern California black walnut (*Juglans californica*).

Representative vertebrate species observed in the BSA during the brief field assessment included, but were not limited to: western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), house finch (*Haemorhous mexicanus*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), Northern mockingbird (*Mimus polyglottos*), hooded oriole (*Icterus cucullatus*), European starling (*Sturnus vulgaris*), Audubon's (desert) cottontail (*Sylvilagus audubonii*), Botta's pocket gopher (*Thomomys bottae*), and California ground squirrel (*Otospermophilus beecheyi*).

#### **4.6 Special Status Biological Resources**

Plant or animal taxa may be designated as having "special status" by the various regulatory agencies (i.e., CDFW) and/or other conservation organizations (i.e., CNPS) due to declining populations, vulnerability to habitat change or loss, or because of restricted/limited distributions. Some species have been listed as "threatened" or "endangered" and/or a candidate for listing by the USFWS and/or the CDFW and are thus protected by the federal and state ESAs respectively. In addition to plants and animals, some vegetation communities have also received special status designation by the CNPS due to incremental loss and fragmentation resulting from development. Impacts to any special status biological resources can be considered significant under CEQA.

The literature review of the CNDDDB, CNPS Inventory, and other biological reports identified a total of 68 special status biological resources known from the vicinity of the project site. These include thirty-eight (38) plants, one (1) invertebrate, four (4) reptiles, (2) amphibians, four (4) fish, six (6) birds, seven (7) mammals, and five (5) vegetation communities. See Tables 1 through 3 for a

complete list of these sensitive biological resources, their conservation status, habitat associations and their occurrence potential.

#### 4.6.1 Focused Surveys

Suitable nesting habitat for both songbirds, raptors, and the burrowing owl is present within and/or adjacent to the project alignment. Therefore, Wood recommended focused surveys include pre-construction surveys for nesting bird and burrowing owl prior to ground disturbance activities.

#### 4.6.2 Special Status Plant Species

Of the thirty-nine special status plant species known from the general project area, all but one, the Southern California black walnut (*Juglans californica*) are assumed to be absent due to lack of suitable habitat. Neither is state or federally listed as threatened or endangered. The status of each species is in Table 1 below.

**Table 1. Special Status Plant Species Potential for Occurrence**

| Species  | Status<br>(F=Federal,<br>C=California)  | Habitat  | BSA Occurrence<br>Probability   |
|--|---|--|---|
| <i>Ambrosia monogyra</i><br><b>singlewhorl<br/>burrobrush</b>                      | F: None<br>S: None<br>CNPS: 2B.2<br>Global rank: G5<br>State rank: S2               | Perennial shrub found in chaparral and Sonoran Desert scrub habitat at 10-500-meter (32-1,640 feet) elevation range.   | <b>Absent</b><br>No suitable habitat (chaparral and/or Sonoran Desert) is present on-site for this species. Also, no known records from project area  |
| <i>Arctostaphylos glandulosa ssp. gabrielensis</i><br><b>San Gabriel manzanita</b> | F: None<br>S: None<br>CNPS: 1B.2<br>Global rank: G5T3<br>State rank: S3             | Perennial evergreen shrub found in chaparral habitat in the San Gabriel Mountains in of 595-1,500 meters (1,952-4,922 feet) elevation range. Known only from Mill Creek Summit divide.   | <b>Absent</b><br>No suitable habitat (open grasslands or wetland areas) is present on-site for this species. Also, no known records from project area |
| <i>Arenaria paludicola</i><br><b>marsh sandwort</b>                                | F: Endangered<br>S: Endangered<br>CNPS RPR: 1B<br>Global rank: G1<br>State rank: S1 | Found in freshwater marshes and swamps. This plant was historically found in scattered colonies in California and Washington. Currently, the only known extant population is on Nipomo Mesa; elevations 3 to 180 meters (10 to 600 feet). The last known record of this species in Riverside and San Bernardino Counties is from 1899. | <b>Absent</b><br>No suitable habitat (freshwater marshes) is present on-site for this species   |

| Species  | Status<br>(F=Federal,<br>C=California)   | Habitat  | BSA Occurrence<br>Probability  |
|--|--|--|--|
| <i>Berberis nevinii</i><br><b>Nevin's barberry</b>                                     | F: Endangered<br>S: Endangered<br>CNPS: 1B.1<br>Global rank: G1<br>State rank: S1                      | On steep, north facing slopes or in low grade sandy washes in chaparral, cismontane woodland, coastal scrub, and riparian scrub; 70-1575 meters.   | <b>Absent</b><br>No suitable habitat (steep, north facing slopes or in low grade sandy washes) is present on-site for this species.  |
| <i>Brodiaea filifolia</i><br><b>thread-leaved brodiaea</b>                             | F: Endangered<br>S: Threatened<br>CNPS: 1B.1<br>MSHCP: S<br>Global rank: G2<br>State rank: S2          | Only visible above ground in Spring of "good" rainfall years, on open ground in floodplains, grasslands, gentle hillsides, particularly near vernal pools in clay or semi-sandy soils.<br>25 - 1120 meters | <b>Absent</b><br>No suitable habitat (grasslands, gentle hillsides, vernal pools) is present on-site for this species.   |
| <i>Calochortus catalinae</i><br><b>Catalina mariposa lily</b>                          | F: None<br>S: S3S4<br>CNPS: 4.2<br>Global rank: G3G4<br>State rank: S3S4                               | Chaparral, cismontane woodland, coastal scrub, and valley & foothill grassland; 15 - 700 meters  | <b>Absent</b><br>No suitable habitat (chaparral, cismontane woodland, coastal scrub or valley & foothill grasslands) is present on-site for this species.                  |
| <i>Calochortus plummerae</i><br><b>Plummer's mariposa lily</b>                         | F: None<br>S: S4<br>CNPS: 4.2<br>MSHCP: P<br>Global rank: G4<br>State rank: S4                         | Cismontane woodlands, chaparral, coastal scrub, grasslands, lower montane coniferous forest; 100 - 1,700 meters.   | <b>Absent</b><br>No suitable habitat (cismontane woodlands, chaparral, coastal scrub, grasslands, or lower montane coniferous forest) is present on-site for this species. |
| <i>Calochortus weedii</i> var. <i>intermedius</i><br><b>intermediate mariposa lily</b> | F: None<br>S: S2<br>CNPS: 1B.2<br>MSHCP: P<br>Global rank: G3G4T2<br>State rank: S2<br>USFS: sensitive | Coastal scrub, chaparral, valley and foothill grassland. Dry, rocky calcareous slopes and rock outcrops; 60-1575 meters.   | <b>Absent</b><br>No suitable habitat (chaparral, coastal scrub, valley and foothill grassland with dry rocky calcareous slopes) is present on-site for this species.       |
| <i>Calystegia felix</i><br><b>lucky morning-glory</b>                                  | F: None<br>S: S1<br>CNPS: 1B.1<br>Global rank: G1Q<br>State rank: S1                                   | Meadows and seeps, riparian scrub. Sometimes alkaline, alluvial; 9-215 meters.   | <b>Absent</b><br>No suitable habitat (meadows and seeps, riparian scrub) is present on-site for this species.  |

| Species  | Status<br>(F=Federal,<br>C=California)  | Habitat  | BSA Occurrence<br>Probability   |
|--|---|--|---|
| <i>Centromadia pungens</i><br><i>ssp. laevis</i><br><b>smooth tarplant</b>             | F: None<br>S: None<br>CNPS: 1B.1<br>MSHCP: S<br>Global rank: G3G4T2<br>State rank: S1                                     | Annual herb found in alkaline areas within chenopod scrub, meadows, playas, riparian woodland, valley and foothill grassland; 0-640 meters.  | <b>Absent</b><br>No suitable habitat (alkaline areas within chenopod scrub, meadows, playas, riparian woodland, valley & foothill grassland) is present on-site for this species. |
| <i>Chloropyron maritimum</i><br><i>ssp. Maritimum</i><br><b>salt marsh bird's beak</b> | F: Endangered<br>S: Endangered<br>CNPS RPR: 1B<br>State rank: S1<br>Global rank: G4/T1<br>BLM: sensitive                  | Coastal dunes and salt marshes below 30 meters (100 feet) elevation. Historical collections referred to this taxon from alkaline meadow in vicinity of San Bernardino Valley are intermediate to <i>C. maritimum ssp. canescens</i> .    | <b>Absent</b><br>No suitable habitat (alkaline areas; coastal dunes & salt marshes) is present on-site for this species.  |
| <i>Chorizanthe parryi</i> var.<br><i>parryi</i><br><b>Parry's spineflower</b>          | F: None<br>S: CSC<br>CNPS RPR: 3<br>MSHCP: P<br>Global rank: G3T3<br>State rank: S2<br>BLM: Sensitive<br>USFWS: Sensitive | Dry sandy soils in chaparral or coastal scrub at 40 to 1,750 meters (100 to 5,700 feet) elevation.   | <b>Absent</b><br>No suitable habitat (dry sandy soils in chaparral or coastal scrub) is present on-site for this species.   |
| <i>Chorizanthe xanti</i> var.<br><i>leucotheca</i><br><b>white-bracted spineflower</b> | F: None<br>S: None<br>CNPS RPR: 1B.2<br>Global rank: G4T3<br>State rank: S3<br>BLM: Sensitive<br>USFWS: Sensitive         | Mojave desert scrub and pinyon and juniper woodland 300 to 1,200 meters (900 to 4,000 feet) elevation. Reported from Los Angeles, Riverside and San Bernardino Counties. Unlikely to be found within Riverside County.                   | <b>Absent</b><br>No suitable habitat (Mojave desert scrub or pinyon and juniper woodland) is present on-site for this species   |
| <i>Cladium californicum</i><br><b>California saw-grass</b>                             | F: None<br>S: None<br>CNPS: 2B.2<br>Global rank: G4<br>State rank: S2<br>USFW: sensitive                                  | Meadows and seeps, marshes and swamps (alkaline or freshwater). Freshwater or alkaline moist habitats; 20-2135 meters  | <b>Absent</b><br>No suitable habitat (meadows and seeps, marshes, and swamps) is present on-site for this species.  |
| <i>Claytonia lanceolata</i><br>var. <i>peirsonii</i><br><b>Peirson's spring beauty</b> | F: None<br>S: None<br>CNPS: 1B.2<br>Global rank: G2G3T2<br>State rank: S2<br>USFW: sensitive                              | This subspecies known only from San Bernardino County in subalpine and upper montane coniferous forest of the San Gabriel Mtns.; known to occur in gravelly soils or scree at elevations of 2,135 to 2,750 meters (7,000 to 9,000 feet). | <b>Absent</b><br>No suitable habitat (subalpine and upper montane coniferous forest) is present on-site for this species  |

| Species  | Status<br>(F=Federal,<br>C=California)  | Habitat   | BSA Occurrence<br>Probability  |
|--|---|---|--|
| <i>Deinandra paniculata</i><br><b>paniculate tarplant</b>                                  | F: None<br>S: None<br>CNPS: 4.2<br>Global rank: G4<br>State rank: S4                            | Usually found in vernal mesic, sometimes sandy, coastal scrub, valley and foothill grassland, vernal pools; and at elevation of 25 - 940 meters (82-3,085 feet).  | <b>Absent</b><br>No suitable habitat (coastal scrub, valley, and foothill grassland, vernal pools) is present on-site for this species.  |
| <i>Dodecahema leptoceras</i><br><b>slender-horned spineflower</b>                          | F: Endangered<br>S: Endangered<br>CNPS: 1B.1<br>MSHCP: S<br>Global rank: G1<br>State rank: S1   | Sandy soils in association with mature alluvial scrub or in the Vail Lake area gravel soils of Temecula arkose deposits in association with open chamise chaparral. The ideal habitat appears to be terraces and benches that receive over-bank deposits every 50-100 years; and at elevation of 200 - 760 meters (655-2,495 feet). | <b>Low</b><br>No suitable habitat (sandy soils in alluvial scrub, open chamise chaparral) is present within the work areas for this species. There is a low potential for this species to occur within sandy soils of the wash north of I-10 and east of Etiwanda Ave. |
| <i>Dudleya multicaulis</i><br><b>many-stemmed dudleya</b>                                  | F: None<br>S: Endangered<br>CNPS: 1B.2<br>MSHCP: S<br>USFS: sensitive<br>BLM: sensitive         | Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clayey soils or grassy slopes; at elevation of below 910 meters (2,985 feet).  | <b>Absent</b><br>No suitable habitat (chaparral, valley and foothill grassland) is present on-site for this species. The coastal sage present within the survey area does not contain clayey soils.  |
| <i>Eriastrum densifolium</i><br><i>ssp. sanctorum</i><br><b>Santa Ana River woollystar</b> | F: Endangered<br>S: Endangered<br>CNPS: 1B.1<br>MSHCP: C<br>Global rank: G4T1<br>State rank: S1 | Sandy soils of floodplains and terraced fluvial deposits of the Santa Ana River and larger tributaries; at elevation of 91 - 625 meters (298-2,050 feet).   | <b>Absent</b><br>The survey area is outside of the range of this sub-species.  |
| <i>Eriogonum microthecum</i> var. <i>johnstonii</i><br><b>Johnston's buckwheat</b>         | F: None<br>S: None<br>CNPS: 1B.3<br>Global rank: G5T2<br>State rank: S2                         | Perennial deciduous shrub found in the rocky, upper montane and subalpine coniferous forest of the San Gabriel Mtns.; and found at 1,829 to 2,926 meters (6,000 to 9,600 feet) elevation.   | <b>Absent:</b> No suitable habitat (upper montane and subalpine coniferous forest of the San Gabriel Mtns.) is present on-site for this species.   |
| <i>Horkelia cuneata</i> var. <i>puberula</i><br><b>mesa horkelia</b>                       | F: None<br>S: None<br>CNPS: 1B.1<br>Global rank: G4T1<br>State rank: S1                         | Sandy or gravelly soils in chaparral, or rarely in cismontane woodland or coastal scrub at 70 to 825 meters (200 to 2,700 feet) elevation.  | <b>Absent</b><br>No suitable habitat (sandy or gravelly soils in chaparral or cismontane woodland or coastal scrub) is present on-site for this species.   |

| <b>Species</b>  | <b>Status<br/>(F=Federal,<br/>C=California)</b>  | <b>Habitat</b>   | <b>BSA Occurrence<br/>Probability</b>  |
|---|--|--|--|
| <i>Juglans californica</i><br><b>Southern California<br/>black walnut</b>                   | F: None<br>S: SSC<br>CNPS: 4.2<br>MSHCP: C<br>Global rank: G4<br>State rank: S4          | A perennial deciduous tree found in chaparral, cismontane woodland, coastal scrub, riparian woodland; at 50 - 900 meters (164-2,955 feet) elevation.   | <b>Present</b><br>Found within the survey area (i.e., 500-foot buffer). No natural habitat occurs on-site. Remnant trees due to preserved as a farm or residential shade tree. |
| <i>Lepidium virginicum</i><br>var. <i>robinsonii</i><br><b>Robinson's pepper-<br/>grass</b> | F: None<br>S: None<br>CNPS: 4.3<br>Global rank: G5T3<br>State rank: S3                   | Dry soils in coastal sage scrub and chaparral, typically below 500 meters (1,600 feet) elevation.  | <b>Absent</b><br>No suitable habitat (dry soils in coastal sage scrub and/or chaparral) is present on-site for this species.   |
| <i>Lilium parryi</i><br><b>lemon lily</b>   | F: None<br>S: None<br>CNPS: 1B.2<br>Global rank: G3<br>State rank: S3<br>USFW: sensitive | Bulbiferous perennial herb of wet areas in meadows and riparian and montane coniferous forests at 1,300 to 2,790 meters (4,300 to 9,200 feet) elevation.   | <b>Absent</b><br>No suitable habitat (wet areas in meadows, riparian, or montane coniferous forests) is present on-site for this species.                                      |
| <i>Linanthus concinnus</i><br><b>San Gabriel linanthus</b>                                  | F: None<br>S: None<br>CNPS: 1B.2<br>Global rank: G2<br>State rank: S2<br>USFW: sensitive | Lower and upper montane coniferous forest; found on dry rocky slopes, often in Jeffrey pine/canyon oak forest; 1,675 to 2,800 meters (5,500 to 9,200 feet) elevation; known only from Los Angeles and San Bernardino Counties.                       | <b>Absent</b><br>No suitable habitat (lower & upper montane coniferous forest; dry rocky slopes, Jeffrey pine/canyon oak forest) is present on-site for this species.          |
| <i>Malacothamnus parishii</i><br><b>Parish's bush-mallow</b>                                | F: None<br>S: None<br>CNPS RPR: 1A<br>Global rank: GXO<br>State rank: SX                 | Known only from one occurrence in 1895, in chaparral and coastal sage scrub at 490 meters (1,600 feet) elevation in vicinity of San Bernardino. Presumed extinct.  | <b>Absent</b><br>No suitable habitat (chaparral and coastal sage scrub) is present on-site for this species.   |
| <i>Monardella australis</i><br>ssp. <i>jokerstill</i><br><b>Jokerst's monardella</b>        | F: None<br>S: None<br>CNPS RPR: 1B.1<br>Global rank: G4T1?<br>State rank: S1?            | Perennial rhizomatous herb found steep scree or talus slopes between breccia, secondary alluvial benches along drainages and washes in chaparral and lower montane coniferous forest habitat at 1,350 – 1,750-meter (4,429 to 5,741 feet) elevation. | <b>Absent</b><br>No suitable habitat (steep scree or talus slopes, alluvial benches along drainages and washes) is present on-site for this species.                           |

| Species   | Status<br>(F=Federal,<br>C=California)   | Habitat   | BSA Occurrence<br>Probability   |
|---|--|---|---|
| <i>Muhlenbergia californica</i><br><b>California muhly</b>                        | F: None<br>S: None<br>CNPS: 4.3<br>Global rank: G4<br>State rank: S4   | Coastal scrub, chaparral, lower montane coniferous, forest, meadows, and seeps. Usually found near streams or seeps; 100-2000 meters.   | <b>Absent</b><br>No suitable habitat (coastal scrub, chaparral, lower montane coniferous, forest, meadows, and seeps) is present on-site for this species.  |
| <i>Navarretia prostrata</i><br><b>prostrate vernal pool navarretia</b>            | F: None<br>S: None<br>CNPS: 1B.2<br>MSHCP: S<br>Global rank: G2<br>State rank: S2                              | Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites; 3-1235 meters.   | <b>Absent</b><br>No suitable habitat (coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps) is present on-site for this species.   |
| <i>Opuntia basilaris</i> var. <i>brachyclada</i><br><b>short-joint beavertail</b> | F: None<br>S: None<br>CNPS RPR: 1B<br>Global rank: G5T3<br>State rank: S3<br>USFS: sensitive<br>BLM: sensitive | Sandy soil or coarse, granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, and pinyon-juniper woodland at 880 to 1,800 meters (2,900 to 5,900 feet) elevation.  | <b>Absent</b><br>No suitable habitat (sandy soil or coarse, granitic loam in chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon-juniper woodlands) is present on-site for this species. |
| <i>Oreonana vestita</i><br><b>woolly mountain-parsley</b>                         | F: None<br>S: None<br>CNPS RPR: 1B<br>Global rank: G3<br>State rank: S3<br>USFS: sensitive<br>BLM: sensitive   | Scree, talus, or gravel on high ridges in subalpine coniferous forest and upper montane coniferous forest at 2285 to 3500 meters (7,500 to 11,500 feet) elevation. Known only from Los Angeles and San Bernardino Counties. | <b>Absent</b><br>No suitable habitat (subalpine coniferous forest and upper montane coniferous forest) is present on-site for this species.   |
| <i>Phacelia stellaris</i><br><b>Brand's star phacelia</b>                         | F: None<br>S: None<br>CNPS: 1B.1<br>MSHCP: S<br>Global rank: G1<br>State rank: S1                              | Found in sandy openings, sandy benches, dunes, sandy washes, or river floodplains, in coastal sage scrub, and open areas; at 5-400 meters (20 to 1,300 feet) elevation.   | <b>Absent</b><br>No suitable habitat (coastal scrub, coastal dunes, sandy benches, sandy washes or river floodplains) is present on-site for this species.  |
| <i>Pseudognaphalium leucocephalum</i><br><b>white rabbit-tobacco</b>              | F: None<br>S: None<br>CNPS: 2B.2<br>Global rank: G4<br>State rank: S2  | Perennial herb found in sandy, gravelly at the edges of washes or mouths of steep canyons; at 0 to 2,100 meters (0 to 7,000 feet) elevation.  | <b>Absent</b><br>No suitable habitat (sand, gravel edges of washes or mouths of steep canyons) is present on-site for this species.   |

| Species  | Status<br>(F=Federal,<br>C=California)   | Habitat  | BSA Occurrence<br>Probability   |
|--|--|--|---|
| <i>Sidalcea neomexicana</i><br><b>salt spring<br/>checkerbloom</b> | F: None<br>S: None<br>CNPS: 2B.2<br>Global rank: G4<br>State rank: S2<br>USFS: sensitive | Perennial herb found in alkali springs and marshes at elevations of 15-1,530 meters (49-5,020 feet).   | <b>Absent</b><br>No suitable habitat (alkaline springs and marshes) is present on-site for this species.  |
| <i>Symphyotrichum defoliatum</i><br><b>San Bernardino aster</b>    | F: None<br>S: None<br>CNPS: 1B.2<br>USFS: sensitive<br>BLM: sensitive                    | Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas; at 2 - 2,045 meters (6-6,709 feet) elevation.   | <b>Absent</b><br>No suitable habitat (meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland, or vernal grasslands etc..) is present on-site for this species. |
| <i>Sagittaria sanfordii</i><br><b>Sanford's arrowhead</b>          | F: None<br>S: None<br>CNPS RPR: 1B<br>Global rank: G3<br>State rank: S3                  | Marshes and swamps below 610 meters (2,000 feet) elevation. Occurs in standing or slow-moving fresh water (ponds, marshes, and ditches).   | <b>Absent</b><br>No suitable habitat (marshes and swamps or standing, slow-moving freshwater ponds, marshes, ditches) is present on-site for this species.  |
| <i>Senecio aphanactis</i><br><b>chaparral ragwort</b>              | F: None<br>S: None<br>CNPS RPR: 2B.2<br>Global rank: G3<br>State rank: S2                | Drying alkaline flats in cismontane woodland, coastal sage scrub, and chaparral at 15 to 575 (800?) meters (50 to 1,900 [2,600] feet) elevation. Known in California from Alameda, Contra Costa, Fresno, Los Angeles, Merced, Orange, Riverside, Santa Barbara, Santa Clara, San Diego, San Luis Obispo, Solano, and Ventura Counties. | <b>Absent:</b> Suitable habitat (drying alkaline flats in cismontane woodland, coastal sage scrub, and chaparral) is present on-site for this species.  |
| <i>Sphenopholis obtusata</i><br><b>prairie wedge grass</b>         | F: None<br>S: None<br>CNPS RPR: 2B.2<br>Global rank: G5<br>State rank: S2                | Cismontane woodland, meadows and seeps/mesic, in elevations ranging from 300 to 2,000 meters (1,000 to 6,600 feet), in Amador, Fresno, Inyo, Mono, Riverside, San Bernardino, and Tulare Counties.   | <b>Absent:</b> Suitable habitat (cismontane woodland, meadows, and seeps) is present on-site for this species.  |

**KEY TO TABLE 2**

**Definitions of occurrence probability:**

*Occurs:* Observed on the site by Wood biologists or recorded on-site by other qualified biologists.



**High:** Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

**Moderate:** Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

**Low:** Site is within the known range of the species but habitat on the site is rarely occupied by the species.

**Absent:** A focused study failed to detect the species, or, no suitable habitat is present.

**Unknown:** Distribution and habitat use has not been clearly determined.

**Federal designations:** (F = federal Endangered Species Act or federal agency designations)

ND: No designation

**State designations:** (C = California Endangered Species Act or CDFG designations)

**CDFW state rankings** are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a threat designation attached to the rank:

**S1** = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres

**S1.1** = very threatened

**S1.2** = threatened

**S1.3** = no current threats known

**S2** = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

**S2.1** = very threatened

**S2.2** = threatened

**S2.3** = no current threats known

**S3** = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

**S3.1** = very threatened

**S3.2** = threatened

**S3.3** = no current threats known

**S4** = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

**S5** = Secure. Common, widespread, and abundant in the state.

**SH** = All known California sites are historical, not extant

### 4.6.3 Special Status Vegetation Communities

None of the five special status vegetation communities shown in Table 2 (below) are known from the general project area are present. Vegetation communities are not state or federally listed as threatened or endangered.

**Table 2. Special Status Vegetation Communities Potential for Occurrence**

| Community                  | Status<br>(F=Federal,<br>C=California)                      | Habitat   | BSA<br>Occurrence<br>Probability   |
|----------------------------|---|---|--|
| California Walnut Woodland | F: None<br>S: None<br>Global rank: G3G4<br>State rank: S1S2 | California walnut woodland may be monospecific or mixed. Coast live oak ( <i>Quercus agrifolia</i> ) frequently co-dominates. Stands sometimes occur in chaparral and occasionally in coastal sage scrub. | <b>Absent:</b><br>This habitat was not detected and most of the project site has been significantly altered and/or highly disturbed. |

|   |   |   |  |
|---|---|---|--|
| Coastal and Valley Freshwater Marsh       | F: None<br>S: None<br>Global rank: G3<br>State rank: S2.1 | A marsh and swamp or wetland habitat dominated by presence of plants (emergent hydrophytes) adapted to growing in saturated soils and standing water. Habitat can include but not limited to cattails ( <i>Typha</i> sp.), bulrush ( <i>Scirpus</i> sp.), sedges ( <i>Carex</i> sp.).   | <b>Absent:</b><br>This habitat was not detected and most of the project site has been significantly altered and/or highly disturbed. |
| Riversidean Alluvial Fan Sage Scrub       | F: None<br>S: None<br>Global rank: G1<br>State rank: S1.1 | A 'soft chaparral' habitat found on south-facing upland slopes, rarely flooded found along streams. Occurs below 3,000 feet elevation, occupies generally drier sites than chaparral. Common vegetation found in this type of series includes but is not limited to California buckwheat ( <i>Eriogonum fasciculatum</i> ), sagebrush ( <i>Artemisia californica</i> ), common sand aster ( <i>Corethrogyne filaginifolia</i> ), golden bush ( <i>Isocoma menziesii</i> ), coyote brush ( <i>Baccharis pilularis</i> ), and Encelia ( <i>Encelia californica</i> ). | <b>Occurs:</b><br>Intermittently present in area along Etiwanda  |
| Southern Riparian Forest                  | F: None<br>S: None<br>Global rank: G4<br>State rank: S4   | Riparian forest community dominated by any of several species of willow and cottonwood trees that are generally greater than 20 feet high. Additional vegetation may include but not limited to coast live oak ( <i>Quercus agrifolia</i> ), white alder ( <i>Alnus rhombifolia</i> ), or California walnut ( <i>Juglans californica</i> ).   | <b>Absent:</b><br>This habitat was not detected and most of the project site has been significantly altered and/or highly disturbed  |
| Southern Sycamore Alder Riparian Woodland | F: None<br>S: None<br>Global rank: G4<br>State rank: S4   | A tall, open, woodland dominated by western sycamore and often white alder ( <i>Alnus rhombifolia</i> ).  | <b>Absent:</b><br>This habitat was not detected and most of the project site has been significantly altered and/or highly disturbed  |

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**S3.1** = very threatened

**S3.2** = threatened

**S3.3** = no current threats known

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#### **4.6.4 Special Status Animals**

##### **Insects**

Delhi series soils are mapped along on the southern project alignment, and the project is located within the currently known range of the Delhi Sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) (DSFLF). However, the project alignment between the intersection of Etiwanda Ave. and Philadelphia Ave. east to the intersection of Philadelphia Ave. and Country Village Ave. is now developed, except for the southeast corner of the intersection. Delhi fine sand soils are mapped within this vacant lot that shows signs of weed abatement activities. This area has been regularly disked and no longer contains areas of unconsolidated and aeolian deposits of Delhi sands. Additional mapped Delhi fine sand soils occur along south Country Village Ave. Most of this area is also developed and therefore unlikely to provide habitat for the DSFLF.

##### **Fish**

No waterways capable of supporting the federally listed as threatened Santa Ana sucker (*Catostomus santaanae*), arroyo chub (*Gila orcutti*), or Santa Ana speckled dace (*Rhinichthys osulus*) are present in the project area. It is the only fish species identified by the literature search (Table 3).

##### **Reptiles and Amphibians**

Only four special status reptile or amphibian species are known from the BSA (Table 3). They are southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), coast (San Diego) horned lizard (*Phrynosoma blainvillii*), and two-striped gartersnake (*Thamnophis hammondi*). None of these species are state or federally listed as

threatened or endangered and no suitable habitat is present within the project alignment. No additional action is required.

### **Birds**

Six (6) special status bird species were identified to be of potential occurrence in the project area. Five of those have no suitable habitat and are not expected to occur (Table 3). Of the remaining species, one special status species, the burrowing owl (*Athene cunicularia*) has the potential for occurring within the project alignment. This special status species and is unlisted however, burrowing owls are treated differently than most unlisted birds because they are uniquely vulnerable to ground disturbance. The burrowing owl is a year-round resident throughout much of Southern California, with an incursion of visitors retreating from higher elevations and more northerly latitudes in the winter months (Garrett and Dunn 1981; Small 1994). Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation and flat to moderate slopes with less than 30 percent canopy cover of trees and shrubs. Burrows are the essential component of burrowing owl habitat. Both natural and artificial burrows provide protection, shelter, and nests for burrowing owls. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or badgers, but also may use manmade structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement.

Virtually all native bird species are protected by the federal Migratory Bird Treaty Act (MBTA) and by the state fish and game code. Although some nesting birds can occur year-round in Southern California, typical avian breeding season is from February 1 through August 31, so it is recommended to schedule work between September 1 and January 31 to avoid nesting activity. If work must be done during the nesting season, the project alignment and adjacent areas should be examined by a qualified biologist prior to disturbance, especially where there could be any direct impacts. If active nests are found, the nests should be avoided, and a no disturbance buffer zone established and observed until young have fledged. While there is no established protocol for nest avoidance and buffer zones, when consulted, the California Department of Fish and Wildlife (CDFW) generally recommends avoidance buffers of 500 feet for raptors and listed species and 100–300 feet for other unlisted birds. Nest avoidance and buffer zones are decided on a case-by-case basis by the biological monitor and can sometimes be reduced depending on a variety of factors including topography, vegetation structure, the species in question, and avian behavior. Construction activity may encroach into the buffer area at the discretion of the biological monitor with CDFW concurrence.

## Mammals

One of the special status mammal species known to have occurred in the BSA, the western yellow bat (*Lasiurus xanthinus*) has a low potential to occur within the project alignment (see Table 3). It is neither state or federally listed as threatened or endangered. Marginally suitable habitat in the form of untrimmed palm trees is scattered throughout the project alignment. The project alignment is not located within the currently understood range of the San Bernardino kangaroo rat (*Dipodomys merriami parvus*) and suitable habitat is not present for this species or the other special status mammal species known to occur within the project vicinity. There is no suitable habitat for the northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*), Stephen's kangaroo rat (*Dipodomys stephensi*) Western mastiff bat (*Eumops perotis*), or the San Diego jackrabbit (*Lepus californicus bennettii*).

**Table 3. Special Status Animals**

| Species  | Protective Status<br>(F=Federal;<br>C=California)                               | Habitat  | BSA Occurrence<br>Probability   |
|--|---|--|---|
| <b>Insects</b>   |   |  |   |
| <i>Rhaphiomidas terminatus abdominalis</i><br><br><b>Delhi sands flower-loving fly</b> | F: None<br>S: None<br>Global rank: G1T1<br>State rank: S1                       | Endemic to arid, sandy habitats with sparse (<20%) total vegetative cover in the Colton Dunes ecosystem. Generally found in areas containing Delhi fine sands soil type. | <b>Low</b><br>Delhi series soils are mapped along the south boundary of the alignment. Marginally suitable habitat present within the 500 feet boundary of the project alignment. |
| <b>Fish</b>  |   |  |   |
| <i>Catostomus santaanae</i><br><br><b>Santa Ana sucker</b>                             | F: Threatened<br>S: None<br>MSHCP: C<br>Global rank: G1<br>State rank: S1       | Endemic to Los Angeles basin south coastal streams. Habitat generalists, but prefer sand-rubble-boulder bottoms, cool, clear water, & algae.                             | <b>Absent</b><br>No suitable habitat (sand-rubble boulder bottoms, cool, clear water, & algae) is present on-site for this species.   |
| <i>Gila orcutti</i><br><br><b>Arroyo chub</b>  | F: Threatened<br>S: SSC<br>Global rank: G2<br>State rank: S2<br>USFS: sensitive | Perennial streams or intermittent streams with permanent pools; slow water sections of streams with mud or sand substrates; spawning occurs in pools.                    | <b>Absent:</b> No suitable habitat (perennial streams or intermittent streams with permanent pools) is present on-site for this species.  |

| Species   | Protective Status<br>(F=Federal;<br>C=California)   | Habitat   | BSA Occurrence<br>Probability   |
|---|---|---|---|
| <i>Rhinichthys osculus</i><br><i>ssp. 3</i><br><br><b>Santa Ana speckled dace</b> | F: Threatened<br>S: SSC<br>Global rank: G5T1<br>State rank: S1<br>USFS: sensitive           | Found in the headwaters of the Santa Ana and San Gabriel River drainages. Found in riffles in small streams and shore areas with abundant gravel and rock.  | <b>Absent:</b> No suitable habitat (drainages; small streams & shore areas) is present on-site for this species.  |
| <b>Reptiles and Amphibians</b>  |   |   |   |
| <i>Anniella stebbinsi</i><br><br><b>southern California legless lizard</b>        | F: None<br>S: SSC<br>Global rank: G3<br>State rank: S3<br>USFS: sensitive                   | Inhabits moist loose soil and humus from central California to northern Baja California.  | <b>Low</b><br>No suitable habitat (loose soil and humus) within the project work areas. The species could occur in the sandy wash areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project. |
| <i>Arizona elegans occidentalis</i><br><br><b>California glossy snake</b>         | F: None<br>S: SSC<br>Global rank: G5T2<br>State rank: S2                                    | Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats from eastern part of San Francisco Bay area south to northwestern Baja California. Old reports of this species from the Santa Monica Mountains.   | <b>Low</b><br>No suitable habitat (loose soil and humus) within the project work areas. The species could occur in the scrub areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project.      |
| <i>Batrachoseps gabrieli</i><br><br><b>San Gabriel slender salamander</b>         | F: None<br>S: None<br>Global rank: G2G3<br>State rank: S2S3                                 | Found under rocks, wood, fern fronds and on soil at the base of talus slopes. This salamander is most active on the surface in winter and early spring. Known only from the San Gabriel Mountains.  | <b>Absent</b><br>No suitable habitat (talus slopes) is present on-site for this species.  |
| <i>Phrynosoma blainvillii</i><br><br><b>coast (San Diego) horned lizard</b>       | F: None<br>S: SSC<br>MSHCP: C<br>Global rank: G4G5T2Q<br>State rank: S3S4<br>BLM: sensitive | Occurs in many scrub and woodland habitats, grasslands, loose soils. Prefers open country, especially sandy areas, washes, and floodplains. Requires open areas for sunning, bushes for cover, ants.  | <b>Low</b><br>No suitable habitat within the project work areas. The species could occur in the scrub areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project.                             |
| <i>Spea hammondii</i><br><br><b>Western spadefoot</b>                             | F: None<br>S: SSC<br>MSHCP: C<br>Global rank: G3<br>State rank: S3<br>BLM: sensitive        | Grasslands and occasionally hardwood woodlands; requires vernal pools (persisting for at least three weeks) for breeding; burrows in loose soils during dry season. Occurs in the Central Valley and adjacent foothills, the non-desert areas of southern California, and in Baja California, Mexico. | <b>Absent</b><br>No suitable habitat (grasslands, hardwood woodlands, vernal pools) is present on-site for this species.  |

| Species   | Protective Status<br>(F=Federal;<br>C=California)   | Habitat  | BSA Occurrence<br>Probability   |
|---|---|--|---|
| <i>Thamnophis hammondi</i><br><br><b>Two-striped gartersnake</b>    | F: None<br>S: SSC<br>Global rank: G2<br>State rank: S2<br>BLM: sensitive                    | Highly aquatic. Only in or near permanent sources of water. Streams with rocky beds supporting willows or other riparian vegetation. From Monterey County to northwest Baja California.  | <b>Absent</b><br>No suitable habitat (permanent sources of water, streams with rocky beds) is present on-site for this species.   |
| <b>Birds</b>  |   |  |   |
| <i>Agelaius tricolor</i><br><br><b>tricolored blackbird</b>         | F: None<br>S: SSC<br>Global rank: G2G3<br>State rank: S1S2<br>Other: MBTA<br>BLM: sensitive | Breeds near fresh water, in emergent wetland with tall, dense cattails or tules, also in thickets of shrubs or tall herbs, including wheat and other crops. Feeds in grassland and cropland habitats.  | <b>Nesting: Absent</b><br>No suitable habitat (fresh water in emergent wetland areas) is present on-site for this species.<br><br><b>Foraging: Absent</b><br>Same as above  |
| <i>Artemisiospiza belli belli</i><br><br><b>Bell's sage sparrow</b> | F: None<br>S: None<br>Global rank: G5T2T3<br>State rank: S3<br>Other: MBTA                  | Occupies dry shrublands or grasslands, including creosote and saltbush-dominated desert scrub, yucca, honey mesquite, and greasewood. Uncommon and very local summer resident on grassy slopes and mesas west of the deserts. In mountains of Southern California, they are common among big sagebrush ( <i>Artemisia tridentata</i> ) habitat. In the Mojave they are known to use low scrub habitats including big sagebrush, saltbush, bitterbrush, shadscale, and creosote bush. | <b>Nesting: Absent</b><br>No suitable habitat (shrublands, grasslands, creosote and saltbush dominant desert scrub, yucca, honey mesquite) is present on-site for this species.<br><br><b>Foraging: Absent</b><br>Same as above   |
| <i>Athene cucularia</i><br><br><b>burrowing owl</b>                 | F: None<br>S: None<br>Global rank: G4<br>State rank: S3<br>Other: MBTA<br>BLM: sensitive    | Occupies ground squirrel burrows in open, dry grasslands, agricultural, railroad rights-of-way, and margins of highways, golf courses, and airports. Often utilizes man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. Nests in burrows, drainpipes, and piles of debris in grasslands, scrub habitats, and agricultural areas.   | <b>Nesting: Low</b><br>Marginally suitable habitat (open non-native grassland areas, fallow agricultural fields) is present within the project alignment for this species. California ground squirrel burrows suitable for burrowing owl use were detected and mapped. Focused surveys negative. Burrowing owls are highly mobile and can colonize or occur onsite at any time. A preconstruction clearance survey is recommended prior to site disturbance in accordance with the survey protocol and guidelines.<br><br><b>Foraging: Low</b><br>Same as above |

| Species  | Protective Status<br>(F=Federal;<br>C=California)   | Habitat  | BSA Occurrence<br>Probability  |
|--|---|--|--|
| <i>Laterallus jamaicensis coturniculus</i><br><b>California black rail</b>         | F: None<br>S: Threatened<br>Global rank: G3G4T1<br>State rank: S1<br>Other: MBTA              | Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Nests on the ground in high portions of salt marshes, shallow freshwater marshes, wet meadows, and flooded grassy vegetation. Species needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | <b>Nesting: Absent</b><br>No suitable habitat (freshwater marshes, wet meadows, saltwater marshes, flooded grassy vegetation) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above.  |
| <i>Polioptila californica californica</i><br><b>coastal California gnatcatcher</b> | F: Threatened<br>S: None<br>MSHCP: C<br>Global rank: G4G5T2Q<br>State rank: S2<br>Other: MBTA | Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.   | <b>Nesting: Absent</b><br>No suitable habitat (sage scrub in low-lying foothills and valleys, sparse chaparral) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above   |
| <i>Vireo bellii pusillus</i><br><b>least Bell's vireo</b>                          | F: Endangered<br>S: Endangered<br>Global rank: G5T2<br>State rank: S2<br>Other: MBTA          | Inhabits riparian forests and willow thickets. Nests from central California to northern Baja California and winters in southern Baja California.  | <b>Nesting: Absent</b><br>No suitable habitat (riparian forests and willow thickets) is present within the project alignment.<br><b>Foraging: Absent</b><br>Same as above  |
| <b>Mammals</b>   |   |  |  |
| <i>Chaetodipus fallax fallax</i><br><b>Northwestern San Diego pocket mouse</b>     | F: Endangered<br>S: SSC<br>MSHCP: C<br>Global rank: G5T3T4<br>State rank: S3S4                | Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush.  | <b>Low</b><br>No suitable habitat within the project work areas. The species could occur in the scrub areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project.  |
| <i>Chaetodipus fallax pallidus</i><br><b>Pallid San Diego pocket mouse</b>         | F: Endangered<br>S: SSC<br>MSHCP: C<br>Global rank: G5T3T4<br>State rank: S3S4                | Found in sandy herbaceous areas, usually associated with rocks or coarse gravel in desert wash, desert scrub, desert succulent scrub, and pinyon-juniper woodlands.  | <b>Absent:</b> No suitable habitat (sandy herbaceous areas associated rocks or coarse gravel in coastal scrub, chaparral, grasslands, and sagebrush) is present on-site for this species.  |
| <i>Dipodomys merriami parvus</i><br><b>San Bernardino kangaroo rat</b>             | F: Endangered<br>S: Candidate Endangered<br>Global rank: G5T1<br>State rank: S1               | Found on gentle slopes of alluvial fans, on flood plains, along washes, and on adjacent upland areas with soils containing sand, loam, and gravel deposited by rivers and streams. They also occupy areas where sandy soils are wind deposited.  | <b>Moderate</b><br>No suitable habitat within the project work areas. The species could occur in the wash areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project. Areas of potential burrows have been flagged as ESA by a previous unrelated project. |



| Species   | Protective Status<br>(F=Federal;<br>C=California)                               | Habitat  | BSA Occurrence<br>Probability   |
|---|---|--|---|
| <i>Dipodomys stephensi</i><br><b>Stephens' kangaroo rat</b>                     | F: Endangered<br>S: Threatened<br>MSHCP: C<br>Global rank: G2<br>State rank: S2 | Found in plant communities transitional between grassland and coastal sage scrub, with perennial vegetation cover of less than 50%. Most commonly associated with <i>Artemisia tridentata</i> , <i>Eriogonum fasciculatum</i> , and <i>Erodium</i> . Requires well-drained soils with compaction characteristics suitable for burrow construction. Not found in soils that are highly rocky, less than 20 inches deep, or heavily alkaline or clay, or in areas exceeding 25% slope. Occurs only in western Riverside County, northern San Diego County, and extreme southern San Bernardino County, below 915 meters (3,000 feet) elevation. In northwestern Riverside County, known only from east of Interstate 15. | <b>Absent</b><br>No suitable habitat (transitional grassland and coastal sage scrub with perennial vegetation cover less than 50%) is present within the project alignment.                               |
| <i>Eumops perotis</i><br><b>Western mastiff bat</b>                             | F: None<br>S: SSC<br>Global rank: G5<br>State rank: S3<br>WBWG: H               | Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical cliff faces, high buildings, and tunnels, and travels widely when foraging  | <b>Absent:</b><br>No suitable habitat (woodlands, coastal scrub, grasslands, chaparral, vertical cliff faces) is scattered throughout the project alignment   |
| <i>Lasiurus xanthinus</i><br><b>western yellow bat</b>                          | F: None<br>S: SSC<br>Global rank: G5<br>State rank: S3<br>WBWG: H               | Occurs in palm oases and in residential areas with untrimmed palm trees. Day roosts in trees only, particularly under palm aprons; especially the dead fronds of palm trees. Forages over water and among trees.   | <b>Low:</b><br>Marginally suitable habitat (untrimmed palm trees) is scattered throughout the project alignment   |
| <i>Lepus californicus bennettii</i><br><b>San Diego black-tailed jackrabbit</b> | F: None<br>S: SSC<br>Global rank: G5T3T4<br>State rank: S3S4                    | Variety of habitats including herbaceous and desert scrub areas, early stages of open forest and chaparral. Most common in relatively open habitats. Restricted to the cismontane areas of Southern California, extending from the coast to the Santa Monica, San Gabriel, San Bernardino, and Santa Rosa Mountain ranges.   | <b>Moderate</b><br>No suitable habitat within the project work areas. The species could occur in the wash and basin areas north of I-10 and east of Etiwanda Ave but will not be impacted by the project. |

**KEY TO TABLE 2**

**Definitions of occurrence probability:**

*Occurs:* Observed on the site by Wood biologists or recorded on-site by other qualified biologists.

*High:* Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

*Moderate:* Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

*Low:* Site is within the known range of the species but habitat on the site is rarely occupied by the species.

*Absent:* A focused study failed to detect the species, or, no suitable habitat is present.

*Unknown:* Distribution and habitat use has not been clearly determined.

**Federal designations:** (F = federal Endangered Species Act or federal agency designations)

ND: No designation

**State designations:** (C = California Endangered Species Act or CDFG designations)

**CDFW state rankings** are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a threat designation attached to the rank:

**S1** = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres

**S1.1** = very threatened

**S1.2** = threatened

**S1.3** = no current threats known

**S2** = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

**S2.1** = very threatened

**S2.2** = threatened

**S2.3** = no current threats known

**S3** = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

**S3.1** = very threatened

**S3.2** = threatened

**S3.3** = no current threats known

**S4** = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

**S5** = Secure. Common, widespread, and abundant in the state.

**SH** = All known California sites are historical, not extant

**Western Bat Working Group (WBWG) designations:**

H = High: Species which are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.

M: = Medium: Species which warrant a medium level of concern and need closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.

L: = Low: Species for which most of the existing data support stable populations, and for which the potential for major changes in status in the near future is considered unlikely. There may be localized concerns, but the overall status of the species is believed to be secure. Conservation actions would still apply for these bats, but limited resources are best used on High and Medium status species.

P: = Periphery: This designation indicates a species on the edge of its range, for which no other designation has been determined.

#### **4.7 Wildlife Corridors**

The BSA was assessed to determine if a wildlife linkage occurs on or within a portion of the project site. Because the BSA is completely altered by development and agriculture, it does not act as a corridor for terrestrial animals. To a limited degree, it acts as a corridor (flyway) for birds, especially those associated with water, which use agricultural ponds and marshes for foraging, etc.

#### **5.0 DISCUSSION**

The majority of the project site is located within disturbed areas associated with existing roads, road shoulders, and railroad right of way. Keeping direct impacts confined to such areas will minimize or eliminate direct impacts to protected biological resources. Areas where direct impacts are possible due to the presence of relatively undisturbed potential habitat for those biological elements include:

- Undeveloped areas within the northern portion of the SBCDPW/FCD Potential Alignment

- Undeveloped/unpaved areas within the project alignment, especially the basin at the south end.
- Any areas where pipeline installation work might encroach on the walls of ditches and berms, which could potentially harbor burrowing owls and/or be a jurisdictional water.

Recommendations for minimization of direct impacts, if any, are in Section 7.0 below. Indirect impacts are also a potential issue, primarily for birds. The MBTA and California Fish and Game Code protect virtually all native birds, both common and special status species. Although nesting birds and other wildlife could occur in close proximity to the project over a wide area, the majority of the project alignment is along busy thoroughfares and an airport. Any wildlife present will already be accustomed to a certain level of noise and vibration.

## **6.0 RECOMMENDATIONS**

Appropriately timed preconstruction surveys by a qualified biologist will always precede direct and indirect impacts in areas where potential special status biological resources or nesting bird habitat is present. The nesting bird season is generally considered to be February 1 to August 31. Depending on the habitat, these surveys will vary in timing, but in no case would they be done more than 30-days prior to vegetation removal or ground disturbance. In some cases, a qualified biological monitor may be needed during project work activities if the work could directly or indirectly impact sensitive species or active bird nests. These issues are described in more detail below.

A Worker Environmental Awareness Program (WEAP) will be presented prior to any work to outline issues and mitigation measures. All construction personnel assigned to the project must go through the WEAP training prior to starting any work within the project site. Other standard best management practices (BMP) should be implemented to avoid impacts. These would include trash management, project speed limits, etc.

We recommend the following specific measures to reduce or eliminate potential impacts to listed and other special status species. The linear nature of most of the project, the regular presence of disturbance from aircraft and vehicles over most of the project, and the fact that most project direct impacts will be in already disturbed areas was taken into consideration when making these recommendations.

### **6.1 Wetlands and Jurisdictional Drainages**

Potentially jurisdictional waters are present in the BSA. It is our understanding that these waters will be avoided. If they are not 100% avoided, permitting with the USACE, CDFW and/or RWQCB may be needed.

## **6.2 Special Status Plant Species**

One sensitive plant, Southern California black walnut, was observed during the biological assessment. However, these trees will be avoided; and no impacts to any special status plant species are anticipated. We do not recommend any action for plant species.

## **6.3 Special Status Birds**

With the exception of the burrowing owl, unlisted special status bird species will be adequately protected by the nesting bird recommendations in Section 7.4. Burrowing owls have a low potential to nest and/or forage within BSA, so consultation with CDFW will be required to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls, CDFW may require a number of mitigation options that range from passive relocation to habitat replacement. A pre-construction burrowing owl survey is also required prior to any vegetation removal or soil disturbance where suitable habitat is present within the BSA (CDFG 2012).

Preconstruction surveys for burrowing owls are called "take avoidance surveys" by CDFG (2012). The initial take avoidance survey should be completed no less than 14 days prior to initiating ground disturbance activities. Implementation of avoidance and minimization measures would be triggered by positive owl presence on the site where project activities will occur. The development of avoidance and minimization approaches would be informed by monitoring the burrowing owls. Burrowing owls may re-colonize a site after only a few days. Time lapses between project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance.

## **6.4 Nesting Birds**

Direct and indirect impacts to nesting birds can be minimized or eliminated by conducting work outside of the local breeding season. Within the project area, breeding activity is expected to occur between 1 February and 31 August. Work from about 1 September through 31 January would therefore be expected to avoid nesting activity. If work must be done during the breeding season, potential nesting areas should be examined by a qualified biologist in the week prior to disturbance, especially where there could be any direct impacts. Most of the project alignment is adjacent to business and/or residential development, and some smaller areas of the project alignment are adjacent to fallow agricultural fields and/or planted trees which may harbor nesting birds. While there is no established protocol for nest avoidance, when consulted, the CDFW generally recommends avoidance buffers of about 500 feet for raptors and threatened/endangered species and 100 – 300 feet for other birds. If active nests are found, they should be avoided until young have fledged. This distance for avoidance buffers is directly related to the disturbance tolerance of each individual species. Listed species and/or species such as raptors with a very low tolerance for disturbance will have a much larger avoidance buffer. Species with a high disturbance tolerance will have a much shorter avoidance buffer. The use of noise

attenuation barriers when adjacent to nesting habitat or known nests may allow such buffers to be reduced or eliminated.

## **6.5 Special Status Mammals**

There is a low possibility that the unlisted special status western yellow bat could occur onsite. They are commonly found in the southwestern United States roosting in the skirt of dead fronds in both native and non-native palm trees and have also been documented roosting in cottonwood trees (*Populus* spp.). Some individuals migrate, but others are present year-round (Western Bat Working Group 2017). A few palms suitable for occupation by this species are present in the BSA. If any trees, especially palms, must be disturbed or removed, a qualified biologist should conduct a pre-construction survey for bat roosts at most one week prior to project disturbance. If present, appropriate mitigation measures should be implemented in consultation with wildlife agencies, which would potentially include the use of noise attenuation barriers.

Three additional mammals have a low or moderate potential to occur within the project alignment. The San Bernardino kangaroo rat, black-tailed jack rabbit, and San Diego pocket mouse. These species will not be impacted by the project work areas but could occur within adjacent open space areas.

## **6.6 Special Status Reptiles**

Three additional reptiles: legless lizard, San Diego horned lizard, and glossy snake also have a low or moderate potential to occur within adjacent habitat areas but will not be impacted within the project work areas.

### **6.6.1 Survey Protocols for Special Status Plants and Animals**

Protocol surveys for the burrowing owl have been conducted in 2021 in areas that have burrowing owl habitat. A focused burrowing owl survey was conducted, and no owls were found to be currently present within the alignment. Pre-construction surveys are recommended prior to start of construction to ensure no impacts to any owls that may or may not migrate into the project alignment. A separate report is attached describing areas where focused surveys were conducted and results.

## **6.7 Wildlife Corridors**

No terrestrial corridor exists in the project BSA. Since the project consists of improvements to existing facilities and installation of an underground pipeline, the finished project will not block any "corridors" (flyways) for birds or bats that may utilize the area.

## 7.0 LITERATURE CITED AND REFERENCES

- California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation.
- California Department of Fish and Wildlife (CDFW). 2021a. California Natural Diversity Database (CNDDDB) RareFind 5 records of sensitive elements. Accessed online at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>
- CDFW. 2021b. State & Federally Listed Endangered & Threatened Animals of California. November. Accessed online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109405>
- CDFW. 2021. Special Animals List. November. Periodic publication. Sacramento, CA. Accessed online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>
- California Native Plant Society (CNPS). 2021. Inventory of Rare and Endangered Plants of California, Online Inventory, Seventh Edition. Accessed online at: <http://www.rareplants.cnps.org/>
- City of Ontario. 2021. Municipal Code. Accessed online at: [http://library.amlegal.com/nxt/gateway.dll/California/ontario/cityofontariocaliforniamunicipalcodevolu?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:ontario\\_ca](http://library.amlegal.com/nxt/gateway.dll/California/ontario/cityofontariocaliforniamunicipalcodevolu?f=templates$fn=default.htm$3.0$vid=amlegal:ontario_ca)
- City of Rancho Cucamonga. 2021. Municipal Code. Accessed online at: <https://www.cityofrc.us/public-safety/community-improvement/municipal-code>
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Calif. Fish Game, Sacramento. Accessed online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=75893&inline>
- Jepson Flora Project. 2020. Jepson eFlora. Accessed online at: <http://ucjeps.berkeley.edu/IJM.html>
- Sawyer et al. 2021. A Manual of California Vegetation, second edition. California Native Plant Society, Sacramento, CA.
- United States Department of Agriculture (USDA). 2021. PLANTS Database. Accessed online at: <http://plants.usda.gov>
- USDA. 2020. Web Soil Survey. Accessed online at: <http://websoilsurvey.nrcs.usda.gov/app/>
- United States Geological Survey (USGS). 1981. *Cucamonga Peak* and *Guasti*, California 7.5-minute topographic quadrangle maps.
- United States Fish and Wildlife Service (USFWS). 2020a. National Wetlands Inventory. Accessed online at: <https://www.fws.gov/wetlands/>
- United States Fish and Wildlife Service (USFWS). 2020b. Critical Habitat Portal. Accessed online at: <http://ecos.fws.gov/crithab/>.
- United States Forestry Service (USFWS). 2020c. Accessed online at: [https://www.fs.usda.gov/Internet/FSE\\_DOCUMENTS/fsbdev3\\_045236.pdf](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsbdev3_045236.pdf)

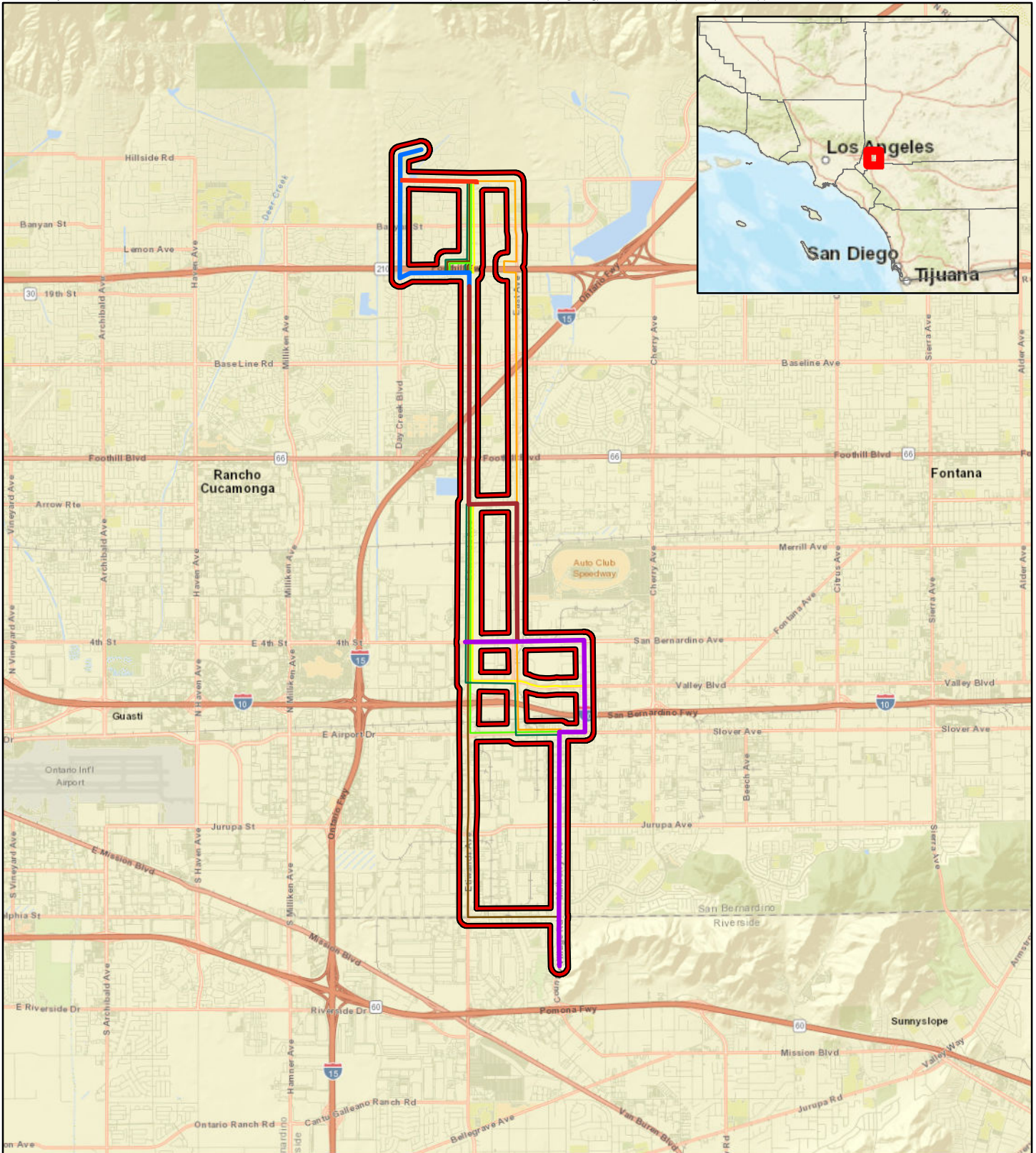
Western Bat Working Group. 2017. Western Bat Species, *Lasiurus xanthinus* | western yellow bat species account. Accessed online at: <http://wbwg.org/western-bat-species/>

Wood, Environment & Infrastructure Solutions, Inc. 2021a. Draft Focused Survey for the Burrowing Owl, JCSD Northern Pipeline Project. Report prepared for Webb.












## **APPENDIX A**

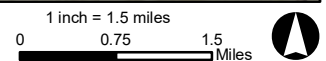
### **FIGURES**





Path: \\sdg1-rs1\GIS\3554\_NaturalResources\Etiwanda\_Pipeline\_2055400815\MXD\Report\Figures\BIO\Fig1\_Regional.mxd, aaron.johnson 7/26/2021

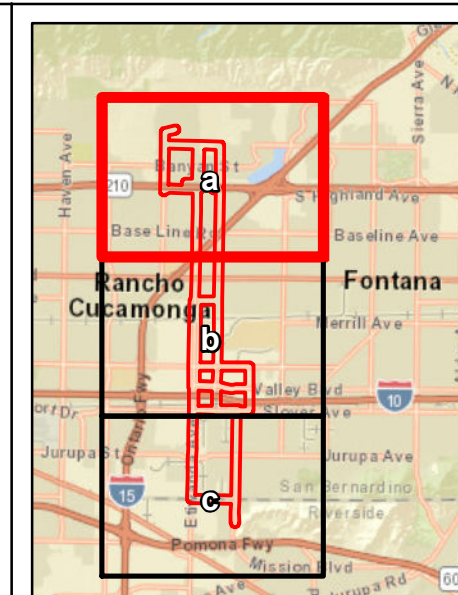
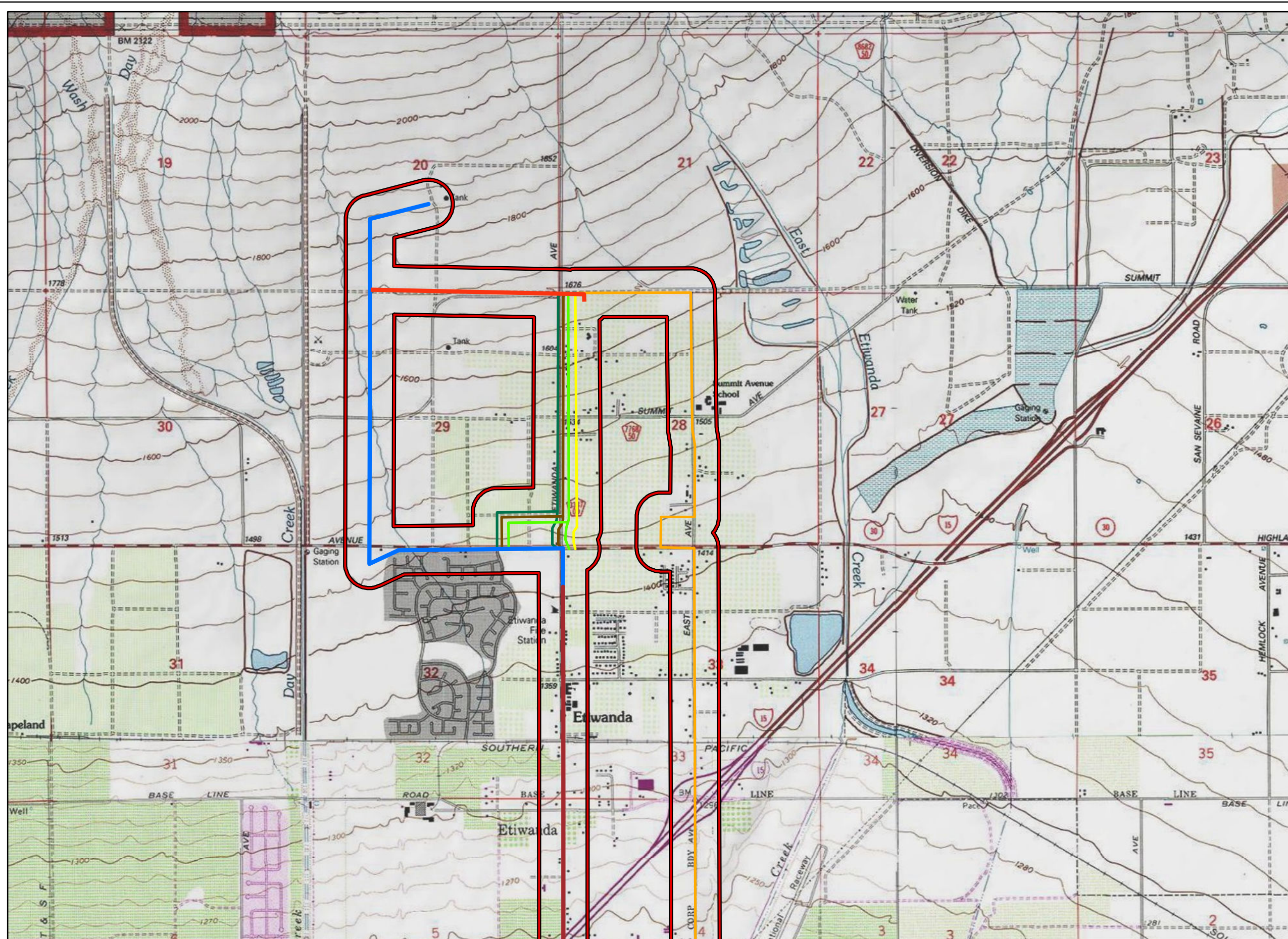
- |   |                                  |   |          |
|---|----------------------------------|---|----------|
|  | Project Alignment (500ft Buffer) |  | Option A |
|  | Phase 1                          |  | Option B |
|  | Phase 2                          |  | Option C |
|  | Phase 3                          |  | Option D |
|  | Phase 4                          |  | Option E |
|  | <b>Recommended Alignment</b>     |   |          |



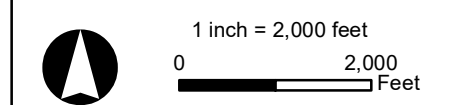
## FIGURE 1

Regional Location  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.





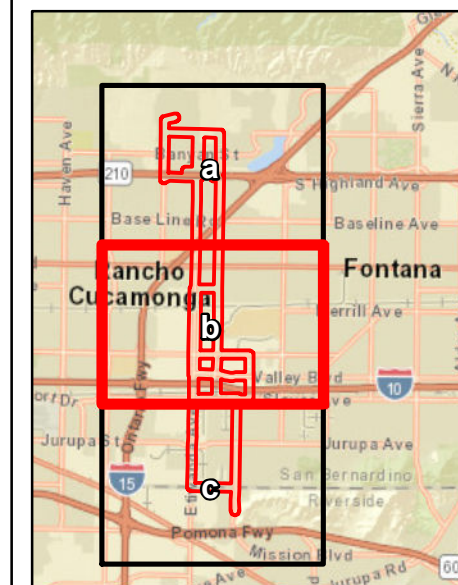
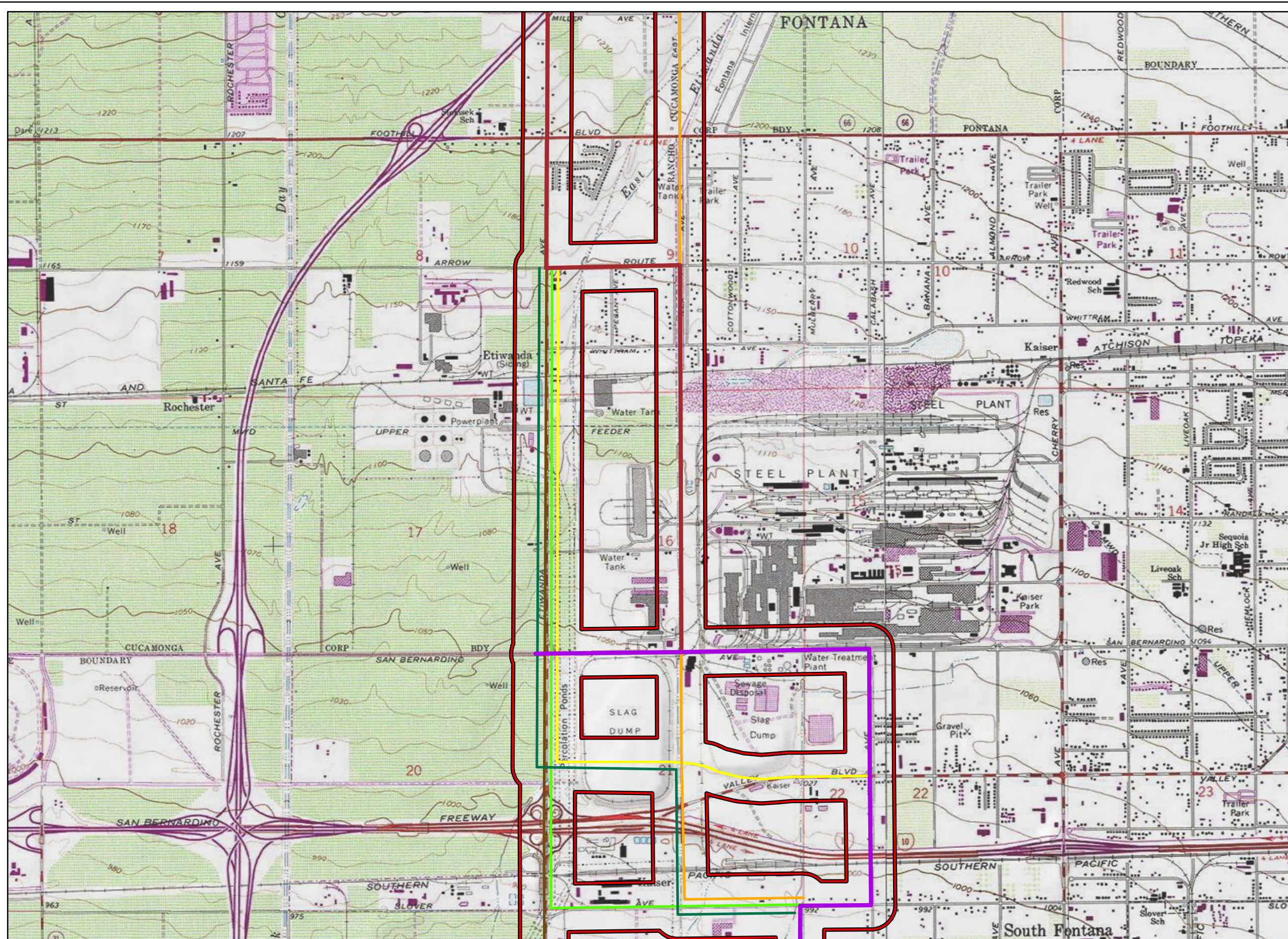
- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E



**FIGURE 2a**  
 Project Location on USGS Topo  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



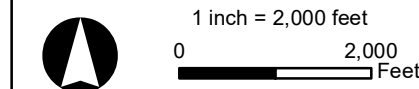
Project Alignment (500ft Buffer)

**Recommended Alignment**

- Phase 1
- Phase 2
- Phase 3
- Phase 4

**Optional Alignments**

- Option A
- Option B
- Option C
- Option D
- Option E

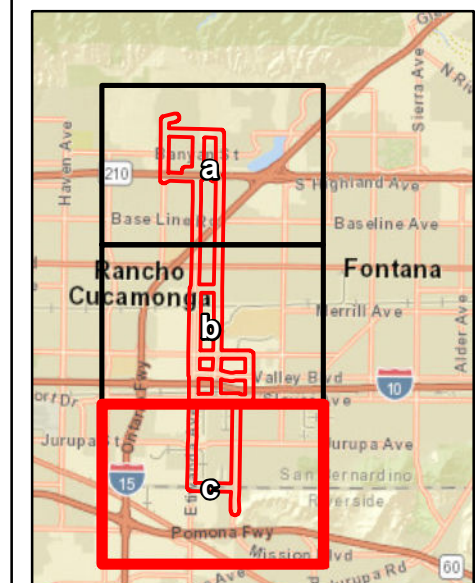
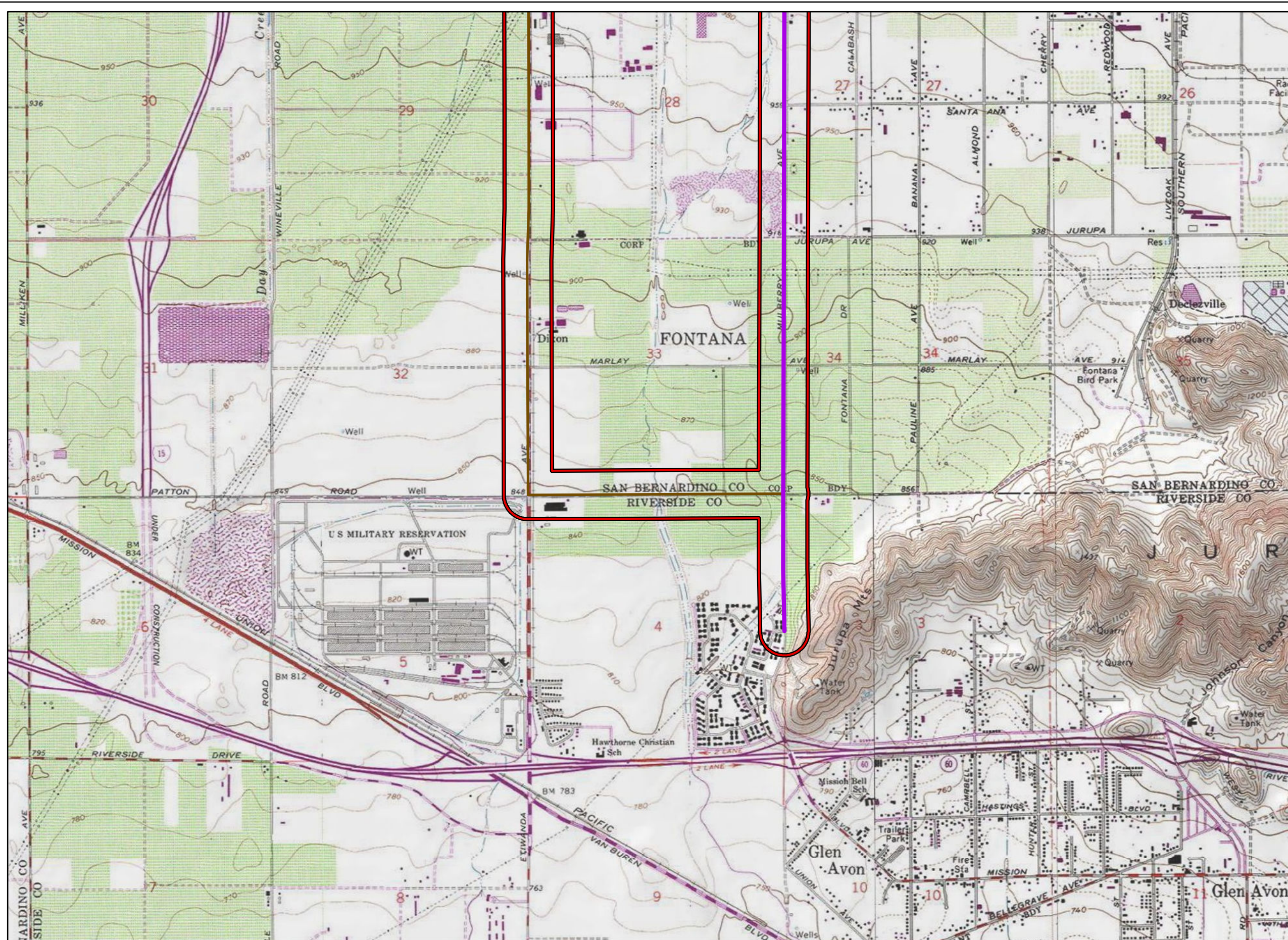












**FIGURE 2b**

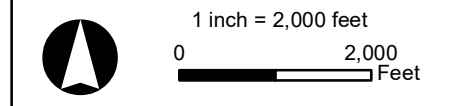
Project Location on USGS Topo  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



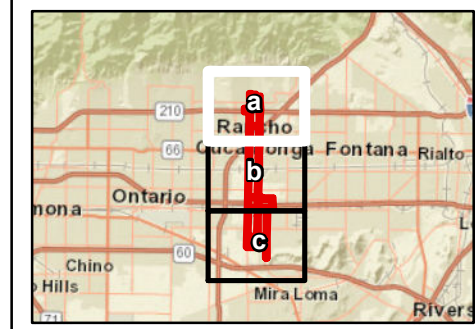
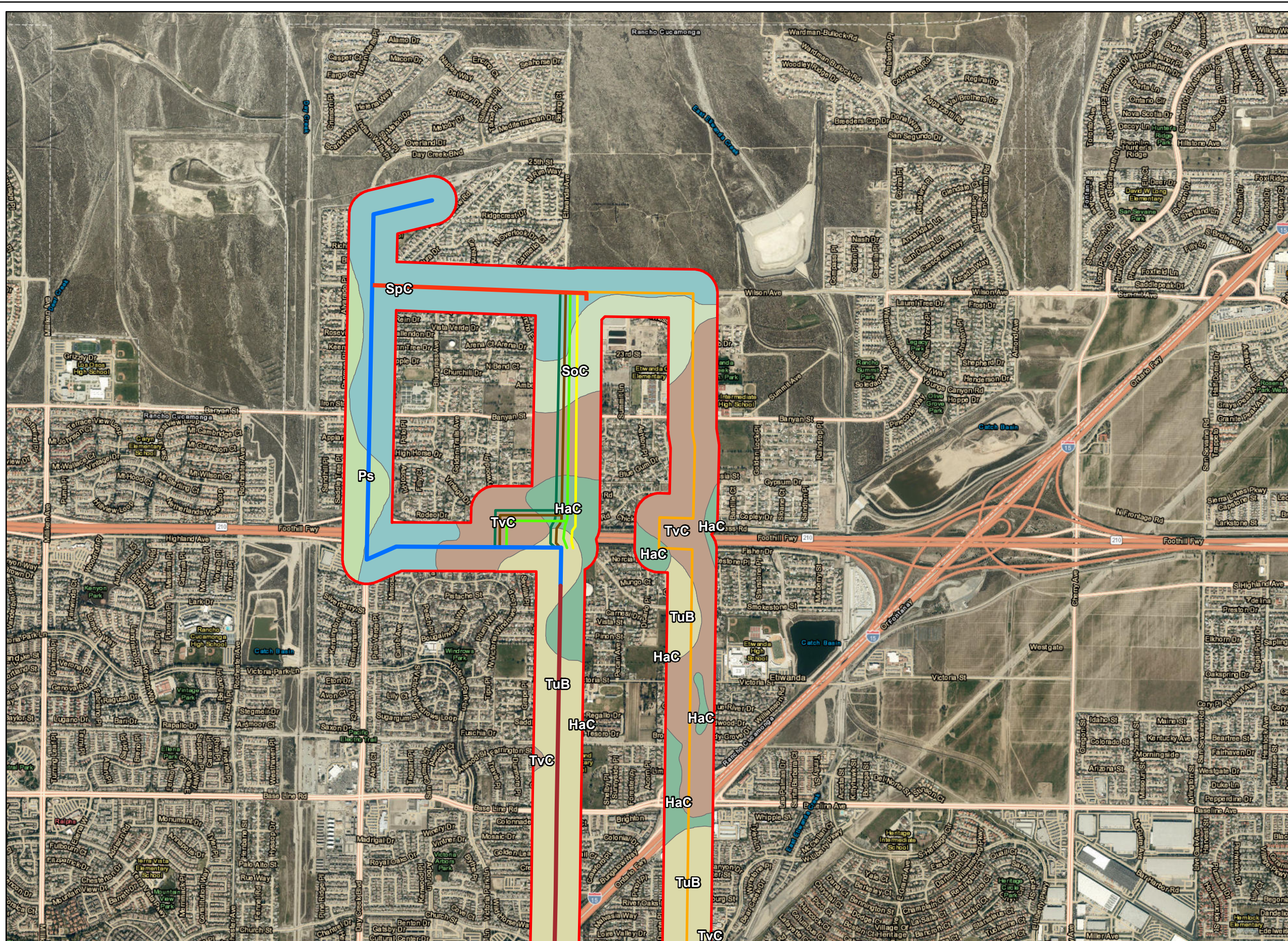
-  Project Alignment (500ft Buffer)
- Recommended Alignment**
-  Phase 1
-  Phase 2
-  Phase 3
-  Phase 4
- Optional Alignments**
-  Option A
-  Option B
-  Option C
-  Option D
-  Option E



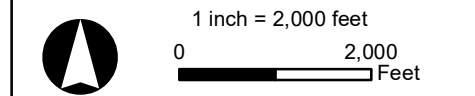
**FIGURE 2c**  
 Project Location on USGS Topo  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



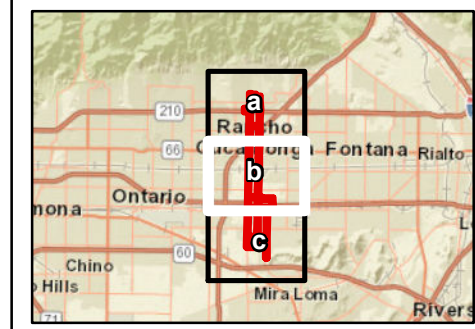
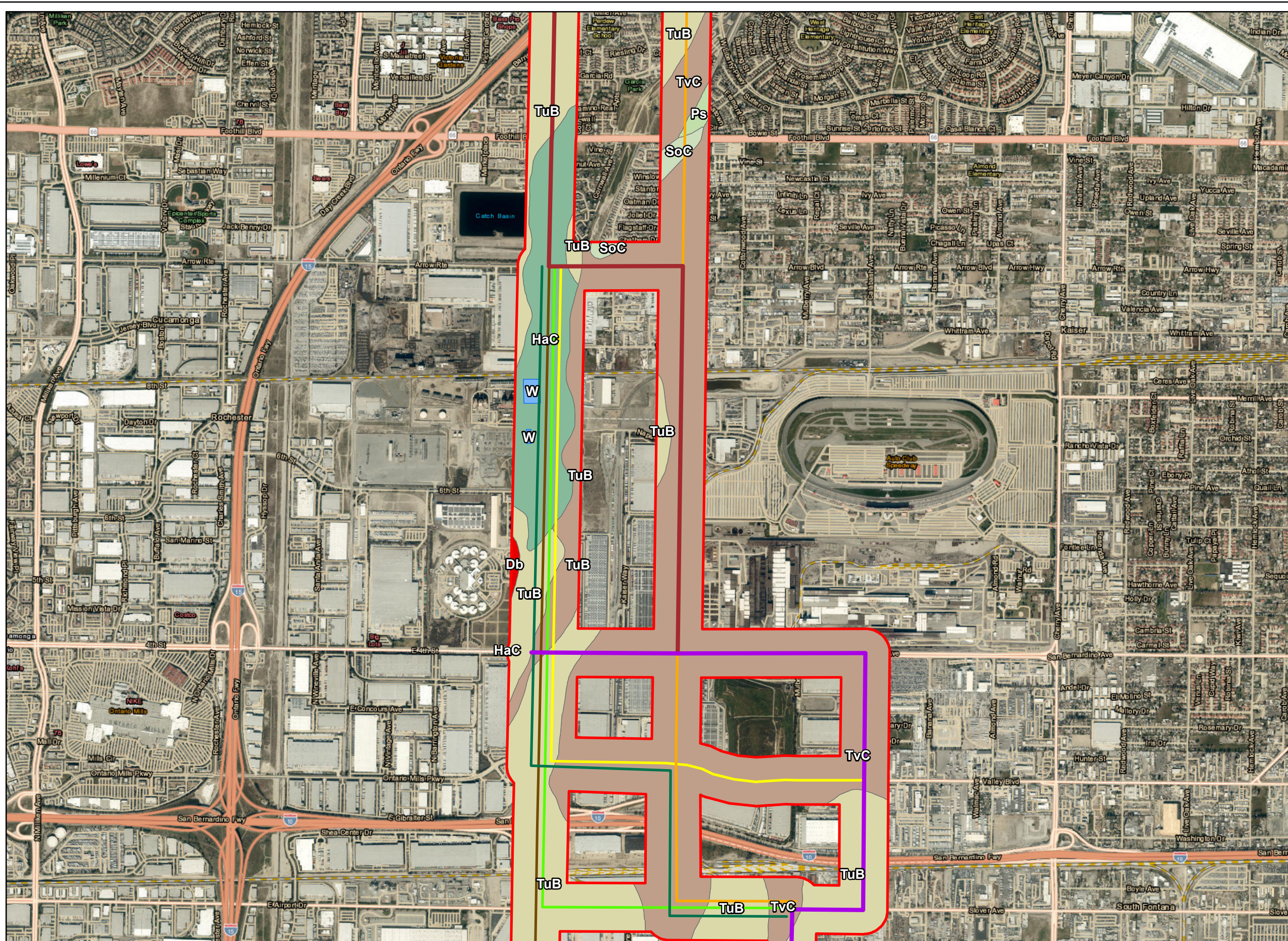
- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Soils**
- HAc - Hanford coarse sandy loam, 2 to 9 percent slopes
- Ps - Portola loam, moderately well drained variant
- SoC - Sobrante loam, 2 to 15 percent slopes
- SpC - Soboba stony loamy sand, 2 to 9 percent slopes
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TvC - Tretten fine sandy loam, 3 to 15 percent slopes



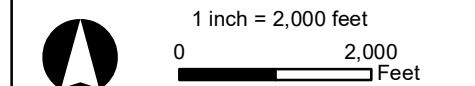
**FIGURE 3a**  
Soil Types  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
GIS User Community  
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



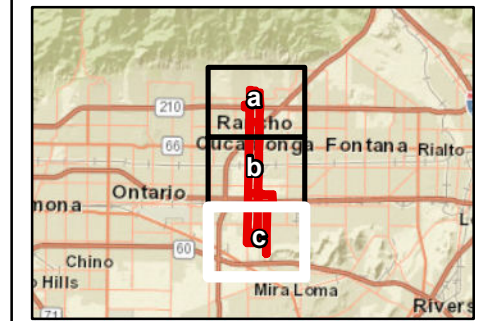
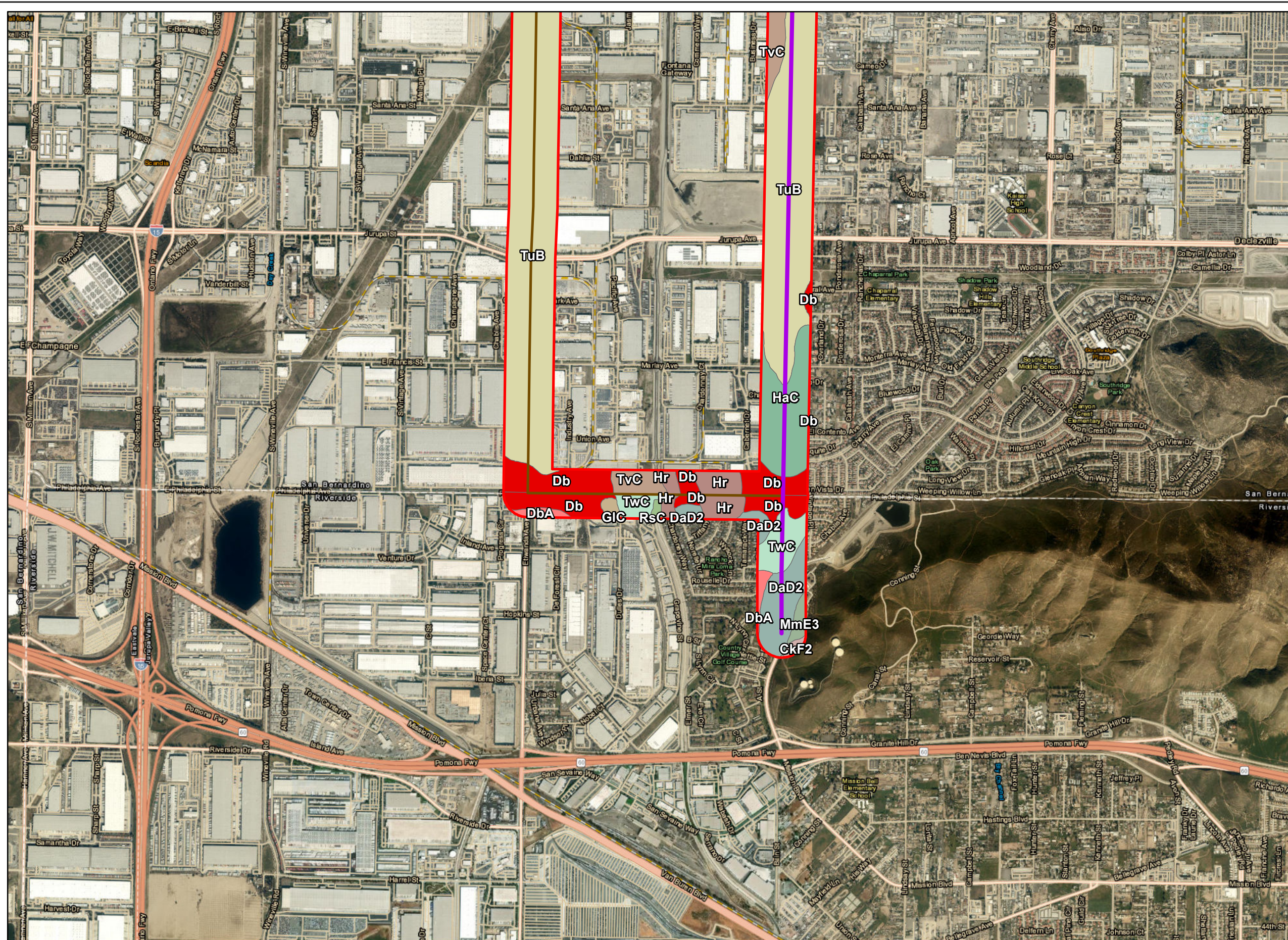
- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 1
- Phase 2
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Soils**
- Db - Delhi fine sand
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- Ps - Portola loam, moderately well drained variant
- SoC - Sobrante loam, 2 to 15 percent slopes
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TVC - Tretten fine sandy loam, 3 to 15 percent slopes
- W - Water



**FIGURE 3b**  
 Soil Types  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



Project Alignment (500ft Buffer)

**Recommended Alignment**

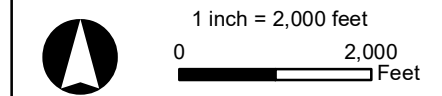
Phase 1

**Optional Alignments**

Option A

**Soils**

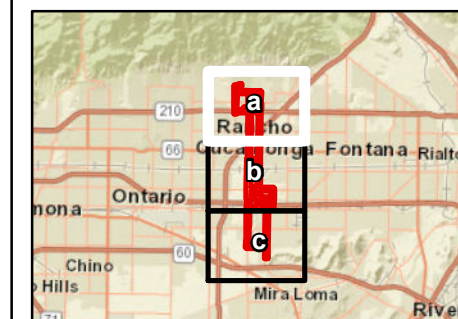
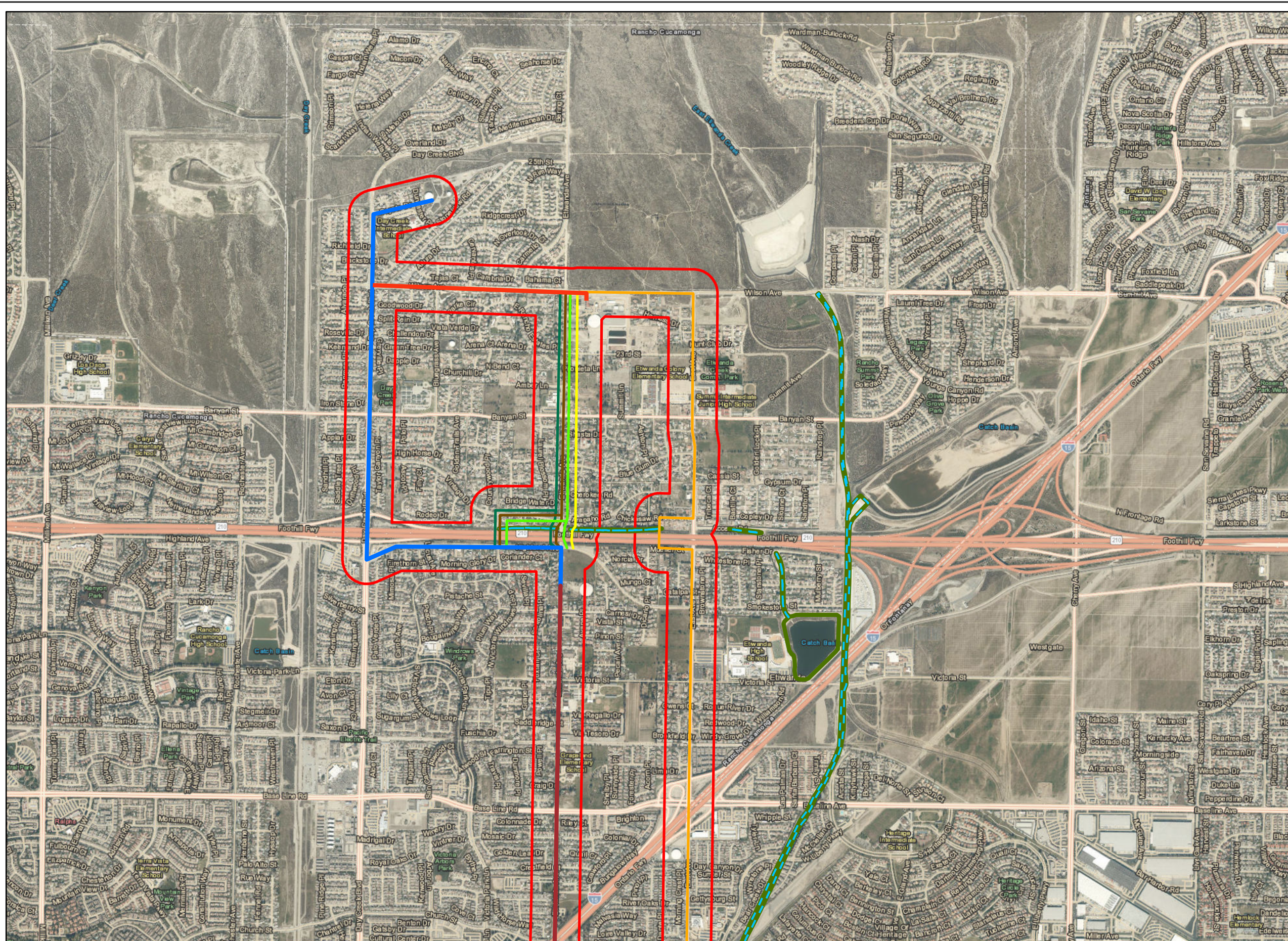
- CkF2 - Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- DaD2 - Daulton rocky silt loam, 8 to 30 percent slopes, eroded
- Db - Delhi fine sand
- DbA - Delhi loamy fine sand, 0 to 3 percent slopes
- GIC - Gorgonio loamy sand, deep, 2 to 8 percent slopes
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- HIA - Hilmar loamy very fine sand, 0 to 2 percent slopes
- Hr - Hanford fine sandy loam, hard substratum
- MmE3 - Miramar coarse sandy loam, steep, severely eroded
- Rsc - Rincon silty clay loam, 2 to 9 percent slopes, MLRA 14
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TvC - Tretten fine sandy loam, 3 to 15 percent slopes
- TwC - Tujunga gravelly loamy sand, 0 to 8 percent slopes



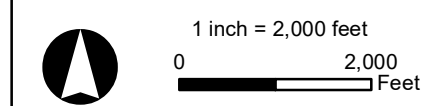
**FIGURE 3c**  
Soil Types  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



- Jurisdictional Areas**
- - - ACOE
  - - - CDFW
- Recommended Alignment**
- Phase 1
  - Phase 2
  - Phase 3
  - Phase 4
- Optional Alignments**
- Option A
  - Option B
  - Option C
  - Option D
  - Option E
  - Project Alignment (500ft Buffer)

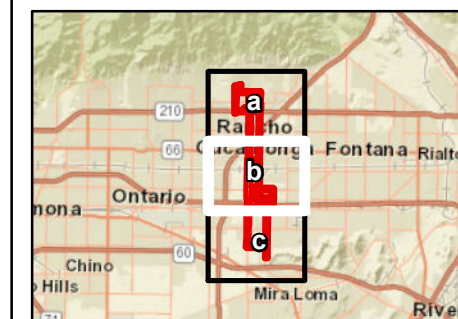
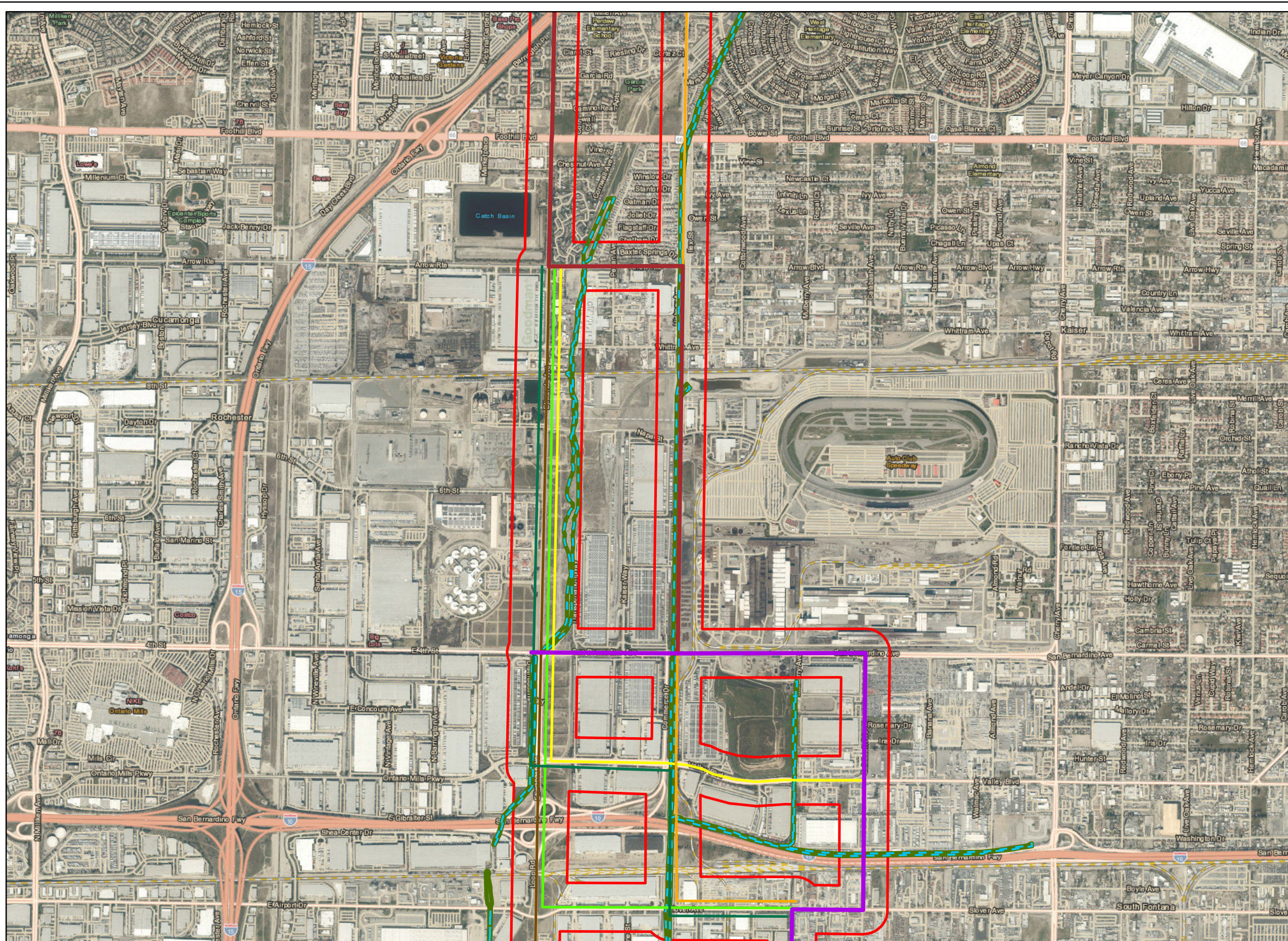


**FIGURE 4a**  
 Jurisdictional Delineation  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.

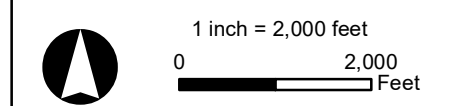


Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,





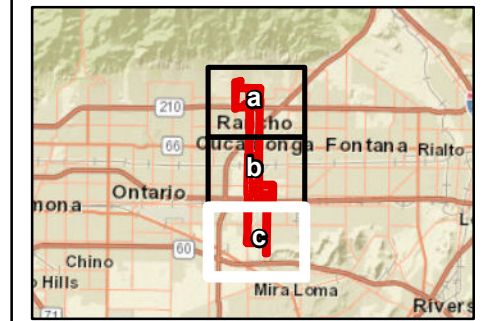
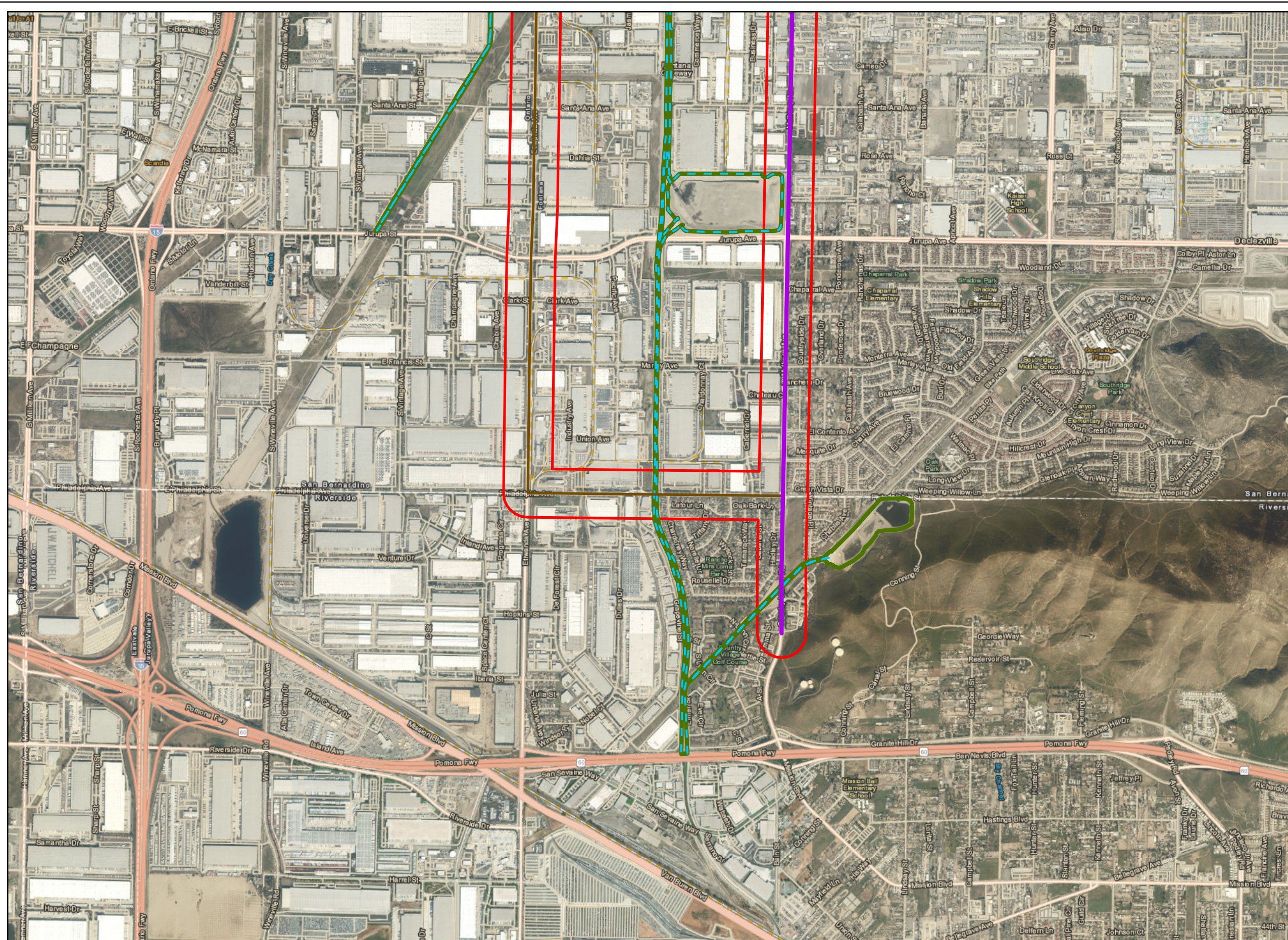
- Jurisdictional Areas**
- - - ACOE
  - CDFW
- Recommended Alignment**
- Phase 1
  - Phase 2
  - Phase 3
  - Phase 4
- Optional Alignments**
- Option A
  - Option B
  - Option C
  - Option D
  - Option E
- Project Alignment (500ft Buffer)



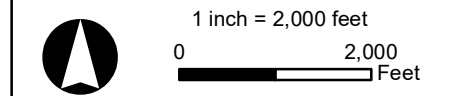
**FIGURE 4b**  
 Jurisdictional Delineation  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



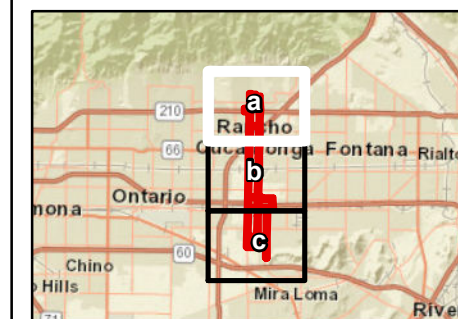
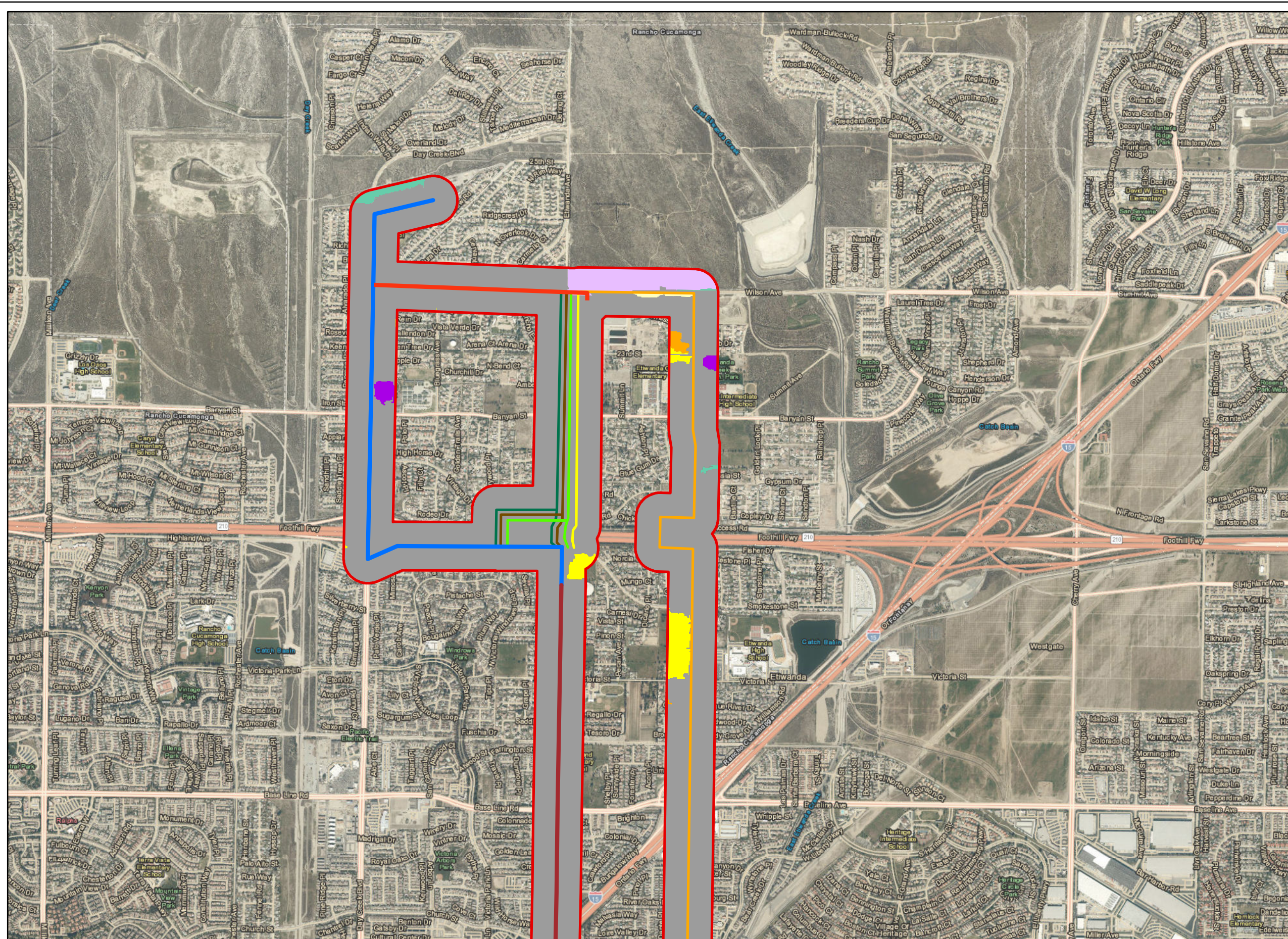
- Jurisdictional Areas**
- ACOE
  - CDFW
- Recommended Alignment**
- Phase 1
  - Phase 2
  - Phase 3
  - Phase 4
- Optional Alignments**
- Option A
  - Option B
  - Option C
  - Option D
  - Option E
  - Project Alignment (500ft Buffer)



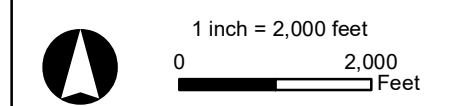
**FIGURE 4c**  
 Jurisdictional Delineation  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



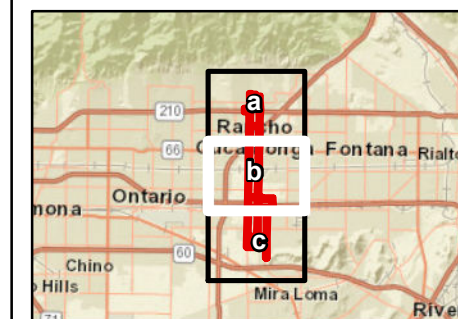
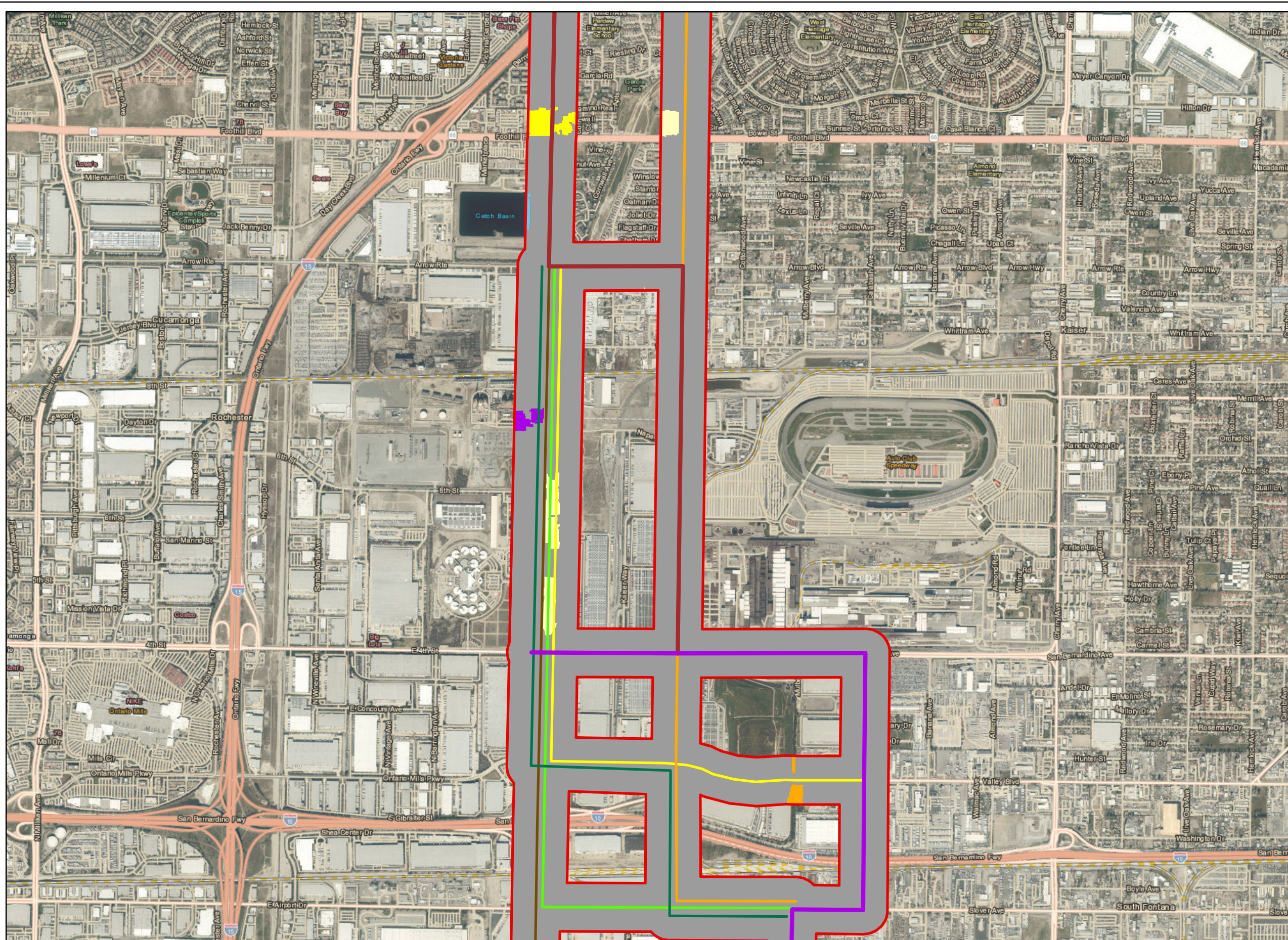
- Project Alignment (500 ft Buffer)
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Vegetation**
- Buckwheat
- California Sagebrush
- Eucalyptus
- Non-Native Grassland
- Non-Native Ornamental
- Riversidean Alluvial Fan
- Urban/Developed



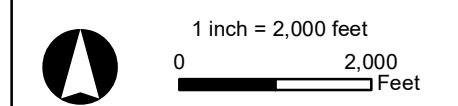
**FIGURE 5a**  
Vegetation Communities  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



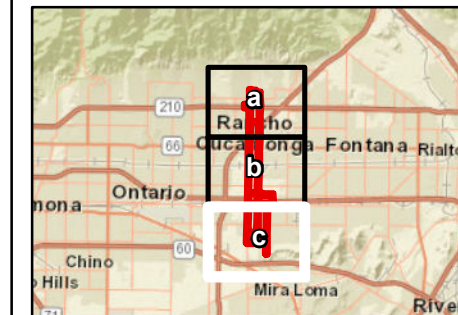
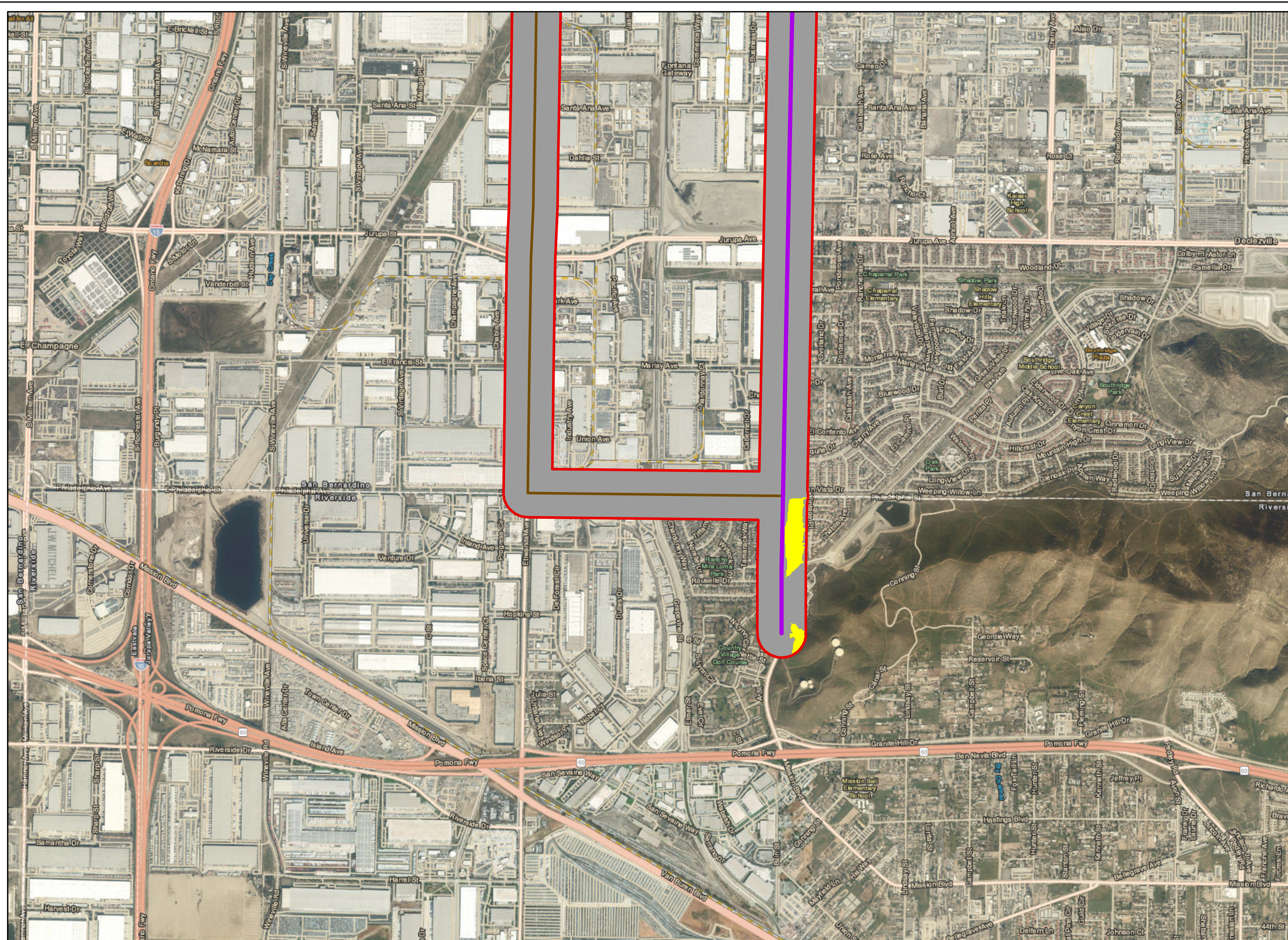
- Project Alignment (500 ft Buffer)
- Recommended Alignment**
- Phase 1
- Phase 2
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Vegetation**
- Buckwheat
- Eucalyptus
- Non-Native Grassland
- Non-Native Ornamental
- Urban/Developed
- Water



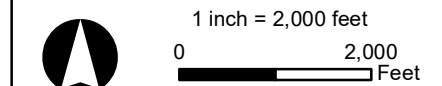
**FIGURE 5b**  
Vegetation Communities  
Biological Assessment  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
GIS User Community  
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



- Project Alignment (500 ft Buffer)
- Recommended Alignment**
- Phase 1
- Optional Alignments**
- Option A
- Vegetation**
- Non-Native Grassland
- Urban/Developed



**FIGURE 5c**  
 Vegetation Communities  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,

## **APPENDIX B**

### **PLANT AND VERTEBRATE SPECIES LISTS**

## PLANT SPECIES LIST

This list reports only plant species observed in the BSA during Wood site visits for this project. Other species may have been overlooked or undetectable due to their seasonal growth patterns. Nomenclature and taxonomy for fauna observed on site follows the Jepson eFlora (2021). If no common name is listed in Jepson, the United States Department of Agriculture PLANTS database (2021) is followed.

### SYMBOLS AND ABBREVIATIONS:

- \* Non-native species
- \*\* **Sensitive species** (State or federally listed as endangered, threatened, or candidate; state species of special concern/watchlist/tracked; Bureau of Land Management and/or USFS sensitive)
- sp. Identified only to genus; species unknown (plural = spp.)

| PLANTS OBSERVED                                  |                   |
|--|-------------------|
| <b>AMARANTHACEAE</b>                             |                   |
| <i>Amaranthus albus</i> *                        | white pigweed     |
| <b>ANACARDIACEAE</b>                             |                   |
| <i>Schinus molle</i> *                           | Peruvian pepper   |
| <b>ASTERACEAE</b>                                |                   |
| <i>Baccharis salicifolia</i>                     | mule fat          |
| <i>Centaurea melitensis</i> *                    | totalote          |
| <i>Erigeron canadensis</i>                       | horseweed         |
| <i>Helianthus annuus</i>                         | sunflower         |
| <i>Heterotheca grandiflora</i>                   | telegraph weed    |
| <i>Lactuca serriola</i> *                        | prickly lettuce   |
| <i>Lepidospartum squamatum</i>                   | scalebroom        |
| <i>Verbesina encelioides ssp. exauriculata</i> * | golden crownbeard |
| <b>BRASSICACEAE</b>                              |                   |
| <i>Brassica tournefortii</i> *                   | Sahara mustard    |
| <i>Hirschfeldia incana</i> *                     | shortpod mustard  |
| <b>CHENOPODIACEAE</b>                            |                   |
| <i>Salsola tragus</i> *                          | Russian thistle   |
| <b>EUPHORBIACEAE</b>                             |                   |
| <i>Croton californicus</i>                       | California croton |
| <i>Croton setiger</i>                            | doveweed          |
| <i>Euphorbia maculata</i> *                      | spotted spurge    |
| <i>Ricinus communis</i> *                        | castor bean       |
| <b>GERANIACEAE</b>                               |                   |
| <i>Erodium cicutarium</i> *                      | redstem filaree   |

|                               |                                  |
|-------------------------------|----------------------------------|
| <b>JUGLANDACEAE</b>           |                                  |
| <i>Juglans californica</i>    | Southern California black walnut |
| <b>OLEACEAE</b>               |                                  |
| <i>Olea europaea</i> *        | olive                            |
| <b>POACEAE</b>                |                                  |
| <i>Avena barbata</i> *        | slender wild oat                 |
| <i>Avena fatua</i> *          | wild oat                         |
| <i>Bromus diandrus</i> *      | ripgut grass                     |
| <b>POLYGONACEAE</b>           |                                  |
| <i>Eriogonum fasciculatum</i> | California buckwheat             |
| <b>SOLANACEAE</b>             |                                  |
| <i>Datura wrightii</i>        | sacred datura                    |
| <i>Nicotiana glauca</i> *     | tree tobacco                     |
| <b>ZYGOPHYLLACEAE</b>         |                                  |
| <i>Tribulus terrestris</i> *  | puncture vine                    |



## VERTEBRATE ANIMALS LIST

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This list reports only vertebrate animal species observed during site visits for this project. Other species may have been overlooked or undetectable due to their activity patterns. Nomenclature and taxonomy for fauna observed on site follows the California Bird Records Committee Official California Checklist (2019) for birds and CDFW (2016) for herpetofauna and mammals.

---

### SYMBOLS AND ABBREVIATIONS:

---

- \* Non-native species
  - \*\* Sensitive species (State or federally listed as endangered, threatened, or candidate; state species of special concern/watchlist/tracked; USFWS bird of conservation concern; Bureau of Land Management and/or USFS sensitive)
  - sp. Identified only to genus; species unknown (plural = spp.)
- 

### REPTILES

#### Phrynosomatidae

*Uta stansburiana*

#### Spiny Lizards

side-blotched lizard

### BIRDS

#### Columbidae

*Columba livia*\*

*Zenaida macroura*

#### Pigeons and Doves

rock pigeon

mourning dove

#### Accipitridae

*Buteo jamaicensis*

#### Hawks and Relatives

red-tailed hawk

#### Falconidae

*Falco sparverius*

#### Caracaras and Falcons

American kestrel

#### Corvidae

*Corvus brachyrhynchos*

#### Jays, Crows, Ravens, Magpies

American crow

#### Mimidae

*Mimus polyglottos*

#### Mockingbirds, Thrashers, and Allies

northern mockingbird

#### Passeridae

*Passer domesticus*\*

#### Old World Sparrows

house sparrow

#### Fringillidae

*Haemorhous mexicanus*

#### Finches

house finch

#### Icteridae

*Icterus cucullatus*

#### Blackbirds, Meadowlarks, Orioles

hooded oriole

### MAMMALS

#### Leporidae

*Sylvilagus audubonii*

#### Rabbits and Hares

Audubon's (desert) cottontail

#### Geomyidae

*Thomomys bottae*

#### Pocket Gophers

Botta's pocket gopher

#### Sciuridae

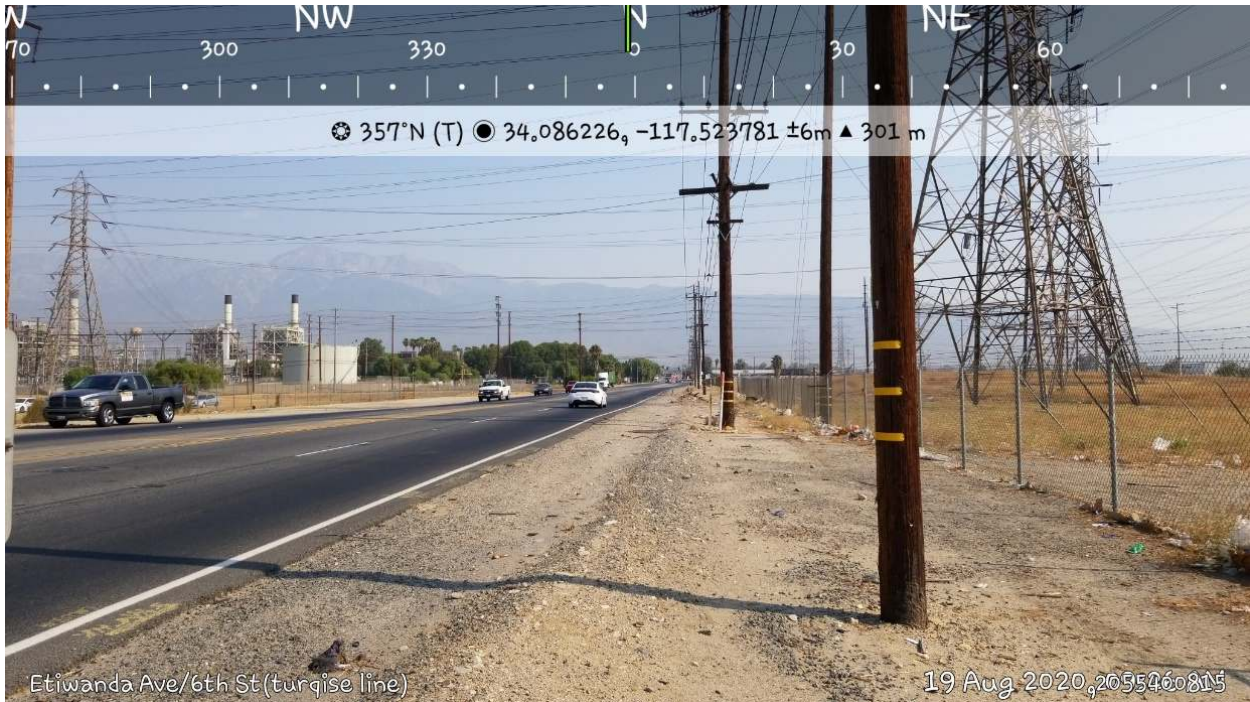
*Otospermophilus beecheyi*

#### Squirrels

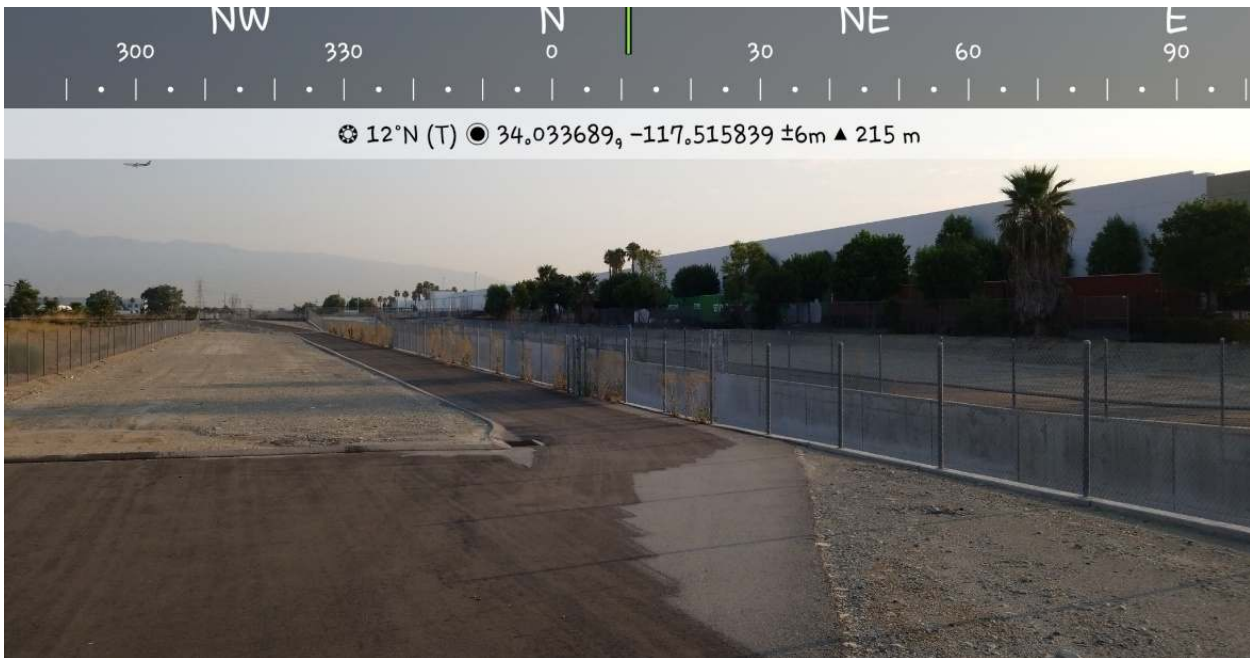
California ground squirrel

**APPENDIX B**  
**SITE PHOTOGRAPHS**

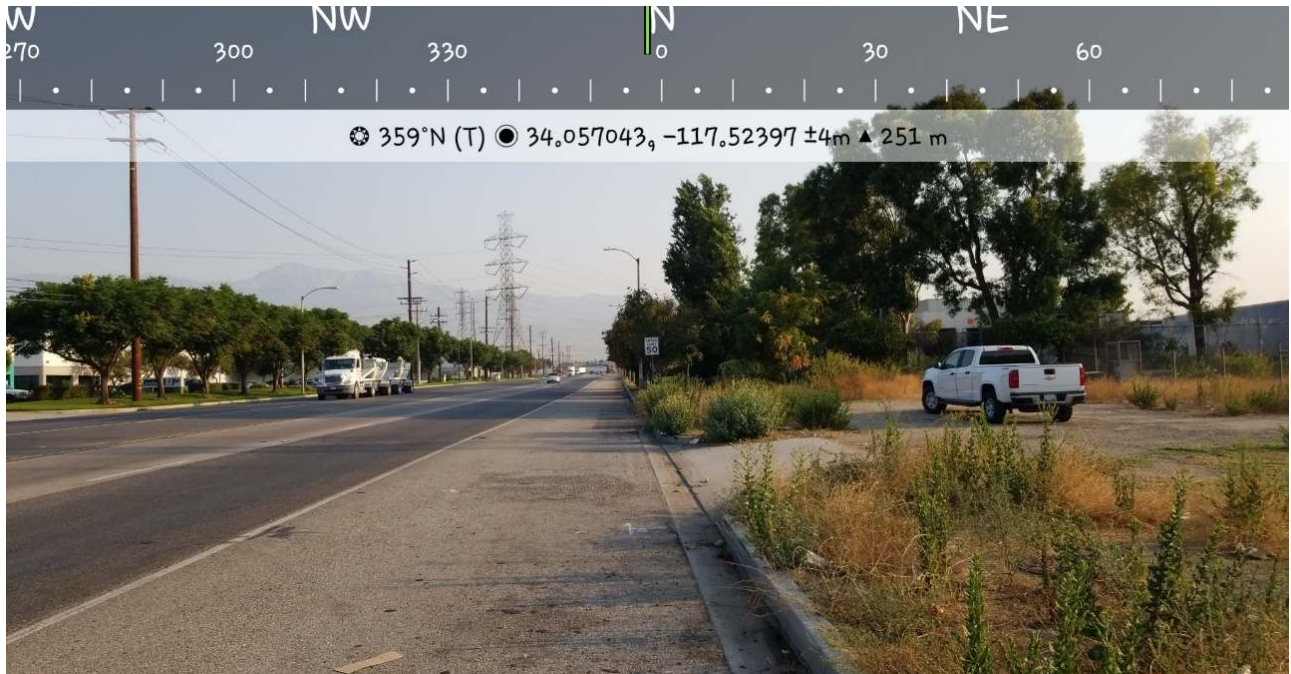
**JCSD Northern Feeder Pipeline Project  
Cities of Rancho Cucamonga, Fontana, Ontario, and Jurupa Valley  
in San Bernardino County, California**



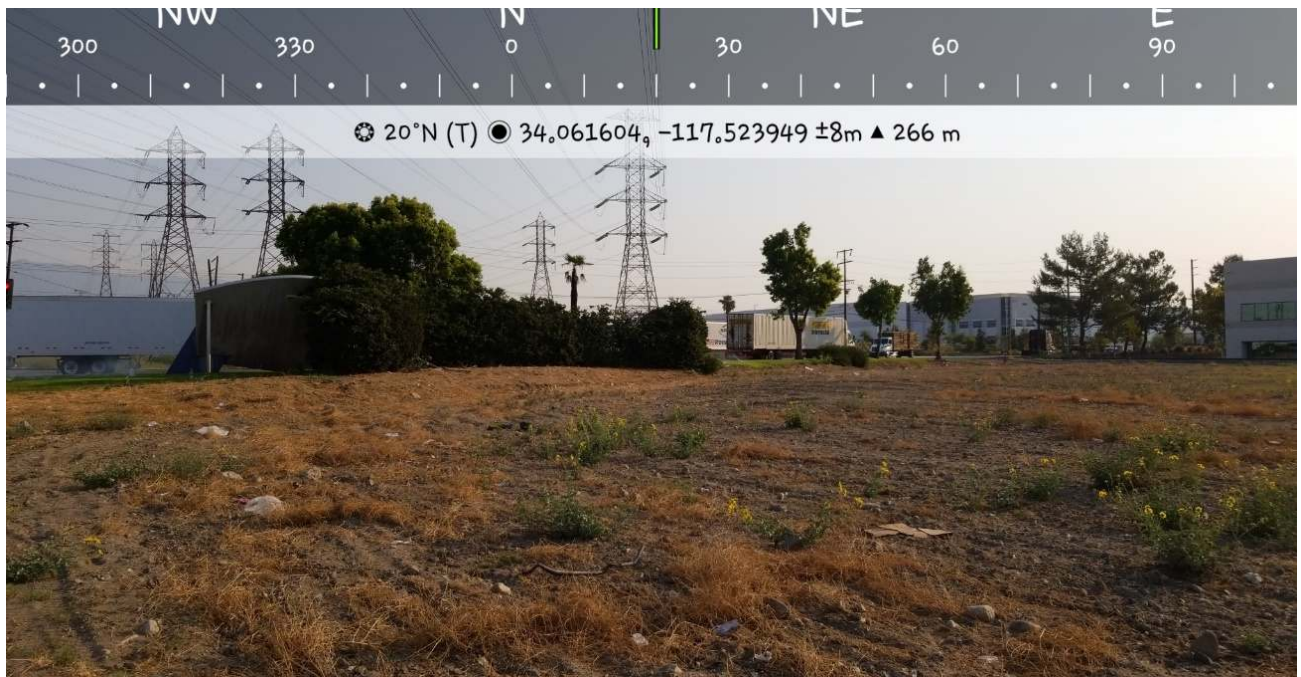
**Photo 1.** Representative condition of alignment where road right-of-way lies adjacent to areas with fenced in areas of non-native grassland fields. Photo as seen facing north on Etiwanda Avenue towards Foothill Blvd.



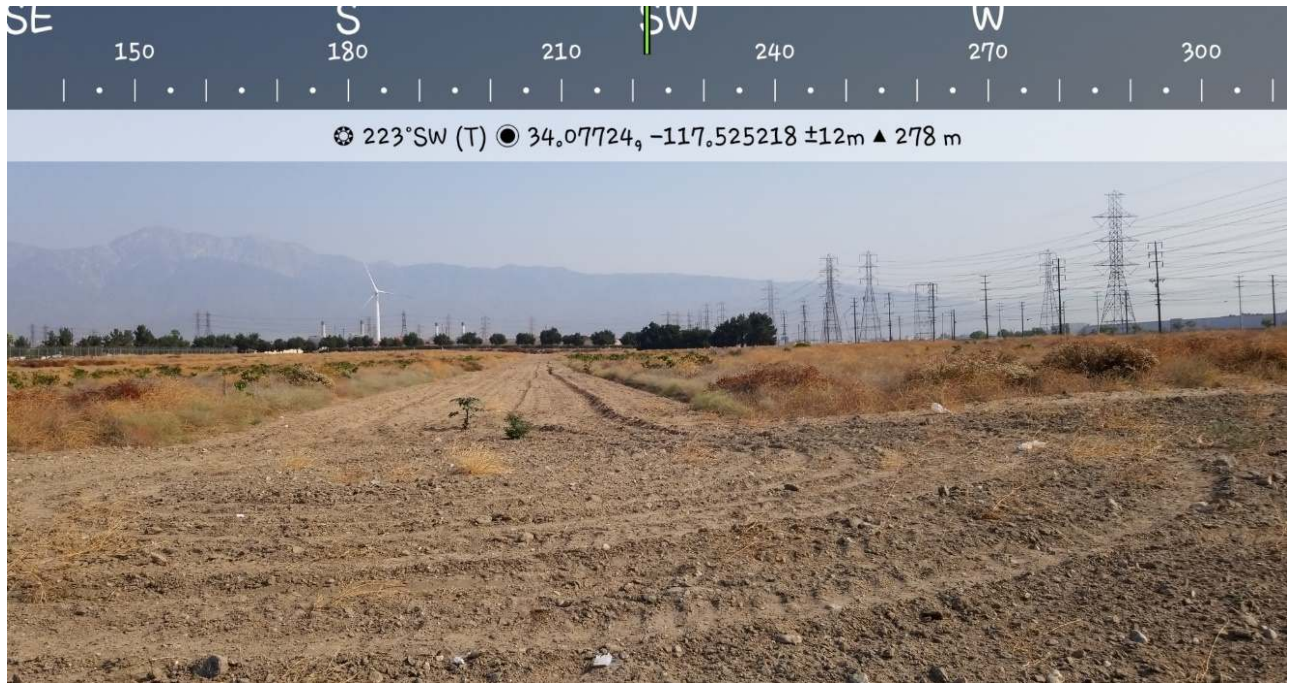
**Photo 2.** Representative condition of concrete channels found along the alignment. Photo taken east of Grapevine Street and as seen facing north from Philadelphia Avenue.



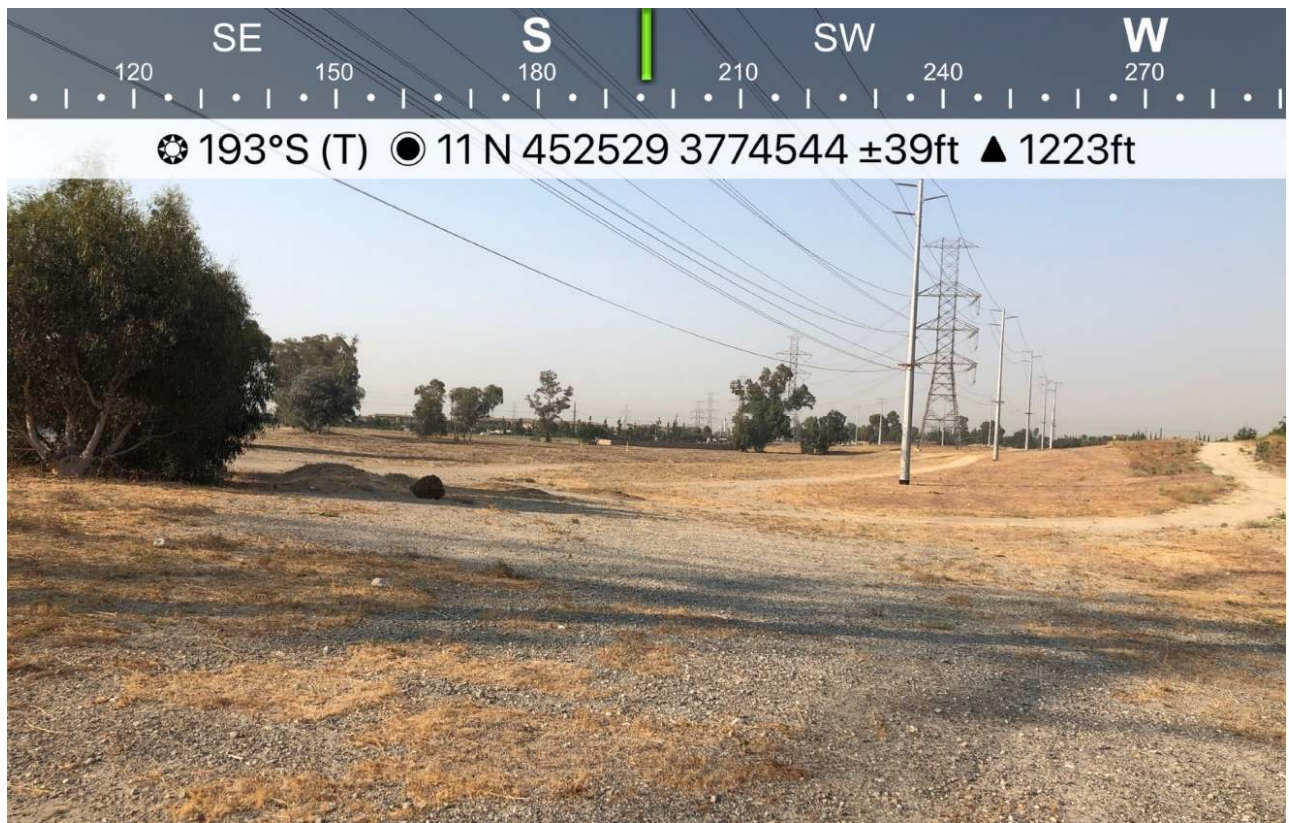
**Photo 3.** Representative condition of alignment along Etiwanda Avenue, north of the intersection of Etiwanda Avenue and Santa Ana Street.



**Photo 4.** Representative of non-native grassland found within the alignment, among industrial areas (i.e., potential burrowing owl habitat). Photo is from southeast corner of the Etiwanda Avenue/Slover Avenue intersection as seen facing northeasterly.



**Photo 5.** Representative of remnant agriculture fields found within the alignment at the northwest corner of Etiwanda Avenue and San Bernardino Avenue. (i.e., potential burrowing owl habitat). Photo is seen as facing southwest of the intersection.



**Photo 6:** Representative low potential habitat for burrowing owl and possible Delhi Sand flowers loving fly.

**APPENDIX B.2**  
**Focused Burrowing Owl Survey**



## **DRAFT JCSD ETIWANDA PIPELINE PROJECT**

**Cities of Rancho Cucamonga, Fontana, Ontario and Jurupa Valley  
in San Bernardino County, California**

### **Focused Surveys for Burrowing Owl**

Submitted to:

**Albert A. Webb Associates**

3788 McCray St.

Riverside, CA 92506

(951) 320-6052

(951) 786-0594 - fax

**Cheryl DeGano, Principal Environmental Analyst**

Submitted by:

**Wood Environment & Infrastructure Solutions, Inc.**

1845 Chicago Avenue, Suite D

Riverside, CA 92507

(951) 369-8060

Principal Investigator:

**Dale Hameister**

dale.hameister@woodplc.com

21 July 2021

**DRAFT JCSD Etiwanda Pipeline Project**

**FOCUSED SURVEYS FOR BURROWING OWL**

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| <b>3.0 SITE DESCRIPTION.....</b>                | <b>1</b>    |
| <b>4.0 SPECIES BACKGROUND INFORMATION.....</b>  | <b>2</b>    |
| <b>5.0 METHODS.....</b>                         | <b>3</b>    |
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## JCSD Etiwanda Pipeline Project

### FOCUSED SURVEYS FOR BURROWING OWL

#### 1.0 INTRODUCTION

At the request of Albert A. Webb Associates (Webb), Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a focused survey for burrowing owl (*Athene cunicularia*) for the Jurupa Community Services District (JCSD) Northern Feeder Pipeline Project (project) and alternatives. The biological study area (BSA) for the focused survey included the project site plus a 500-foot buffer, where accessible, and included portions of the cities of Rancho Cucamonga, Ontario, Riverside in San Bernardino County, California (Appendix A, Figure 1).

#### 2.0 PROJECT DESCRIPTION

The proposed project is the installation of a 30 to 36-inch diameter welded steel pipeline. The proposed pipeline alignment begins at the Cucamonga Valley Water (CVWD) Districts' Treatment Plant located at 24th Street (St.) and Etiwanda Avenue (Ave.), in the city of Rancho Cucamonga. From the treatment plant the pipeline alignment will extend south on Etiwanda Ave. to Valley Boulevard (Blvd). From the intersection of Valley Blvd and Etiwanda Ave. the pipeline will go east on Valley Blvd. to Calabash Ave., from this intersection the pipeline will go south under Interstate 10 (I-10) to Slover Ave., from this intersection the proposed pipeline would go west on Slover Ave. to Mulberry Ave. at which point the pipeline would go south on Mulberry Ave. (at this point the street changes to Country Village Road [Rd.] at the Riverside County Line). At Country Village Rd. the proposed pipeline will connect into the existing 30" diameter waterline going to the storage reservoirs and connect into JCSD's existing 24" diameter water line going to the storage reservoirs. The total estimated length of the proposed pipeline is approximately 70,420 or 68,600 feet (13.3 to 12.9 miles). The proposed pipeline alignment terminates approximately ½ mile south of the intersection of Philadelphia St. and Country Village Rd. (Wood 2021).

#### 3.0 SITE DESCRIPTION

Project elevations range from approximately 810 feet (247 meters) at the intersection of Philadelphia St. and Country Village Rd to Plant to 1,673 feet (510 meters) at the Treatment Plant. Despite the gradual elevation change from north to south, the site is generally flat. Site conditions of the alignment varies from industrial/commercial developments, residential housing, agricultural and undeveloped, vacant areas. Areas containing suitable burrowing owl habitat primarily include the agricultural and undeveloped areas. The alignment traverses the United States Geological Survey (USGS) Cucamonga Peak and Guasti 7.5-minute topographic quadrangles (Figure 2) (Wood 2021).

Vegetation communities present along the alignment included: urban/developed areas, non-native grassland and Riversidean alluvial fan sage scrub and coastal sage scrub (buckwheat and brittlebush scrub) (Wood 2021).

California ground squirrels (*Otospermophilus beecheyi*) and their burrows, along with drainpipes, areas containing riprap and piles of broken concrete were detected and mapped at various locations along the alignment and on adjacent vacant lands (Appendix A, Figure 3). These areas represent the potentially suitable burrowing owl habitat and were the subject of the focused burrowing owl survey.

#### **4.0 SPECIES BACKGROUND INFORMATION**

The burrowing owl is a small, tan, short-tailed, ground-dwelling owl that occupies underground burrows. A member of the Strigidae (typical owls family), this species is associated with grasslands and other arid open terrain, including Sonoran creosote bush scrub, throughout much of the western United States. Burrowing owls are opportunistic in their selection of burrows, typically utilizing the burrows of small mammals (e.g., ground squirrels, kit fox), but also use desert tortoise (*Gopherus agassizii*) burrows, drainpipes, culverts, and other suitable natural or manmade cavities at or below ground level. In California, the species often occurs in association with colonies of the California ground squirrel, where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. The species is active both day and night and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of burrowing owls, nest burrows are a critical component of their habitat.

In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. Despite their apparent tolerance to human activities, burrowing owl populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal Endangered Species Acts (CDFG 1995). The declines in burrowing owl populations are attributed to loss and degradation of habitat, to ongoing residential and commercial development, and to rodent control programs. The burrowing owl is currently designated a California Species of Concern (CSC) by the California Department of Fish and Wildlife (CDFW 2020), managed as a Bird of Conservation Concern by the United States Fish and Wildlife Service (USFWS), is considered "sensitive" by the U. S. Bureau of Land Management (BLM), and protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800.

The California Burrowing Owl Consortium (CBOC) developed the Burrowing Owl Survey Protocol and Mitigation Guidelines to meet the need of uniform standards when surveying burrowing owl populations and evaluating impacts from development projects (CBOC 1993). In 1995 the CDFG issued the Staff Report on Burrowing Owl Mitigation to all its regional managers to ensure consistency in standards, policies, and regulatory mandates relating to the burrowing owl (CDFG 1995). Due to the continued decline of burrowing owl populations statewide and as an attempt to reverse this trend, the CDFG issued more effective, viable, coordinated, and concerted approach to burrowing owl conservation actions with the release of an updated Staff Report on Burrowing Owl Mitigation (CDFG 2012).

The sparsely vegetated, largely undeveloped and vacant areas containing Riversidean alluvial fan sage scrub and non-native grassland vegetation communities as well some of the disturbed areas present along and adjacent to the alignment provide suitable habitat for burrowing owl.

## 5.0 METHODS

A burrow search of the entire alignment was conducted on 13 April 2021 by Wood senior biologists Nathan T. Moorhatch and Michael D. Wilcox. The site and immediately adjacent undeveloped areas within a 500-foot buffer zone area were surveyed on foot, where accessible, mapping the locations of California ground squirrel burrows, drainpipes, riprap and debris piles suitable for burrowing owl use. Focused burrowing owl surveys commenced on 14 April 2021, with follow-up surveys on 14 May, 4 June and 2 July 2021. A total of four focused surveys were conducted after completion of the burrow search and mapping. The surveys were conducted via pre-dawn/early morning and pre-twilight pedestrian transects spread approximately 20 meters (~60 feet) apart over 100% of the potentially suitable habitat on- and adjacent to the suitable sites, where accessible, in accordance with protocol established by the Staff Report on Burrowing Owl Mitigation (CDFW 2012). Binoculars were used to visually inspect potential perching locations (i.e., rocks, debris, dirt mounds) as well as the entrances to all on-site mammal burrows and debris providing potential shelter (i.e., piles of concrete slabs, cement drainpipes). Mammal burrows were carefully examined for evidence of burrowing owl occupation (i.e., animal dung, feathers, whitewash, pellets, debris, etc.). Table 1 presents information on each survey (i.e., date, surveyor, survey duration, and weather variables). All wildlife detected was recorded in field notes.

**Table 1. Daily Survey Data.**

| Date         | Surveyor(s) | Time      | Weather, Wind                                | Temp.   |
|--------------|-------------|-----------|--|---------|
| 13 Apr 2021* | NM & MW     | 0700-1230 | Cloudy (100% cloud cover), winds ~ 0-4 mph   | 56-64°F |
| 14 Apr 2021  | MW          | 0630-1000 | Overcast (100% cloud cover), winds ~ 0-1 mph | 54-60°F |
| 14 May 2021  | DH          | 0630-1000 | Overcast (100% cloud cover), winds ~ 0-2 mph | 58-66°F |
| 4 June 2021  | DH          | 0600-0930 | Clear (0% cloud cover), winds ~ 2-5 mph      | 63-77°F |
| 2 July 2021  | DH          | 0530-0945 | Clear (0% cloud cover), winds ~1-3 mph       | 66-78°F |

\* – Burrow Search Only; **DH** – Dale Hameister, **NM** – Nathan Moorhatch, **MW** – Michael Wilcox

## 6.0 RESULTS

California ground squirrel burrows, drainpipes, riprap and debris piles suitable for burrowing owls were detected and mapped on-site and within the adjacent buffer zone areas during the burrow search (Figure 3; Appendix B, Photos 3-5). No burrowing owls, or thereof sign (i.e., whitewash, pellets, feathers, bones, tracks and/or burrow adornments), were observed on or adjacent to the project site during the focused surveys.

A total of 29 species of birds, six mammals (not including domestic animals) and one reptile were detected. Appendix A provides a complete list of all the wildlife species detected during the surveys.

Although not detected on the project site during the protocol level surveys, burrowing owls are highly mobile, and suitable habitat is present throughout portions of the project site and on some of the adjacent lands. For this reason, burrowing owls have the potential to colonize the suitable areas of the site and adjacent areas at any time.

In accordance with the survey guidelines, an initial take avoidance survey no less than 14 days prior to initiating ground disturbance activities is required. Because burrowing owls can colonize or re-colonize sites within just a few days, time lapses between project activities may trigger subsequent take avoidance survey requirements, including, but not limited to a final survey conducted within 24 hours prior to commencement of ground disturbance activities (CDFW 2012).

Additionally, if any grading and/or vegetation clearance is scheduled to be conducted during the nesting season, which is generally from 1 February through 31 August, a nesting bird clearance survey should be completed immediately prior (within approximately 7 days) to commencement of the proposed work. If nesting birds protected by the MBTA and/or Fish and Game Code are detected on-site, an ESA, including an appropriate no disturbance buffer zone area, should be established and monitored until the completion of nesting activities and young have fledged. CDFW generally recommends ESA's, and no disturbance buffer zones to include a 300-foot radius around nest(s) for unlisted passerine species (i.e., songbirds) and 500-foot radius around nests of listed species and raptors (i.e., hawks, falcons, kites and owls). If timed appropriately, the preconstruction take avoidance survey for burrowing owl and nesting birds can be conducted concurrently.

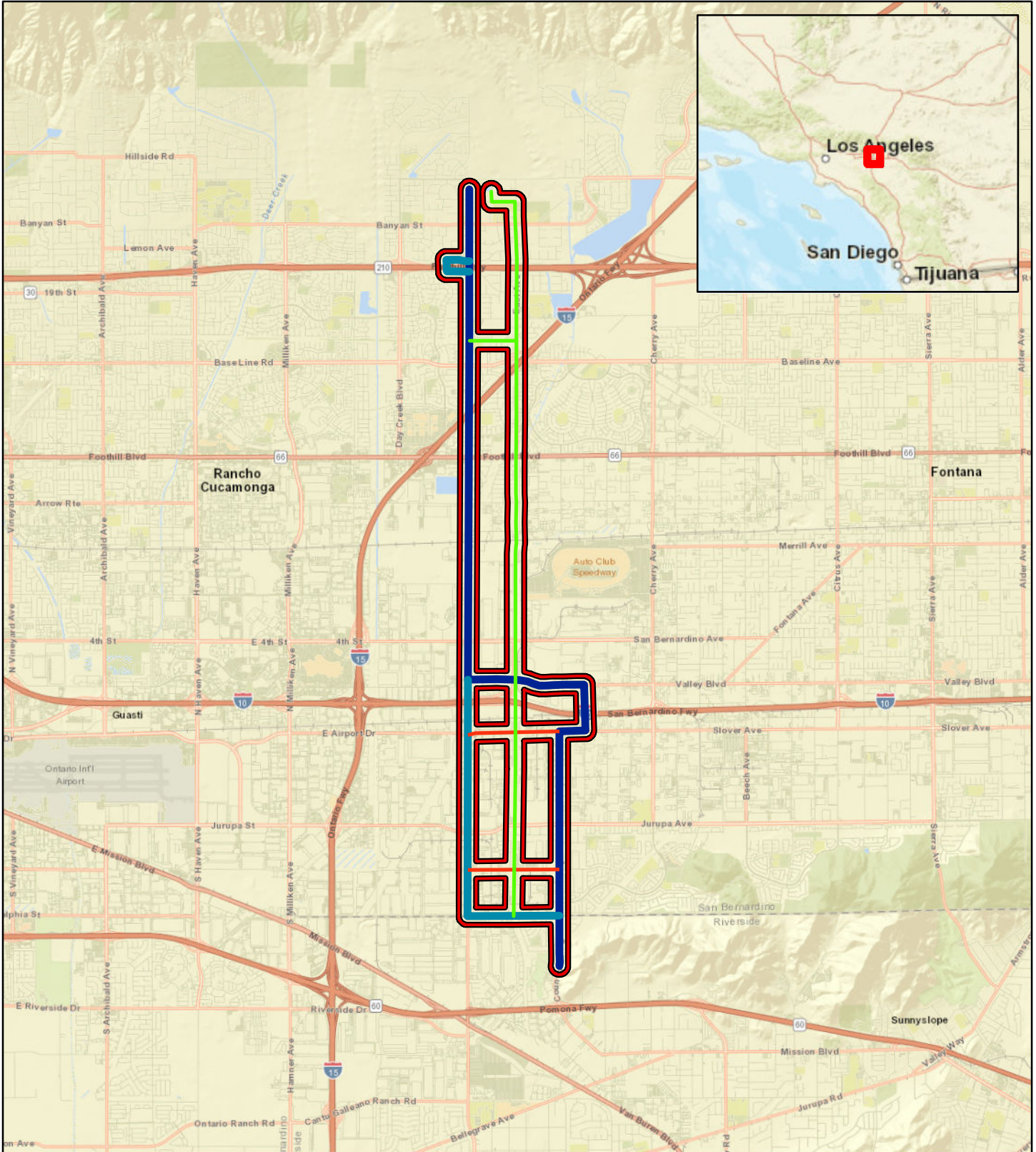
## 7.0 LITERATURE CITED AND REFERENCES

- California Bird Records Committee. 2021. Official California Checklist. Accessed online at: [http://californiabirds.org/ca\\_list.asp](http://californiabirds.org/ca_list.asp).
- California Burrowing Owl Consortium. 1997. Burrowing Owl Survey Protocol and Mitigation Guidelines. Journal of Raptor Research Report, The Raptor Research Foundation, Inc.
- California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Journal of Raptor Research Report, The Raptor Research Foundation, Inc.
- California Department of Fish and Game (CDFG). 1995. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.
- CDFG. 2012. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.
- California Department of Fish and Wildlife (CDFW). 2016. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Accessed online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=87155&inline>
- CDFW. 2021. Special Animals List. July. Periodic publication. Sacramento, CA. Accessed online at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>
- Wood Environment & Infrastructure Solutions, Inc. 2021. Draft Biological Resources Assessment Report for the JCSD Northern Feeder Pipeline Project. Unpub. draft technical report prepared for A.A. Webb.

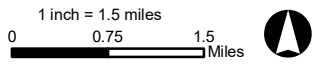
## **APPENDIX A**






### **JCSD Etiwanda Pipeline Project**

#### **Figures**



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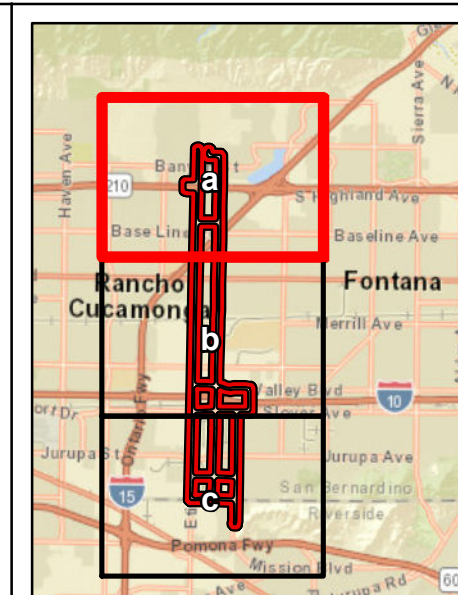
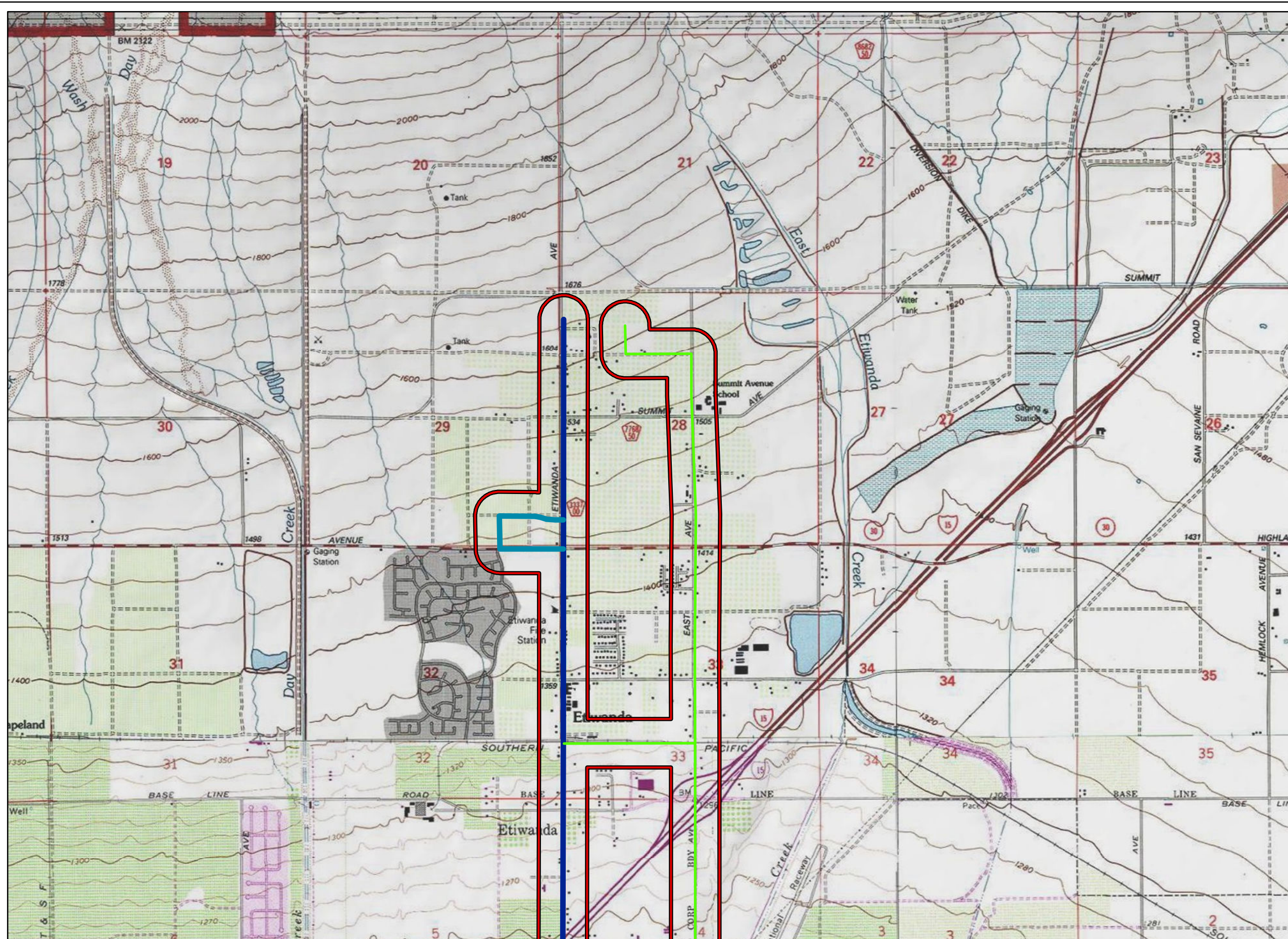







-  Project Alignment (500ft Buffer)
-  Preliminary Alignment
-  Potential Alternative
-  East-West Connection
-  SBCDPW/FCD Potential Alignment

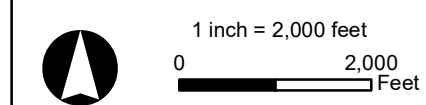
### FIGURE 1

Regional Location  
Burrowing Owl Survey Report  
JCSJ Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, CA





-  Project Alignment (500ft Buffer)
-  Preliminary Alignment
-  Potential Alternative
-  East-West Connection
-  SBCDPW/FCD Potential Alignment

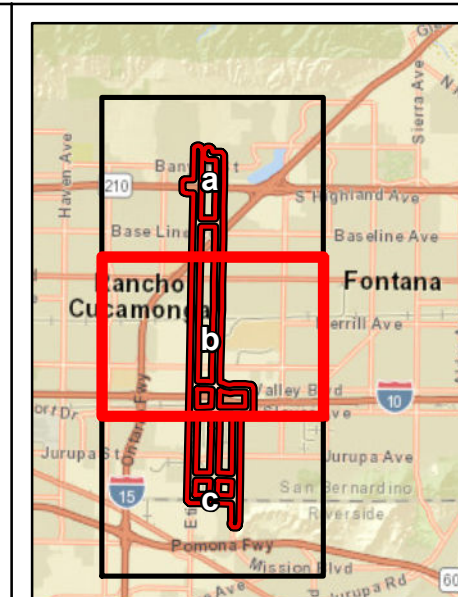
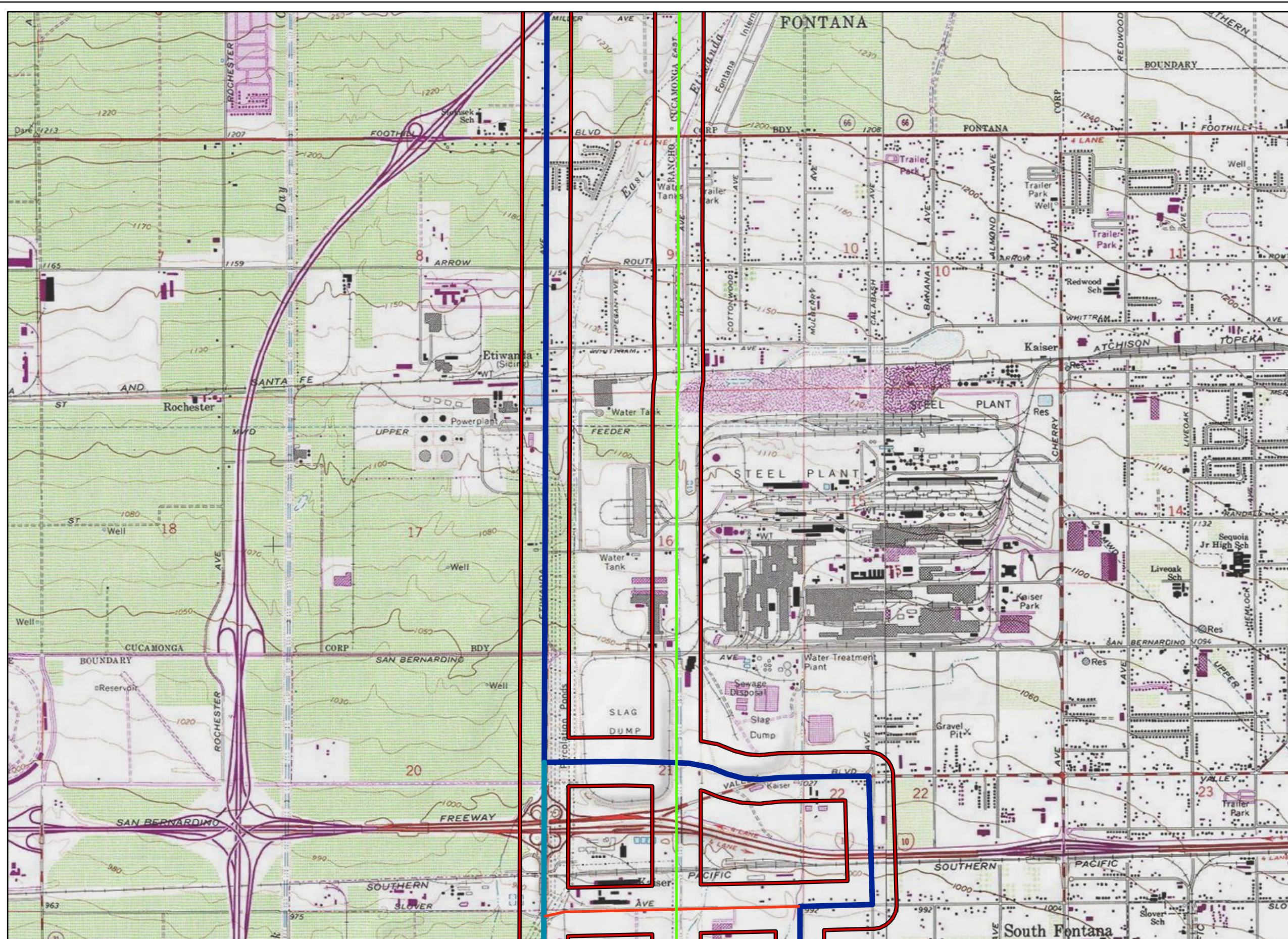







**FIGURE 2a**  
 Project Location on USGS Topo  
 Burrowing Owl Survey Report  
 JCSD Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA

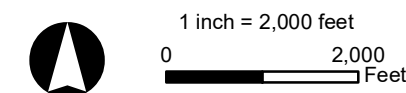


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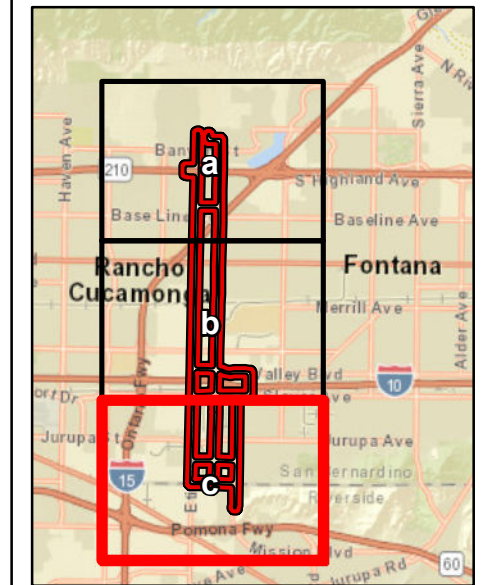
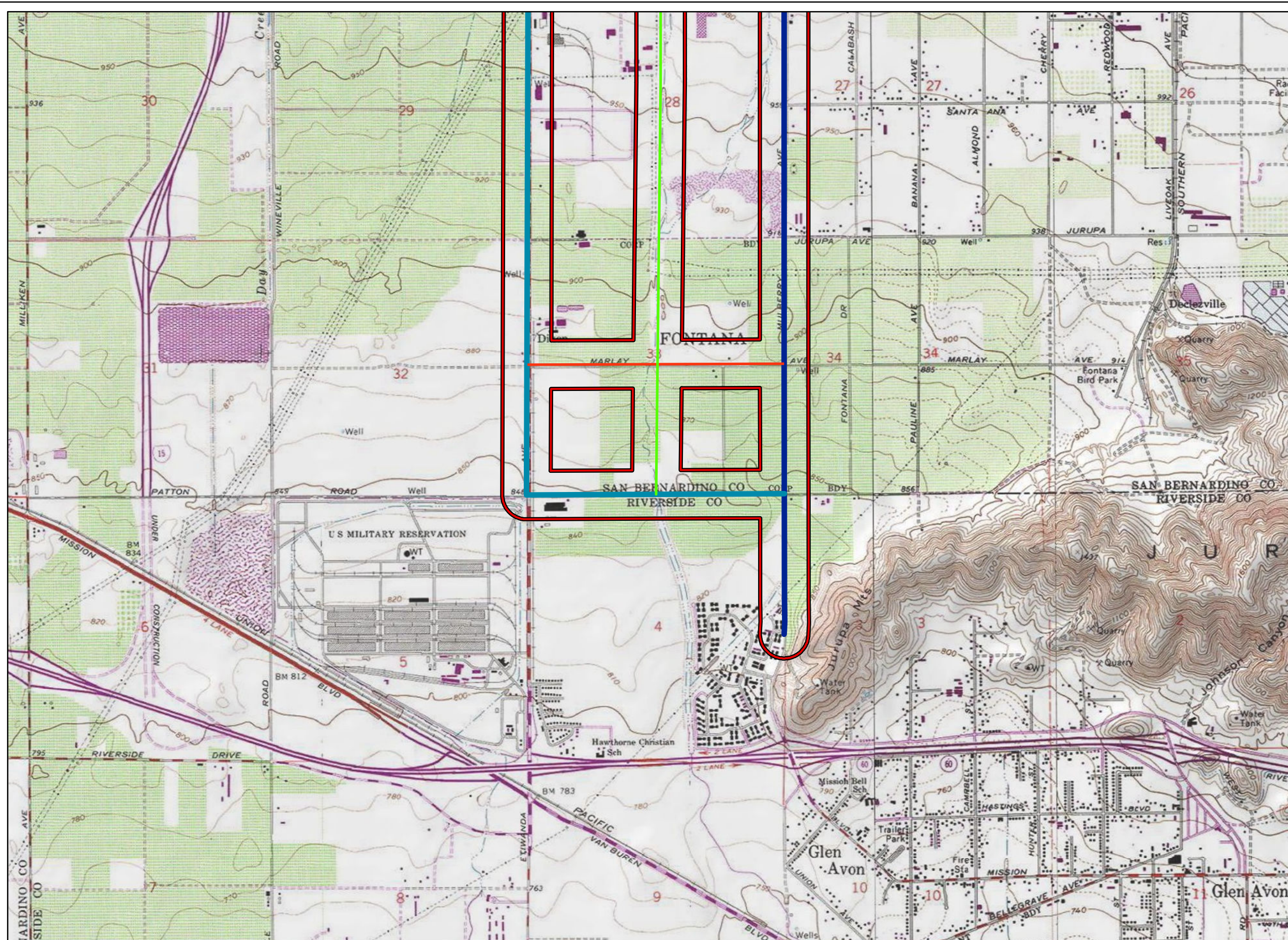
-  Project Alignment (500ft Buffer)
-  Preliminary Alignment
-  Potential Alternative
-  East-West Connection
-  SBCDPW/FCD Potential Alignment



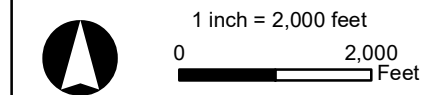
**FIGURE 2b**  
 Project Location on USGS Topo  
 Burrowing Owl Survey Report  
 JCSD Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



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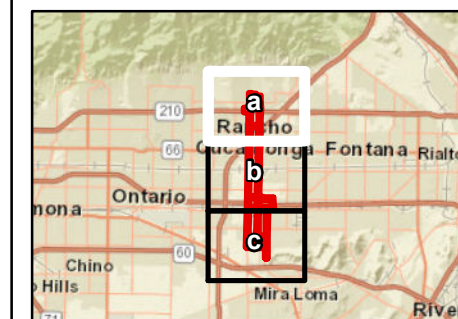
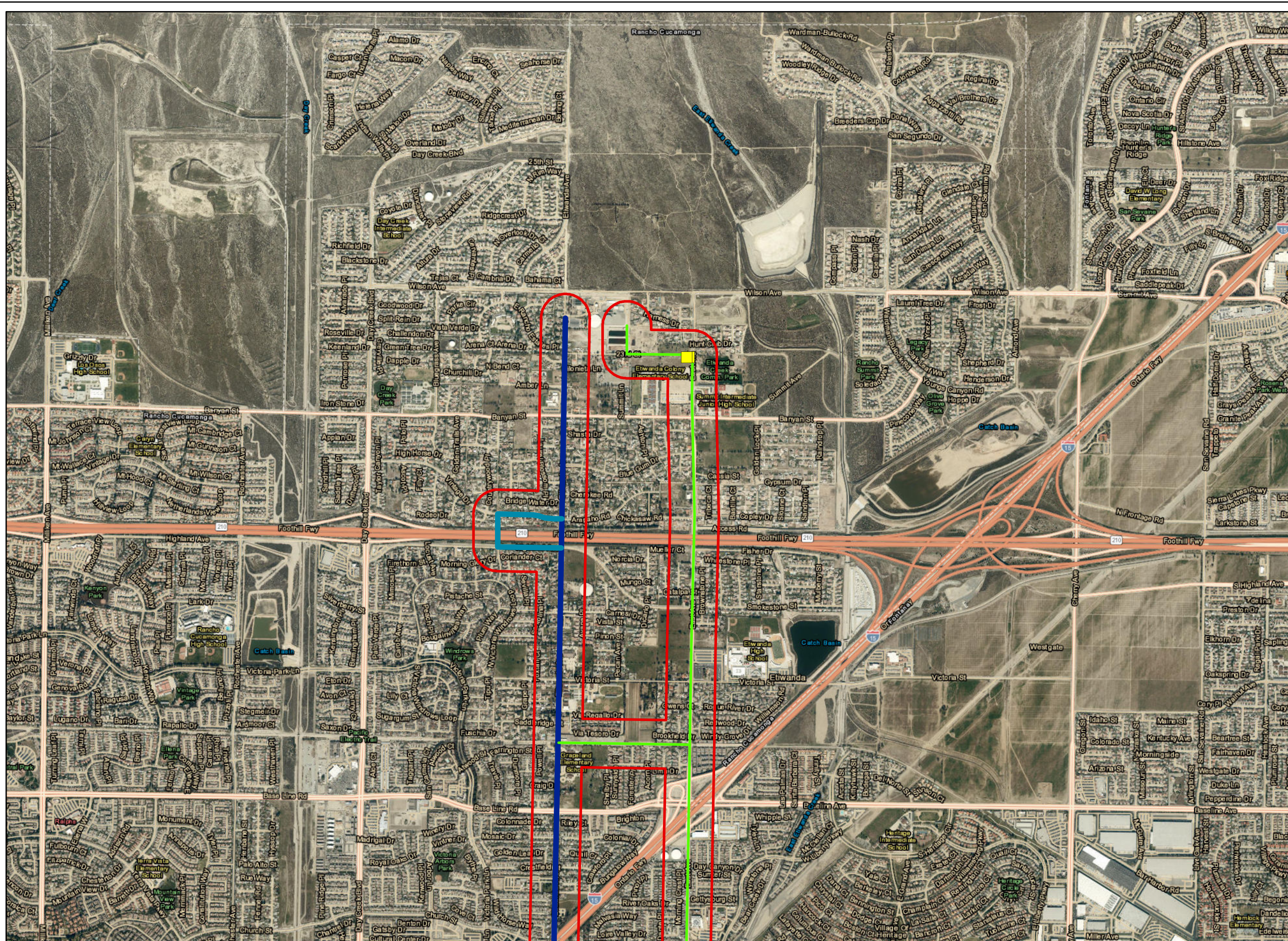
- Project Alignment (500ft Buffer)
- Preliminary Alignment
- Potential Alternative
- East-West Connection
- SBCDPW/FCD Potential Alignment



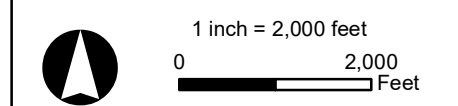
**FIGURE 2c**  
 Project Location on USGS Topo  
 Burrowing Owl Survey Report  
 JCSD Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



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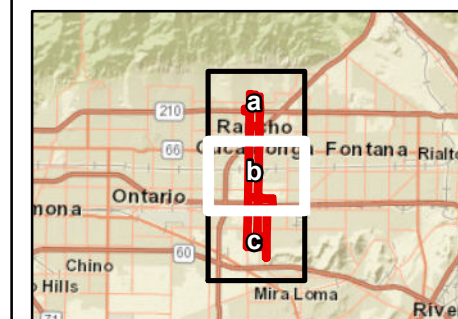
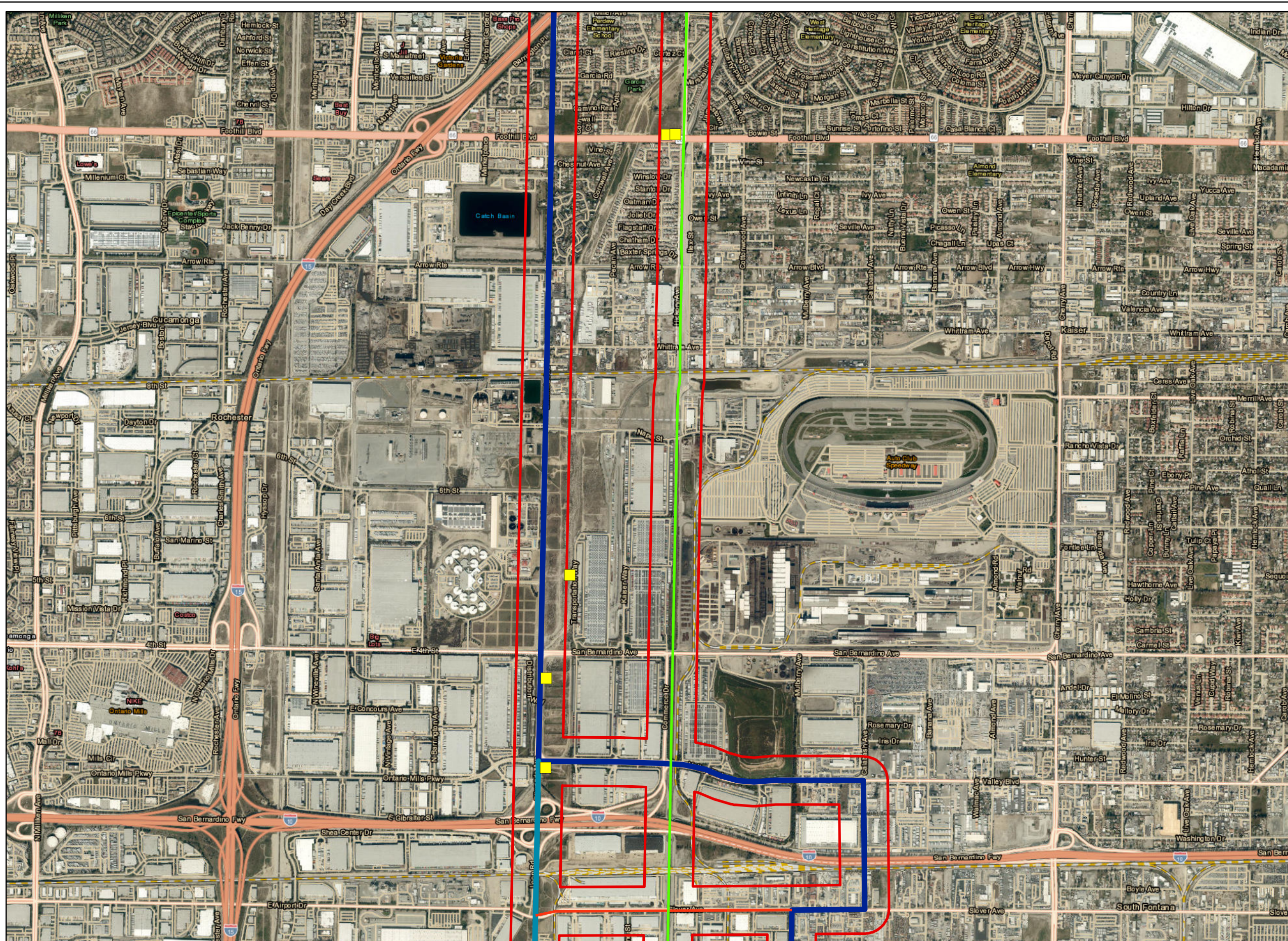
- Burrows
- Preliminary Alignment
- Potential Alternative
- SBBCDPW/FCD Potential Alignment
- Project Alignment (500ft Buffer)



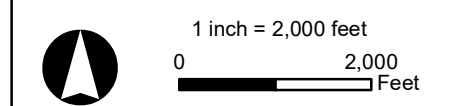
**FIGURE 3a**  
 Burrow Search Results  
 Burrowing Owl Survey Report  
 JCSD Etowanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,



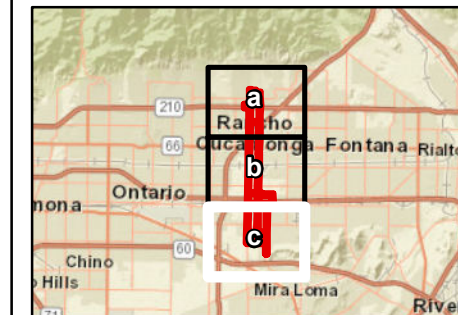
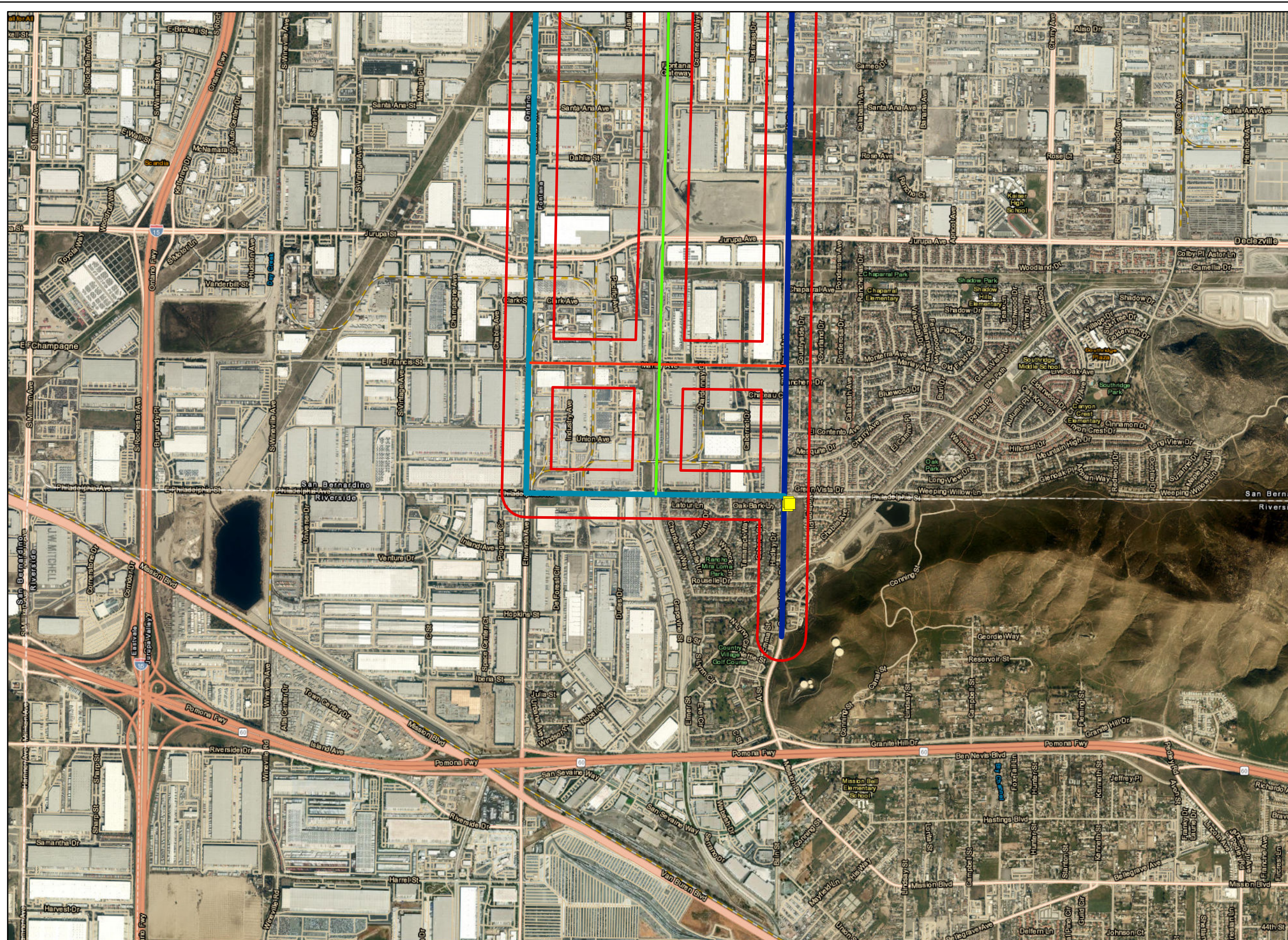
- Burrows
- Preliminary Alignment
- Potential Alternative
- East-West Connection
- SBCDPW/FCD Potential Alignment
- Project Alignment (500ft Buffer)



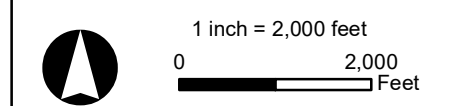
**FIGURE 3b**  
 Burrow Search Results  
 Burrowing Owl Survey Report  
 JCSD Etowanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



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 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,



- Burrows
- Preliminary Alignment
- Potential Alternative
- East-West Connection
- SBCDPW/FCD Potential Alignment
- Project Alignment (500ft Buffer)



**FIGURE 3c**  
 Burrow Search Results  
 Burrowing Owl Survey Report  
 JCSD Etowanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan,

## **APPENDIX B**

### **JCSD Etiwanda Pipeline Project List of Species Detected**

## APPENDIX B

### VERTEBRATE SPECIES DETECTED LIST

#### JCSD Etiwanda Pipeline Project

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This list reports only the wildlife detected on the project site by this study. Other species may have been overlooked or undetectable due to their activity seasons. Unless noted otherwise, nomenclature and systematics follow California Bird Records Committee (2021) for avifauna, and CDFW (2016) for herpetofauna and mammals.

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#### SYMBOLS AND ABBREVIATIONS:

- \* Nonnative species.
  - \*\* Sensitive species (see text).
  - cf.* “compares favorably with”
- 

#### I. VERTEBRATA

#### VERTEBRATE WILDLIFE

##### HERPETOFAUNA

##### REPTILES & AMPHIBIANS

##### **Phrynosomatidae**

*Uta stansburiana*

##### **Spiny Lizards & Relatives**

common side-blotched lizard

##### AVIFAUNA

##### BIRDS

##### **Anatidae**

*Anas platyrhynchos*

*Branta canadensis*

##### **Ducks, Geese & Swans**

mallard

Canada goose

##### **Columbidae**

*Columba livia*\*

*Streptopelia decaocto*\*

*Zenaida macroura*

##### **Pigeons and Doves**

rock pigeon

Eurasian collared dove

mourning dove

##### **Trochilidae**

*Calypte anna*

##### **Hummingbirds**

Anna's hummingbird

##### **Charadriidae**

*Charadrius vociferus*

##### **Plovers & Lapwings**

killdeer

##### **Accipitridae**

*Buteo jamaicensis*

##### **Hawks, Old World Vultures, Harriers**

red-tailed hawk

**Falconidae**

*Falco sparverius*

**Tyrannidae**

*Tyrannus vociferans*

*Tyrannus verticalis*

*Sayornis nigricans*

*Sayornis saya*

**Corvidae**

*Corvus brachyrhynchos*

*Corvus corax*

**Hirundinidae**

*Hirundo rustica*

**Aegithalidae**

*Psaltiparus minimus*

**Mimidae**

*Mimus polyglottos*

**Sturnidae**

*Sturnus vulgaris\**

**Passeridae**

*Passer domesticus\**

**Fringillidae**

*Haemorhous mexicanus*

*Spinus psaltria*

*Spinus lawrencei\*\**

**Passerellidae**

*Zonotrichia leucophrys*

*Passerculus sandwichensis*

*Melospiza lincolnii*

*Melospiza crissalis*

**Icteridae**

*Euphagus cyanocephalus*

**Parulidae**

**Caracaras and Falcons**

American kestrel

**Tyrant Flycatchers**

Cassin's kingbird

western kingbird

black phoebe

Say's phoebe

**Jays, Magpies, and Crows**

American crow

common raven

**Swallows**

barn swallow

**Long-tailed Tits & Bushtits**

bushtit

**Mockingbirds and Thrashers**

northern mockingbird

**Starlings**

European starling

**Old World Sparrows**

house sparrow

**Fringilline & Cardueline Finches & Allies**

house finch

lesser goldfinch

Lawrence's goldfinch

**New World Sparrows**

white-crowned sparrow

savannah sparrow

Lincoln sparrow

California towhee

**Blackbirds**

Brewer's blackbird

**Wood-Warblers**



*Setophaga coronata*

yellow-rumped warbler

## MAMMALS

### **Sciuridae**

*Otospermophilus beecheyi*

### **Squirrels**

California ground squirrel

### **Geomyidae**

*Thomomys bottae*

### **Pocket Gophers**

Botta's pocket gopher

### **Cricetidae**

*Neotoma* sp.

### **New World Mice & Rats**

woodrat (middens, scat)

### **Heteromyidae**

*Dipodomys cf. merriami parvus*\*\*

### **Kangaroo Rats, Pocket Mice and Allies**

San Bernardino kangaroo rat (burrows, trail drags, scat and pin flags marked ESA observed)

### **Leporidae**

*Sylvilagus audubonii*

### **Rabbits & Hares**

desert cottontail

### **Canidae**

*Canis latrans*

### **Coyotes, Foxes, Dogs**

coyote

## **APPENDIX C**

**JCSD Etiwanda Pipeline Project**

**Representative Site Photos**





**Photo 3.** Representative example of California ground squirrel burrow suitable for burrowing owl.



**Photo 4.** Representative potentially suitable burrowing owl shelter beneath rock that was present along the alignment.



**Photo 5.** Representative example of rip rap pile with potentially suitable shelter for burrowing owls present along the alignment.



**Photo 6.** Area where suspected San Bernardino Kangaroo rat sign and ESA pin flags were detected along alignment.

**APPENDIX B.3**  
**Jurisdictional Delineation**

**JCSD ETIWANDA PIPELINE PROJECT  
DELINEATION OF JURISDICTIONAL WATERS**



**CITIES OF RANCHO CUCAMONGA, FONTANA, ONTARIO, and JURUPA VALLEY  
IN SAN BERNARDINO COUNTY, CALIFORNIA**

**Submitted to:**

**Albert A. Webb Associates**

3788 McCray St.  
Riverside, CA 92506

(951) 320-6052  
(951) 786-0594 - fax

Cheryl DeGano, Principal Environmental Analyst

**Submitted by:**

**Wood Environment and Infrastructure, Inc.**

1845 Chicago Avenue, Suite D  
Riverside, CA 92507

Principal Investigators  
Dale Hameister (dale.hameister@woodplc.com)

Wood Environment and Infrastructure Solutions Job # 2055400815

**July 2021**

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## ACRONYMS AND ABBREVIATIONS

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|         |   |
|---------|---|
| AMSL    | above mean sea level  |
| BSA     | Biological Survey Area  |
| CEQA    | California Environmental Quality Act  |
| CDFW    | California Department of Fish and Wildlife                                      |
| CWA     | Clean Water Act   |
| EPA     | Environmental Protection Agency   |
| FAC     | facultative   |
| FACU    | facultative upland  |
| FACW    | facultative wetland   |
| ft.     | Feet  |
| GIS     | Geographic Information System   |
| HUC     | Hydrologic Cataloging Unit  |
| I-10    | Interstate 10   |
| IP      | Individual Permit   |
| M       | Meters  |
| NL      | not listed  |
| NOAA    | National Oceanic and Atmospheric Administration                                 |
| NWI     | National Wetlands Inventory   |
| NWP     | Nationwide Permit   |
| OBL     | obligate  |
| OHWM    | ordinary high-water mark  |
| Rapanos | Rapanos v. U.S. and Carabell v. U.S.  |
| RPW     | relatively permanent waterway   |
| RWQCB   | Regional Water Quality Control Board  |
| SWANCC  | Solid Waste Agency of Northern Cook County v. USACE                             |
| TNW     | traditionally navigable waterway  |
| UPL     | upland  |
| USACE   | U.S. Army Corps of Engineers  |
| USDA    | United States Department of Agriculture, Natural Resources Conservation Service |
| USFWS   | United States Fish and Wildlife Service   |
| USGS    | U.S. Geological Survey  |
| WSC     | Waters of the State of California   |
| WUS     | Waters of the United States   |

## **1.0 INTRODUCTION**

---

At the request of Albert A. Webb Associates (Webb), Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a jurisdictional delineation for the Jurupa Community Services District (JCSD) Etiwanda Pipeline Project (project) and alternatives. The survey area (SA) for this assessment included the project site plus a 500-foot buffer around it and included portions of the cities of Fontana, Ontario, Rancho Cucamonga, and Jurupa Valley, Riverside in San Bernardino Counties, California (Appendix A, Figure 1).

This report presents regulatory framework, methods, and results of a delineation of jurisdictional waters, wetlands, and associated riparian habitat potentially impacted by the Project.

### **1.1 Purpose**

The purpose of the delineation is to determine the extent of state and federal jurisdiction within the project area potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code.

### **1.2 Project Description**

The proposed project is the construction of a 36-inch diameter steel pipeline. The proposed pipeline alignment begins at the Cucamonga Valley Water (CVWD) District at the terminus of Coyote Drive, west to Day Creek Boulevard (Blvd.), south to the intersection of Day Creek Blvd. and Wilson Avenue (Ave.). At this point, the proposed alignment splits east on Wilson Ave. and south on Day Creek Blvd. One split goes east on Wilson Ave. to the CVWD Treatment Plant located at 24th Street (St.) and Etiwanda Ave., in the City of Rancho Cucamonga. From the treatment plant the pipeline alignment will extend south on Etiwanda Ave. to Valley Blvd. From the intersection of Valley Blvd. and Etiwanda Ave. the pipeline will go east on Valley Blvd. to Calabash Ave., from this intersection the pipeline will go south under Interstate 10 (I-10) to Slover Ave., from this intersection the proposed pipeline would go west on Slover Ave. to Mulberry Ave. at which point the pipeline would go south on Mulberry Ave. (at this point the street changes to Country Village Road (Rd.) at the Riverside County Line). At Country Village Rd. the proposed pipeline will connect into the existing 30" diameter waterline going to the storage reservoirs and connect into JCSD's existing 24" diameter water line going to the storage reservoirs. The total estimated length of the proposed pipeline is approximately 70,420 or

68,600 feet (13.3 to 12.9 miles). The proposed pipeline alignment terminates approximately ½ mile south of the intersection of Philadelphia St. and Country Village Rd. The second split from intersection of Day Creek Blvd. and Wilson Ave. goes south on Day Creek Blvd. to Highland Ave. At the intersection of Highland Ave. and Day Creek Blvd. this section goes east to Etiwanda Ave.

Project elevations range from approximately 810 feet (247 meters) at the intersection of Philadelphia St. and Country Village Rd. to 1,673 feet (510 meters) at the CVWD District Treatment Plant. Despite the elevational change, the slope is gentle with the project area appearing flat. The alignment passes through a wide variety of conditions, from undeveloped natural areas to agriculture and vacant lots and from residential to commercial and industrial areas. The project crosses areas mapped on two different United States Geologic Service (USGS) 7.5-minute topographic quadrangle maps (see Figure 2): Cucamonga Peak and Guasti (Appendix A, Figure 2).

## **2.0 REGULATORY FRAMEWORK**

---

### **2.1 U.S. Army Corps of Engineers**

The USACE regulates the discharge of dredged or fill material in waters of the United States (WOTUS) pursuant to Section 404 of the CWA.

#### **2.1.1 Waters of the U.S.**

CWA regulations (33 CFR 328.3(a)) previously defined WOTUS as follows:

All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

All interstate waters including interstate wetlands;

All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: (i) Which are or could be used by interstate or foreign travellers for recreational or other purposes; or (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;

All impoundments of waters otherwise defined as WOTUS under the definition;

- Tributaries of WOTUS;
- The territorial seas;
- Wetlands adjacent to WOTUS (other than waters that are themselves wetlands).

The USACE delineates non-wetland waters in the Arid West Region by identifying the ordinary high-water mark (OHWM) in ephemeral and intermittent channels (USACE 2008a). The OHWM is defined in 33 CFR 328.3(e) as:

"...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

Identification of OHWM involves assessments of stream geomorphology and vegetation response to the dominant stream discharge. Determining whether any non-wetland water is a jurisdictional WOTUS involves further assessment in accordance with the regulations, case law, and clarifying guidance.

## **2.1.2 Wetlands and Other Special Aquatic Sites**

Wetlands are defined at 33 CFR 328.3(c) as “ [a]reas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” 33 C.F.R. § 328.3 (c) (16) (2020)

Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. Special aquatic sites include sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes. They are defined in 40 CFR 230 Subpart E.

## **2.1.3 Supreme Court Decisions**

### **2.1.3.1 Solid Waste Agency of Northern Cook County**

On January 9, 2001, the Supreme Court of the United States issued a decision on Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (2001) 531 U.S. 159, with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over “non-navigable, isolated, intrastate” waters. The Court held that: “nonnavigable, isolated, intrastate waters, which . . . did not actually abut on a navigable waterway, were not included as “waters of the United States.” 531 U.S., at 167, 171; Rapanos v. U.S. (2006) 547 U.S. 715, 726.

### **2.1.3.2 Rapanos/Carabell**

In the next Supreme Court case Rapanos v. U.S. (2006) 547 U.S. 715 the Court clarified the extent of USACE jurisdiction under the CWA by interpreting the phrase “the Waters of The United States”. The Court held that: “ term “navigable waters,” under CWA, includes only relatively permanent, standing or flowing bodies of water, not intermittent or ephemeral flows

of water, and only those wetlands with a continuous surface connection to bodies that are waters of the United States in their own right are adjacent to such waters and covered by the CWA.” Rapanos v. U.S. (2006) 547 U.S. 715. The Court interpreted that: “[T]he phrase “the waters of the United States” [which defines term “navigable waters” in the Clean Water Act], includes only those relatively permanent, standing or continuously flowing bodies of water “forming geographic features” that are described . . . as “streams, oceans, rivers, and lakes.” [T]he phrase does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.” Id. at 739. “[Only] those wetlands with a continuous surface connection to bodies that are “waters of the United States” in their own right, so that there is no clear demarcation between “waters” and wetlands, are “adjacent to” such waters and covered by the Act.” Id. at 742. [E]stablishing that wetlands are covered by the Clean Water Act requires two findings: first, that the adjacent channel contains a “water” of the United States, [that is,] a relatively permanent body of water connected to traditional interstate navigable waters, and second, that the wetland has a continuous surface connection with that water, making it difficult to determine where the “water” ends and the “wetland” begins. Id.

In light of the Rapanos decision, the USACE will assert jurisdiction over a traditional navigable waterway (TNW), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are a relatively permanent waterway (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not RPWs, and wetlands adjacent to but that do not directly abut a non-navigable RPW.

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary indicate whether they significantly affect the chemical, physical and biological integrity of downstream TNWs. Analysis of potentially jurisdictional streams includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

#### **2.1.4 2015 Clean Water Rule**

The federal government issued the Clean Water Rule in 2015 in order to resolve jurisdictional ambiguity resulting from previous Supreme Court decisions (i.e. SWANNC, Rapanos). On June 22, 2015, the USACE and EPA published the Clean Water Rule: Definition of “Waters of the United States”; Final Rule (40 CFR Parts 110, 112, 116, 117, 122, 230, 232, 300, 302, and 401). The Clean Water Rule was put on hold by federal injunction in 2015 but was reinstated in California in August 2018. The Clean Water Rule was again put on hold by federal injunction in September 2019. The Clean Water Rule finds waters to be jurisdictional under the CWA as summarized below:

Jurisdictional by Rule: TNWs, Interstate Waters, Territorial Seas, and Impoundments of Jurisdictional Waters.

Tributaries: Waters characterized by the presence of physical indicators of flow, including bed and bank and OHWM, that contribute flow directly or indirectly to a waters listed in 1) above.

Connected Waters: Adjacent or neighbouring waters that have a significant nexus to waters listed in 1) above.

Other Waters: waters that, individually or as a group, significantly affect the chemical, physical, or biological integrity of waters listed in 1) above.

#### **2.1.5 2020 The Navigable Waters Protection Rule**

On January 23, 2020, the Environmental Protection Agency (EPA) and the Department of the Army published a final rule called The Navigable Water Protection Rule: Definition of “Waters of the United States”. This final rule was developed consistently with decision in Rapanos v. U.S. (2006) 547 U.S. 715 and superseded all previous rules. This rule was published in the Federal Register on April 21, 2020 and went into effect 60 days after that date, on June 22, 2020, and was codified under 33 C.F.R. § 328.3 Definitions (2020), effective June 22, 2020.

In this final rule, the definition of WOTUS for the purposes of CWA encompasses:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries that contribute surface water flow to such waters;
- Certain lakes, ponds, and impoundments of jurisdictional waters; and
- Wetlands adjacent to other jurisdictional waters.



The final rule excludes from the definition of WOTUS all waters or features not mentioned above, specifically clarifying that WOTUS do not include the following:

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

## **2.2 Regional Water Quality Control Board**

The RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit including a Section 404 permit. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as WOTUS but may also include waters not in federal jurisdiction.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State was adopted in April 2020 and put into effect statewide on May 28, 2020 (State Water Resources Control Board, 2020).

The Water Boards define an area as wetland as follows:

*An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.*

The Water Code defines WSC broadly to include "any surface water or groundwater, including saline waters, within the boundaries of the state." WSC include all WOTUS but also includes waters not in federal jurisdiction.

The following wetlands are waters of the state:

1. Natural wetlands,
2. Wetlands created by modification of a surface water of the state, and
3. Artificial wetlands that meet any of the following criteria:
  - a. Approved by an agency as compensatory mitigation for impacts to other waters of the state, except where the approving agency explicitly identifies the mitigation as being of limited duration;
  - b. Specifically identified in a water quality control plan as a wetland or other water of the state;
  - c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or
  - d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the state unless they also satisfy the criteria set forth in 2, 3a, or 3b):
    - i. Industrial or municipal wastewater treatment or disposal,
    - ii. Settling of sediment,
    - iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,
    - iv. Treatment of surface waters,
    - v. Agricultural crop irrigation or stock watering,
    - vi. Fire suppression,
    - vii. Industrial processing or cooling,
    - viii. Active surface mining – even if the site is managed for interim wetlands functions and values,
    - ix. Log storage,

- x. Treatment, storage, or distribution of recycled water, or
- xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits); or
- xii. Fields flooded for rice growing.

All artificial wetlands that are less than an acre in size and do not satisfy the criteria set forth in 2, 3.a, 3.b, or 3.c are not WSC.

### **2.3 California Department of Fish and Wildlife**

The CDFW regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

“An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake (CDFW, 2015).”

Evaluation of CDFW jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds. In general, under 1602 of the Fish and Game Code, CDFW jurisdiction extends to the maximum extent or expression of a stream on the landscape (CDFW, 2010). It has been the practice of CDFW to define a stream as “a body of water that flows perennially or episodically and that is defined by the area in a channel which water currently flows, or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators” (Brady and Vyverberg, 2013). Thus, a channel is not defined by a specific flow event, nor by the path of surface water as this path might vary seasonally. Rather, it is CDFW's practice to define the channel based on the topography or elevations of land that confine the water to a definite course when the waters of a creek rise to their highest point.

CDFW follows definition of a stream under California Code of Regulations as: “A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.” Cal. Code Regs., tit. 14, § 1.72

### 3.0 METHODS

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Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Aerial photographs of the survey area at a scale of 1:1800 to determine the potential locations of jurisdictional waters or wetlands;
- USGS topographic map (Appendix A - Figure 2) to determine the presence of any “blue line” drainages or other mapped water features.
- USDA soil mapping data (Appendix A - Figure 3); and
- USFWS National Wetlands Inventory map to identify areas mapped as wetland features (Appendix A - Figure 4).

A field survey of the project site was conducted by Wood delineator Dale Hameister on 7 October 2020 and 14 May 2021. The survey consisted checking all areas where potential jurisdictional areas were within 500 feet of the proposed pipeline. All accessible natural drainage portions of the survey areas were walked to determine if any topographic low-spots meet the minimum criteria to be considered under the jurisdiction of USACE, RWQCB, and CDFW. All other areas of concrete channels were observed from bridges or boundary fences. Visual observations of vegetation types and changes in hydrology and soil texture, and culvert locations were used to locate areas for evaluation. Weather conditions during delineation fieldwork was conducive for surveying with clear skies.

USACE regulated WUS, including wetlands, and RWQCB WSC were delineated according to the methods outlined in *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE, 2008a). The extent of WUS was determined based on indicators of an OHWM. The OHWM width was measured at points wherever clear changes in width occurred.

Potential federally regulated wetlands were identified based on the *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008b). Additional data was recorded to determine if an area fulfilled the wetland criteria parameters. Three criteria must be fulfilled in order to classify an area as a wetland under the jurisdiction of the USACE: 1) a predominance of hydrophytic vegetation, 2) the presence of hydric soils, and 3) the presence of wetland hydrology.

CDFW jurisdiction is delineated by measuring the elevations of land that confine a stream to a definite course when its waters rise to their highest level and to the extent of associated riparian vegetation. WSC/CDFW jurisdictional areas were determined by the bankfull channel edge and

RWQCB jurisdictional areas were determined by the edge of the OHWM. In some areas the eroded banks were vertical, so these areas shared the same jurisdictional boundary lines.

All washes identified were typical of dryland fluvial systems with unvegetated, sand bottom channels, or engineered concrete channels. Therefore, no soil pits were dug, and no wetland data forms were used to collect information.

To determine jurisdictional boundaries, the surveyor walked the length of the drainage within the project area and recorded the centerline with a Trimble GeoXH global positioning system. The width of the drainage was determined by the OHWM and bankfull width measurements at locations where transitions were apparent. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. Areas that lacked evidence of hydrophytic vegetation, lacked evidence of wetland hydrology, and had no recent disturbance, did not require a soil pit since the other wetland indicators were not present. Concrete channels were mapped using GIS and aerial photographs because of safety and accessibility limitations. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional waters and prepare graphical representations of that data.

## **4.0 ENVIRONMENTAL SETTING**

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### **4.1 Existing Conditions**

The majority of the drainages observed consist of urban engineered concrete channels. One exception is the section of Etiwanda Creek that flows from north to southeast of Etiwanda Avenue and north of I-10. This area is a dry sandy bottomed drainage.

### **4.2 Hydrology**

The average rainfall for the area is 15.04 inches per year (NOAA Regional Climate Center). Weather data was recorded in the City of Ontario. The delineation survey was conducted following a year of below average rainfall.

The Project Area contains a total of 4 jurisdictional drainages and 3 detention basins. The drainages all generally flow north to south and are part of the San Bernardino County, Riverside County, and Caltrans flood control systems.

All the drainages within the SA are within the Middle Santa Ana River Watershed (1807020307). The drainages flow into the Santa Ana River (a RPW), and ultimately to the Pacific Ocean (TNW). The drainages drain storm flows also drain urban runoff and discharged treated waters. Laminar flows within the concrete sections of Etiwanda Creek and other unnamed drainages were observed during October which is generally the dry season. Due to these observations, the drainages would not be considered ephemeral and would be considered U.S. Army Corps jurisdictional.

### **4.3 Vegetation**

The majority of the BSA contains no naturally occurring vegetation communities present in the SA. Three naturally occurring vegetation community, Riversidean Alluvial Fan Sage Scrub, Encelia Scrub, and Buckwheat was found within the proposed project vicinity (Holland, 1986). Additionally, a variety of non-native and/or highly disturbed communities were also detected. The seven (7) categories below were used to describe land cover (see Figures 5a through 5c): **Riversidean Alluvial Scrub**

This category represents areas that have coastal sage scrub found on alluvial fans and flood plains of the coastal side of the San Bernardino and San Gabriel Mountains. Soils are complex and may include alluvium composed of boulders, rocks, and sand. This is a natural vegetation community within San Bernardino County.

#### **4.3.2 Buckwheat**

This category represents areas that have a combination of Buckwheat (*Eriogonum fasciculatum*) often with white sage (*Salvia apiana*). This vegetation community is commonly found at elevations below approximately 6,800 feet (2,074 meters) and often forms adjacent to urbanized landscapes and annual grasses and forbs (Holland, 1986).

#### **4.3.3 Encelia Scrub**

This category represents areas that have brittlebush (*Encelia farinosa*) as the dominated shrub. It is known to occur at lower elevations and is often associated with sage scrub within the ESA.

#### **4.3.4 Eucalyptus**

This category represents areas that are dominated by Eucalyptus (*Eucalyptus* sp.) trees. Historically, groves of eucalyptus trees were used for windbreaks in agriculture areas. Remnant stands were observed within the proposed project alignment.

#### **4.3.5 Non-native Grassland**

This category represents areas that are dominated by non-native, often weedy species such or especially in favorable rainfall years. Mapped areas of this vegetation type are often found in vacant lots amongst urbanized areas. These areas are quite often mowed regularly for fire abatement (Holland, 1986).

#### **4.3.6 Non-native ornamental/shrubs**

This category represents areas that have a mixture of ornamental or non-native conifer or hardwood species. Non-native ornamentals commonly observed may include species such as oleander (*Nerium oleander*), pine trees (*Pinus* sp.), sweetgums (*Liquidambar* sp.), and pepper trees (*Schinus mole*).

#### **4.3.4 Urban/Developed**

This category represents areas that have been disked, cleared, or otherwise altered and include roadways, existing buildings, city parks, cemeteries, and other structures. Disturbed lands may include ornamental plantings for landscaping, or ruderal vegetation dominated by non-native, weedy species.

#### **4.4 Soils**

The SA contains seventeen (17) different soil mapping units (see Figure 4):

- Chino silt loam;
- Cieneba rocky sandy loam, 15 to 50% slopes, eroded
- Delhi fine sand;
- Delhi fine sand, 2 to 15% wind-eroded;
- Gorgonio loamy sand, deep, 2 to 8% slopes;
- Grangeville fine sandy loam;
- Hanford sandy loam, 0 to 2%;
- Hanford coarse sandy loam, 2 to 9% slopes;
- Hilmar loamy fine sand;
- Hilmar loamy very fine sand, 0 to 2% slopes;
- Psamments, Fluvents, and Frequently flooded soils;
- Riverwash;
- Soboba gravelly loamy sand, 0 to 9% slopes;
- Soboba stony loamy sand, 2 to 9% slopes;
- Tujunga gravelly loamy sand, 0 to 8% slopes;
- Tujunga gravelly loamy sand, 0 to 9% slopes;
- Tujunga loamy sand, 0 to 5% slopes;
- Water

None of the soils within the survey area are considered to be wetland soils. All drainages are concrete with the exception of a section of Etiwanda Creek. The sandy riverwash areas of Etiwanda Creek did not show any signs of wetland indicators.

The Lake Switchyard survey area contains disturbed areas, buckwheat scrub, non-vegetated stream channel, and willow riparian. Dominant species observed within Indian Canyon Creek

#### **4.5 National Wetlands Inventory**

The United States Fish and Wildlife Service (USFWS) is the principal Federal agency that provides information to the public on the extent and status of the Nation's wetlands. The USFWS has developed a series of maps, known as the National Wetlands Inventory (NWI) to



show wetlands and deep-water habitat. This geospatial information is used by Federal, State, and local agencies, academic institutions, and private industry for management, research, policy development, education, and planning activities. The NWI program was neither designed nor intended to produce legal or regulatory products; therefore, wetlands identified by the NWI program are not the same as wetlands defined by the USACE.

The NWI Mapper (USFWS, 2021) was accessed on-line to review mapped wetlands within the project study areas.

The NWI mapper (Figure 4, Appendix A) drainages and basins that are the same findings as the surveys in the field. The exception of this finding was the NWI identified some rocky engineered drainages in the northern section of the SA that did not contain any OHWM and did not meet the definitions required to be considered jurisdictional.

## **5.0 RESULTS**

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The Survey Area contains a total of 4 jurisdictional drainages and 3 detention basins. All the drainages are concrete engineered channels with the exception of the section of Etiwanda Creek north of I-10. The trapezoid channels were determined to have CDFW jurisdiction to the top of the bank, and USACE jurisdiction at the base of the channel. The box channels with vertical sided contain the same jurisdiction for USACE and CDFW.

The soil within the Etiwanda Creek is coarse sand with no signs of redox or any other wetland soil indicator.

No wetlands were observed within the SA. The drainages within the SA contain 58.41 acres of USACE jurisdictional areas, and 60.35 acres of CDFW jurisdictional areas.

The USACE, in combination with the EPA, when necessary, reserves the ultimate authority in making the final jurisdictional determination of WUS and the RWQCB reserves the ultimate authority in making the final jurisdictional determination of WSC. Additionally, CDFW has ultimate discretion in the determination of their jurisdiction.

## **6.0 IMPACTS TO JURISDICTIONAL AREAS**

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At the time of this report, the construction details have not been finalized. It is understood that all areas where the pipeline crosses a drainage, the pipe will be placed under the existing drainage using a jack and bore technique. None of the drainages within the SA will be impacted by the pipeline project. However, if plans change and pipes are to be hung on bridges or the walls of a drainage, then impacts at those locations would need to be analyzed. If construction of the pipeline required personnel and heavy equipment to be within the channel, then permits for USACE, CDFW, and RWQCB would be required.

### **6.1 Permitting Requirements**

The proposed project requires temporary and permanent impacts to jurisdictional drainages and therefore, authorizations from the RWQCB and CDFW are required as described below.

#### **6.1.1 U.S. Army Corps of Engineers**

The natural bottom section of Etiwanda Creek is ephemeral. As of June 22, 2020, under the new 2020 USACE ruling, ephemeral drainages would not be considered WUS. USACE would likely not assert jurisdiction over that onsite drainage. The remaining concrete drainages were observed with flowing urban runoff within the dry season not related to any storms. They would not be considered ephemeral. If the USACE did assert jurisdiction over the on-site drainages, or if the applicant decided to use a preliminary determination of jurisdictional status, and permit as jurisdictional status, then a 404 permit may be required as described below.

The two most common types of permits issued by USACE under Section 404 of the CWA to authorize the discharge of dredged or fill material into WUS are: a nation-wide permit (NWP) or an individual permit (IP).

NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources.

#### **6.1.2 Regional Water Quality Control Board**

The project areas occur in the Santa Ana RWQCB (Region 8). Under Section 401 of the CWA, the RWQCB must certify that the discharge of dredged or fill material into WUS does not violate state water quality standards.

The RWQCB also regulates impacts to WSC under the Porter Cologne Water Quality Control Act through issuance of a Construction General Permit, State General Waste Discharge Order,

or Waste Discharge Requirements, depending upon the level of impact and the properties of the waterway.

The project proponent would need to obtain a Water Quality Certification. In addition to the formal application materials and fee (based on area of impact), a copy of the appropriate California Environmental Quality Act (CEQA) documentation must be included with the application.

### **6.1.3 California Department of Fish and Wildlife**

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated riparian habitat, regardless of the extent of impacts. In addition to the formal application materials and fee (based on cost of the project), a copy of the appropriate CEQA documentation must be included with the application.

## 7.0 REFERENCES

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- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley.
- Brady, Roland H. III, Kris Vyverberg. 2013. Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants. California Energy Commission. Publication Number: CEC-500-2014-013.
- California Department of Fish and Wildlife (CDFW). 2010. A Review of Stream Processes and Forms in Dryland Watersheds. Prepared by Kris Vyverberg, Conservation Engineering. 32 p.
- CDFW. 2018. Fish and Game Code of California. <http://www.leginfo.ca.gov/calaw.html>.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior.
- Federal Register / Vol. 85, No. 77 / Tuesday, April 21, 2020 / Rules and Regulations (22250)
- Gretag/Macbeth. 2000. Munsell color. New Windsor, NY.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41: 1-42.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed March 2020.
- U.S. Army Corps of Engineers (USACE). 1987. Wetlands Delineation Manual, Technical Report Y-8. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. + append.
- USACE. 2008a. A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States. A Delineation Manual. Lichvar and McColley. August.
- USACE. 2008b. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. September.
- United States Department of Agriculture, Natural Resources Conservation Service (USDA). 2019a. The PLANTS Database. (<http://plants.usda.gov>, 15 June 2019). National Plant Data Team, Greensboro, NC 27401-4901 USA.

USDA. 2020. List of Hydric Soils. Available online at:

[http://www.nrcs.usda.gov/wps/PA\\_NRCSConsumption/download?cid=stelprdb1248596&ext=xlsx](http://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=stelprdb1248596&ext=xlsx)

U.S. Fish and Wildlife Service. 2020. National Wetlands Inventory Mapper. Available online at:

<http://www.fws.gov/wetlands/Data/Mapper.html>. Accessed March 2020.

United States Geological Survey (USGS). 1996. 7.5-Minute Series, Cucamonga Peak and Gatusi, California, Topographic Quadrangle. Reston, VA.

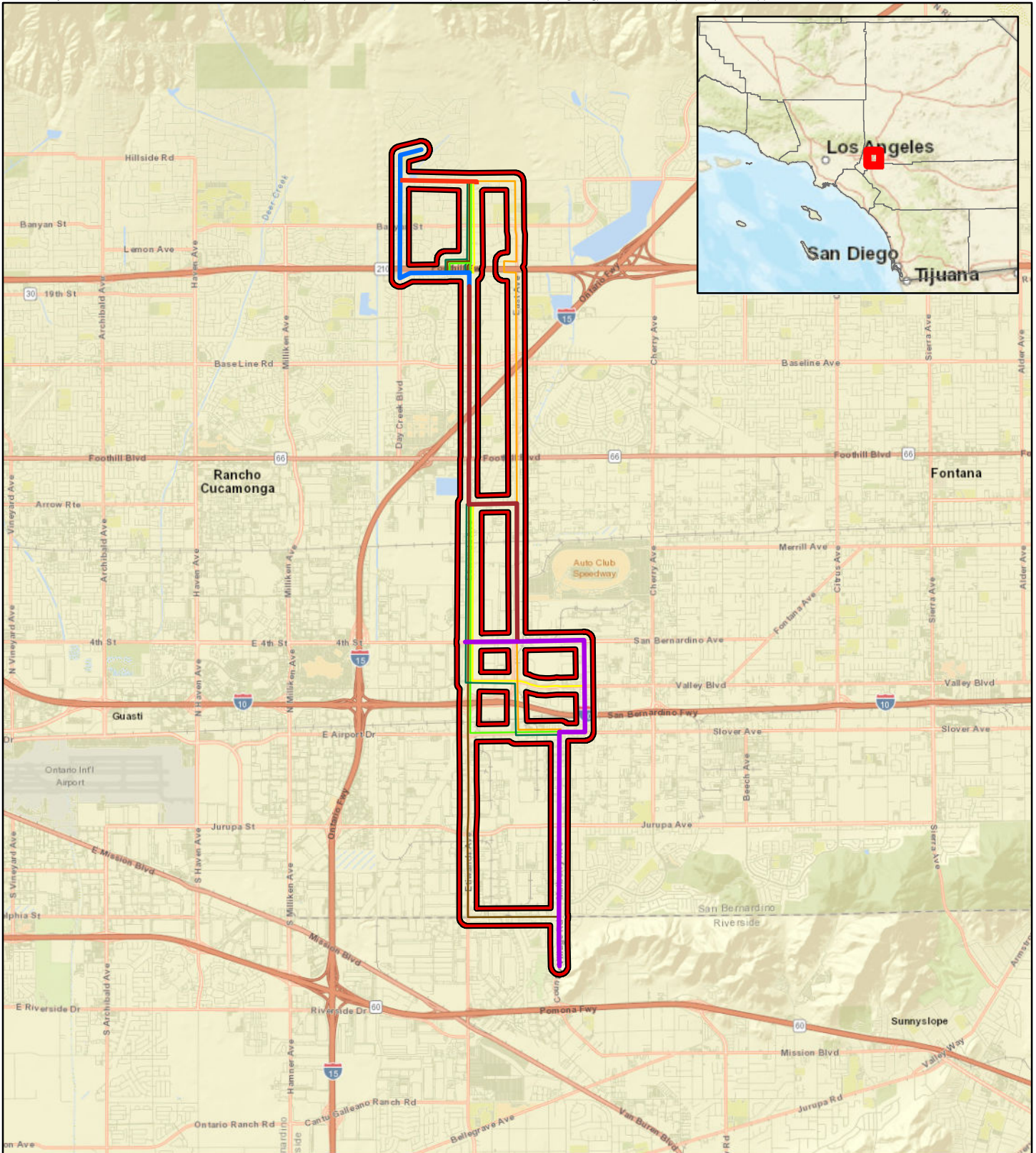
## **APENDIX A**

### **JURISDICTIONAL MAPS**

## **APENDIX A**

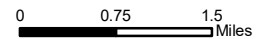
### **JURISDICTIONAL MAPS**





Path: \\sdg1-rs1\gis\3554\_NaturalResources\Etiwanda\_Pipeline\_2055400815\MXD\Report\Figures\JDI\Fig1\_Regional.mxd, aaron.johnson 1/27/2021

1 inch = 1.5 miles

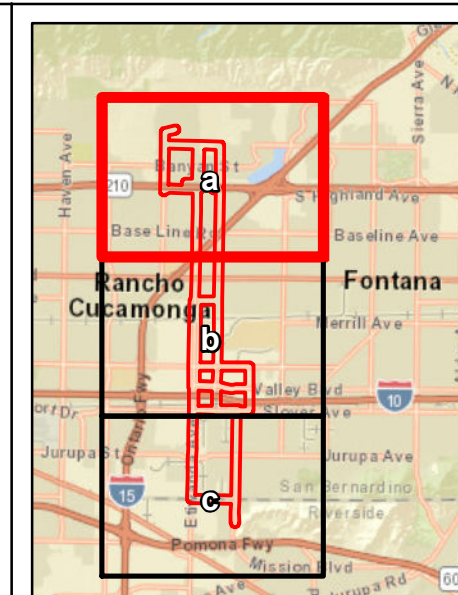
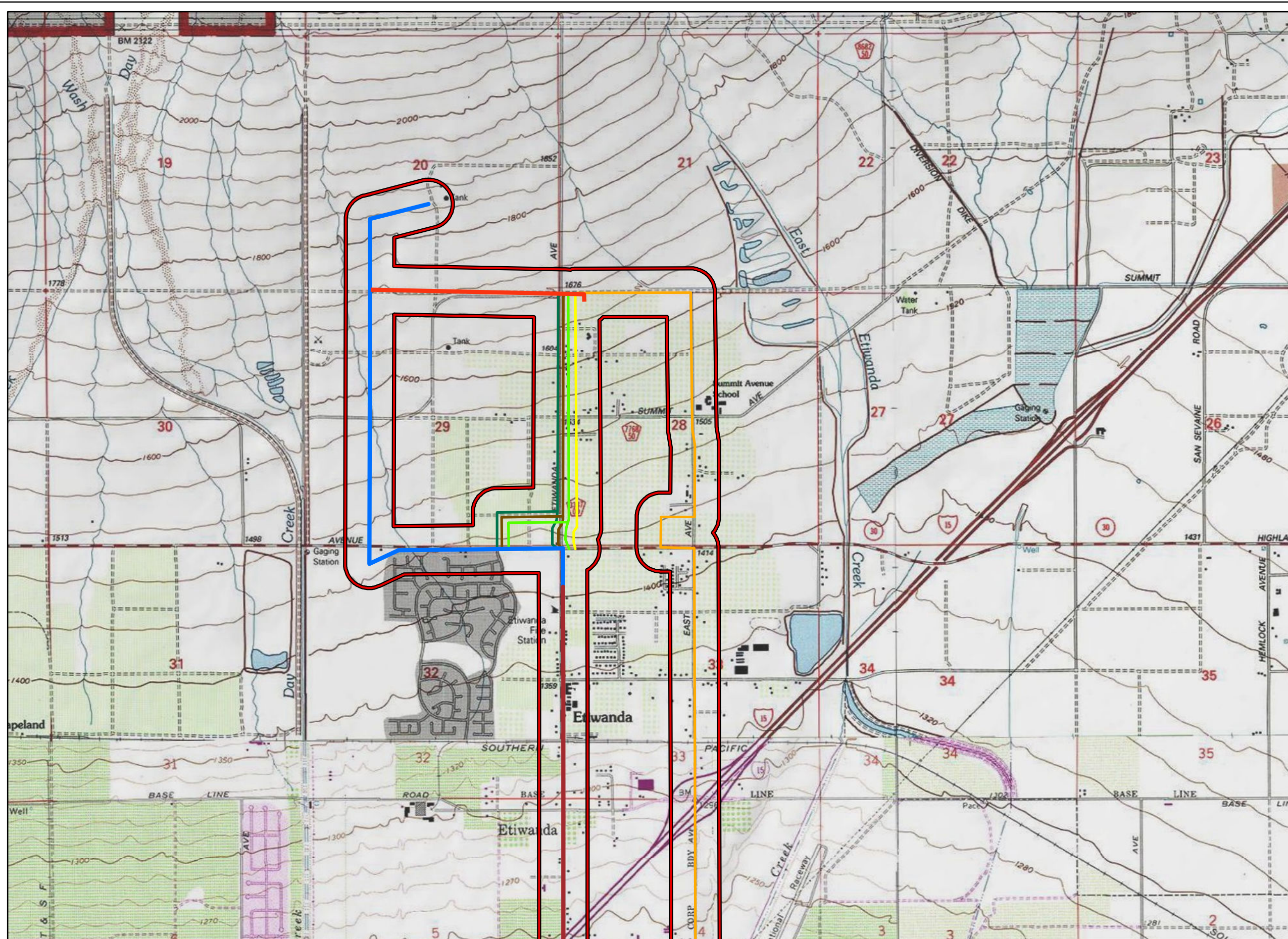


- |  |                                  |  |          |
|--|----------------------------------|--|----------|
|  | Project Alignment (500ft Buffer) |  | Option A |
|  | Phase 1                          |  | Option B |
|  | Phase 2                          |  | Option C |
|  | Phase 3                          |  | Option D |
|  | Phase 4                          |  | Option E |
|  | Recommended Alignment            |  |          |

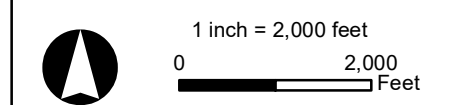
# FIGURE 1

Regional Location  
Jurisdictional Delineation  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.





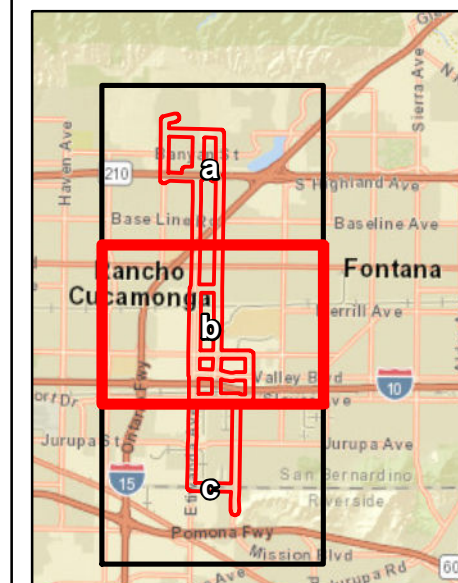
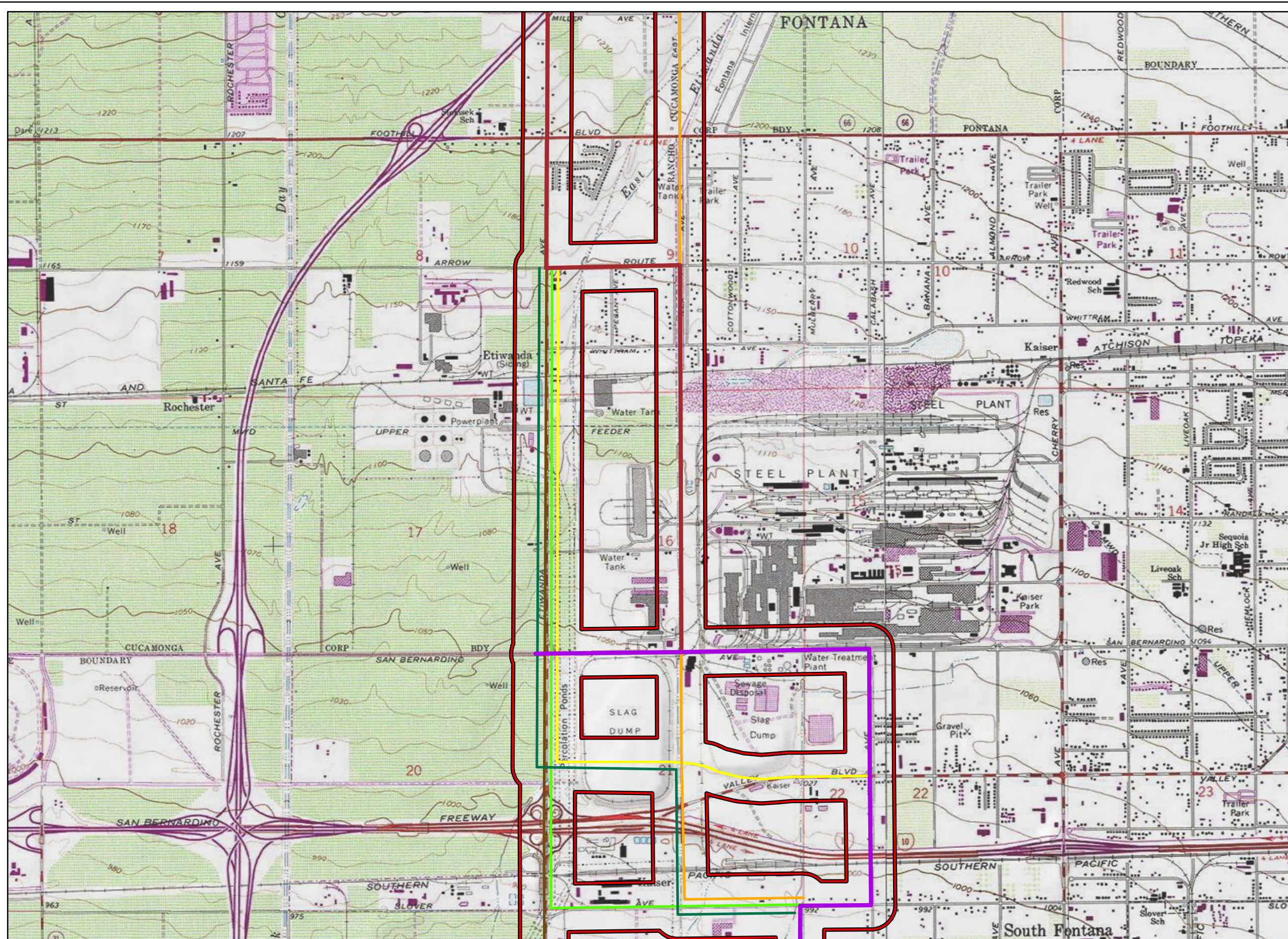
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- Recommended Alignment**
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E



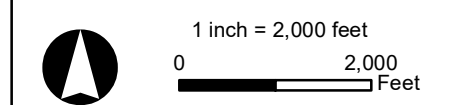
**FIGURE 2a**  
 Project Location on USGS Topo  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



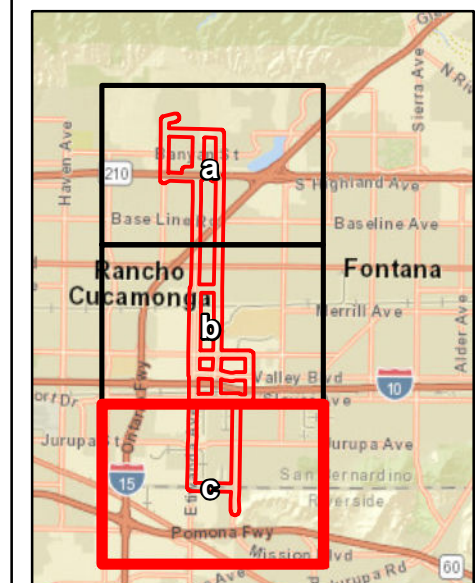
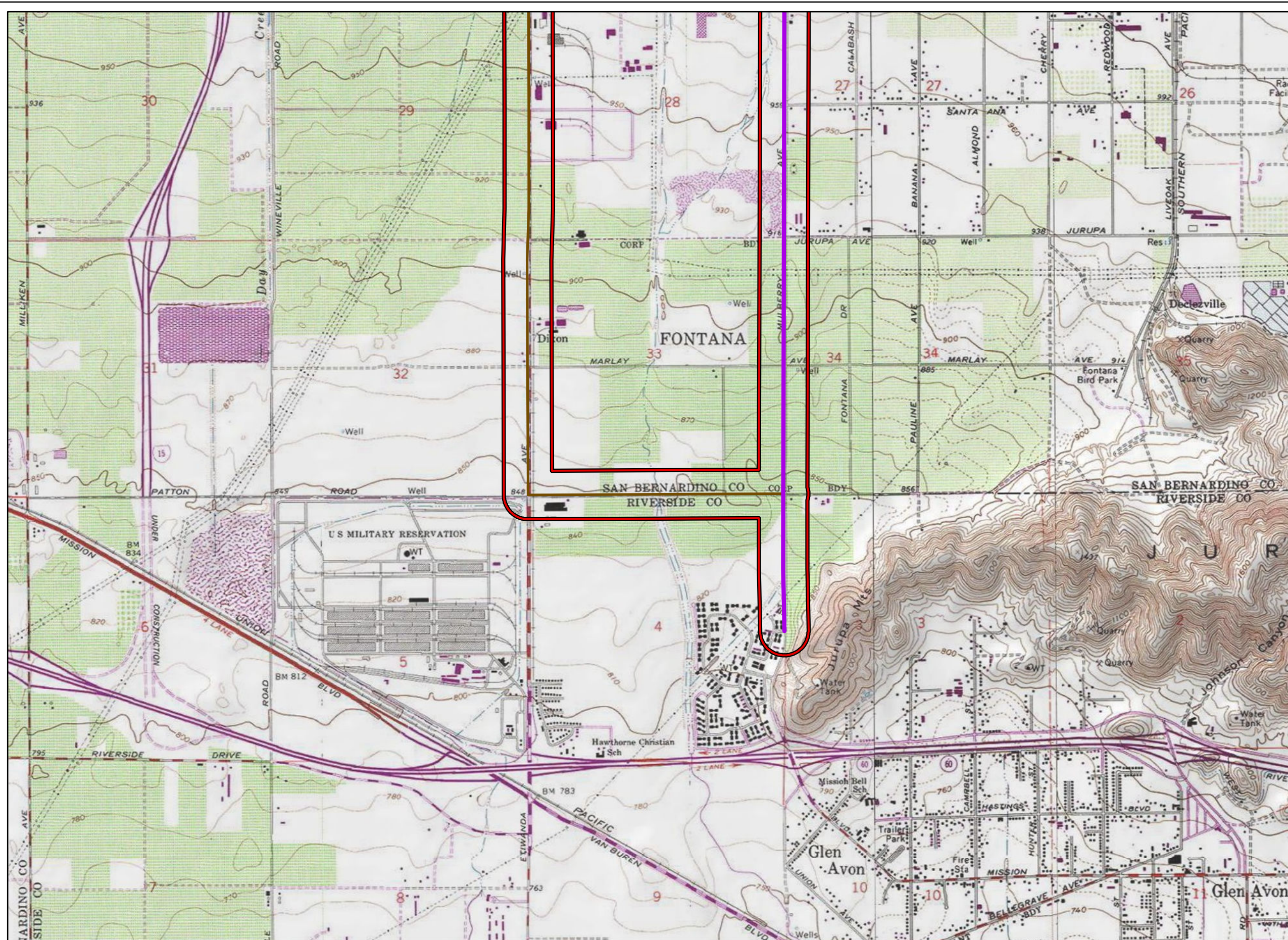
- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 1
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E



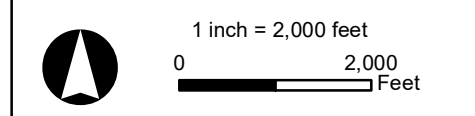
**FIGURE 2b**  
 Project Location on USGS Topo  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



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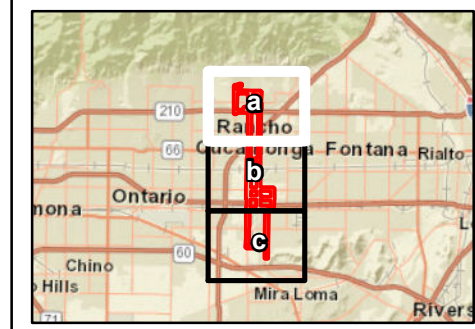
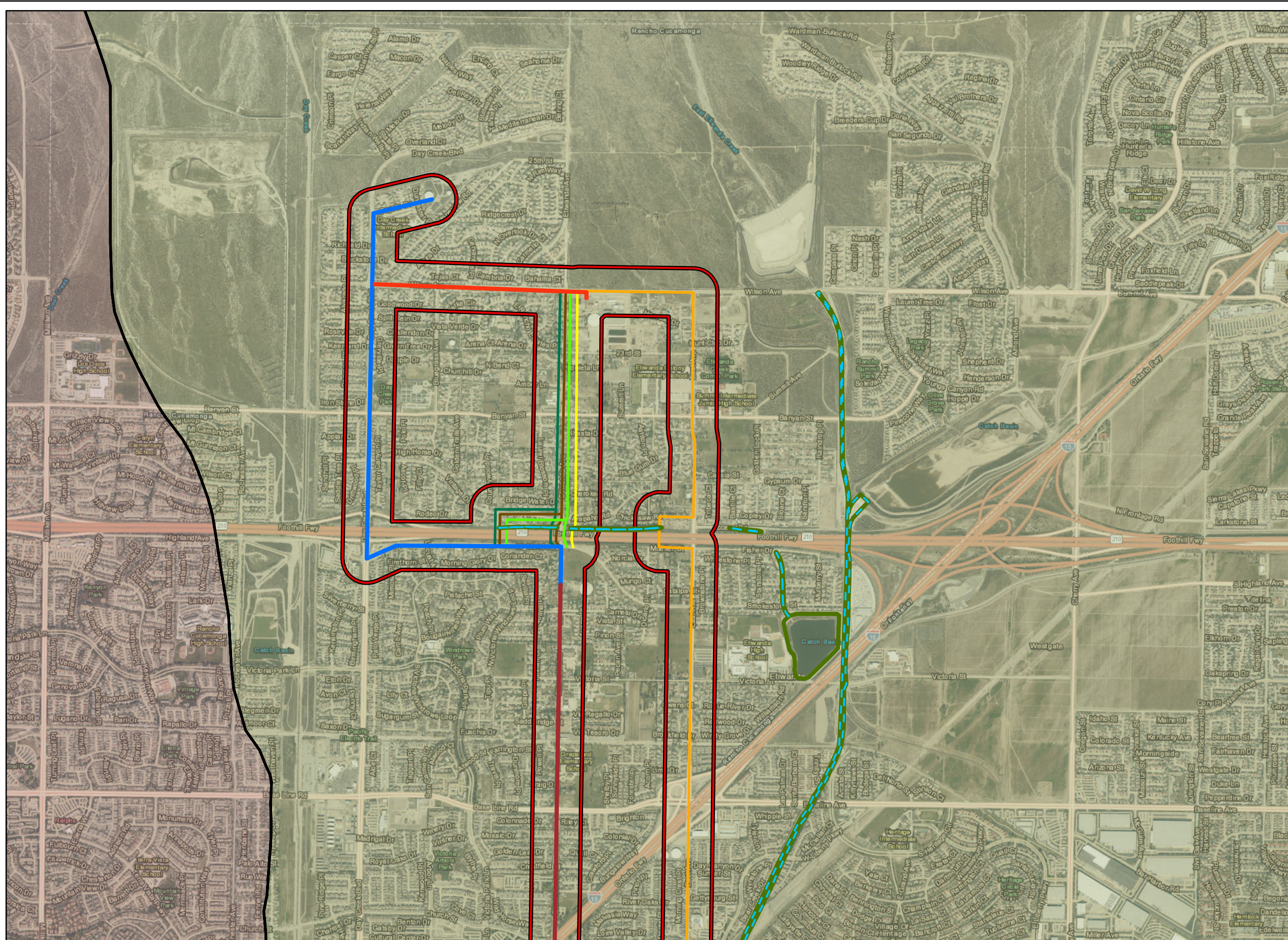
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- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E



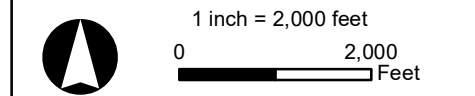
**FIGURE 2c**  
 Project Location on USGS Topo  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



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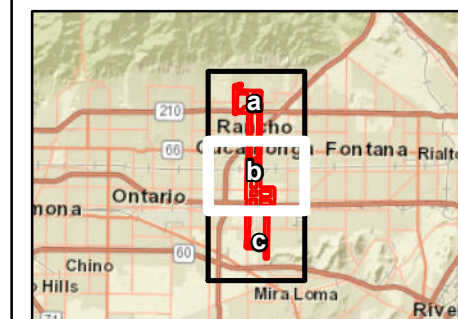
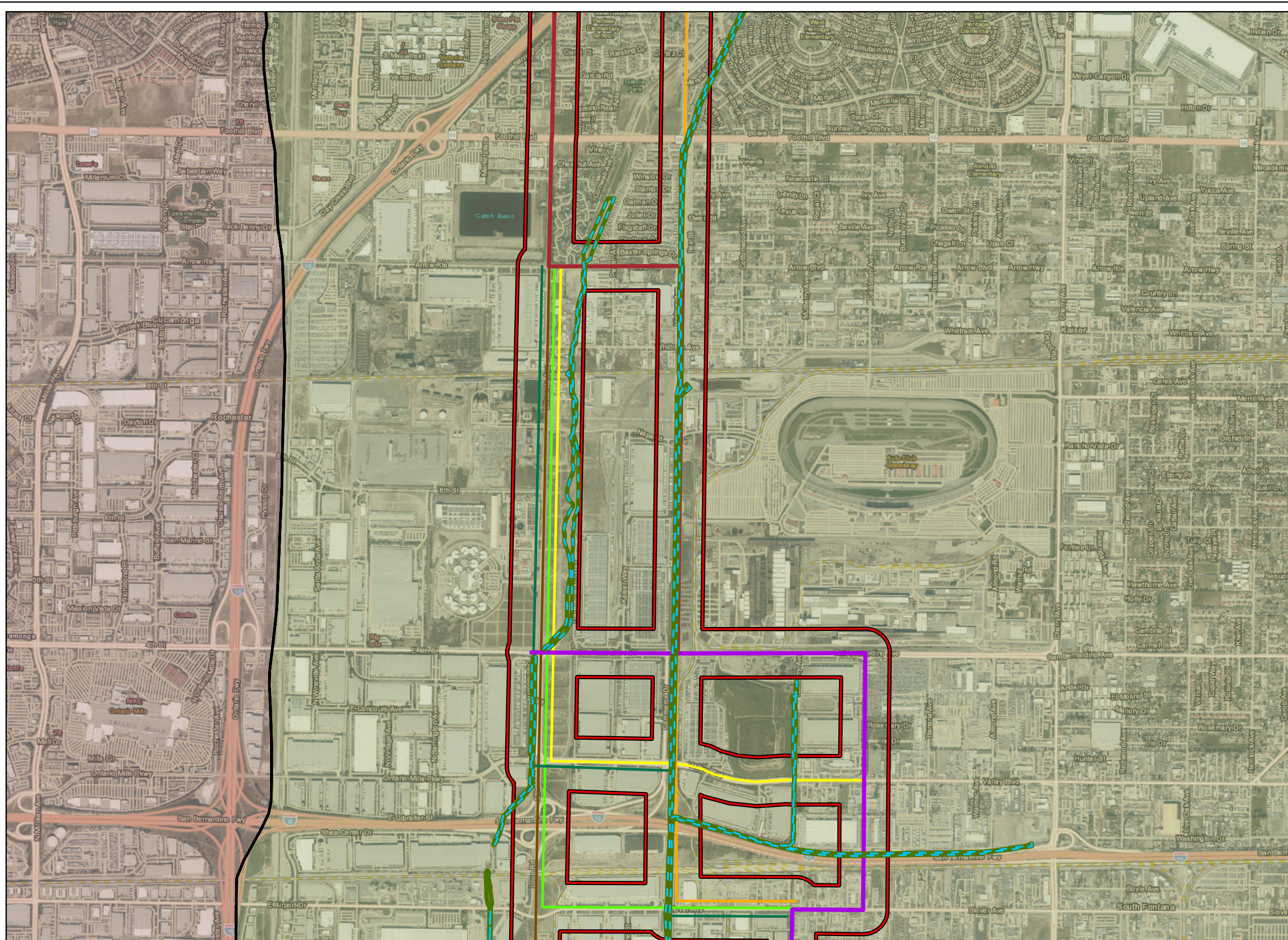
- ACOE
- CDFW
- Chino Creek Watershed (1807020307)
- Middle Santa Ana River Watershed (1807020308)
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Project Alignment (500ft Buffer)



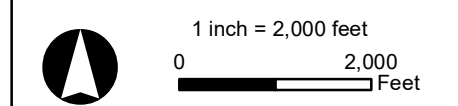
**FIGURE 3a**  
 Watershed Boundaries  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



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 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
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 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



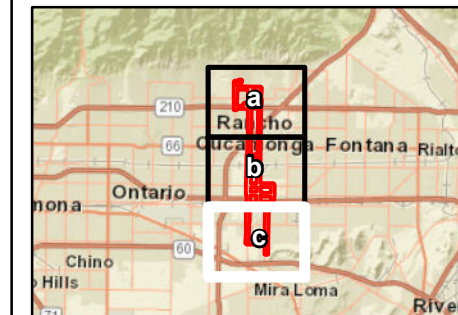
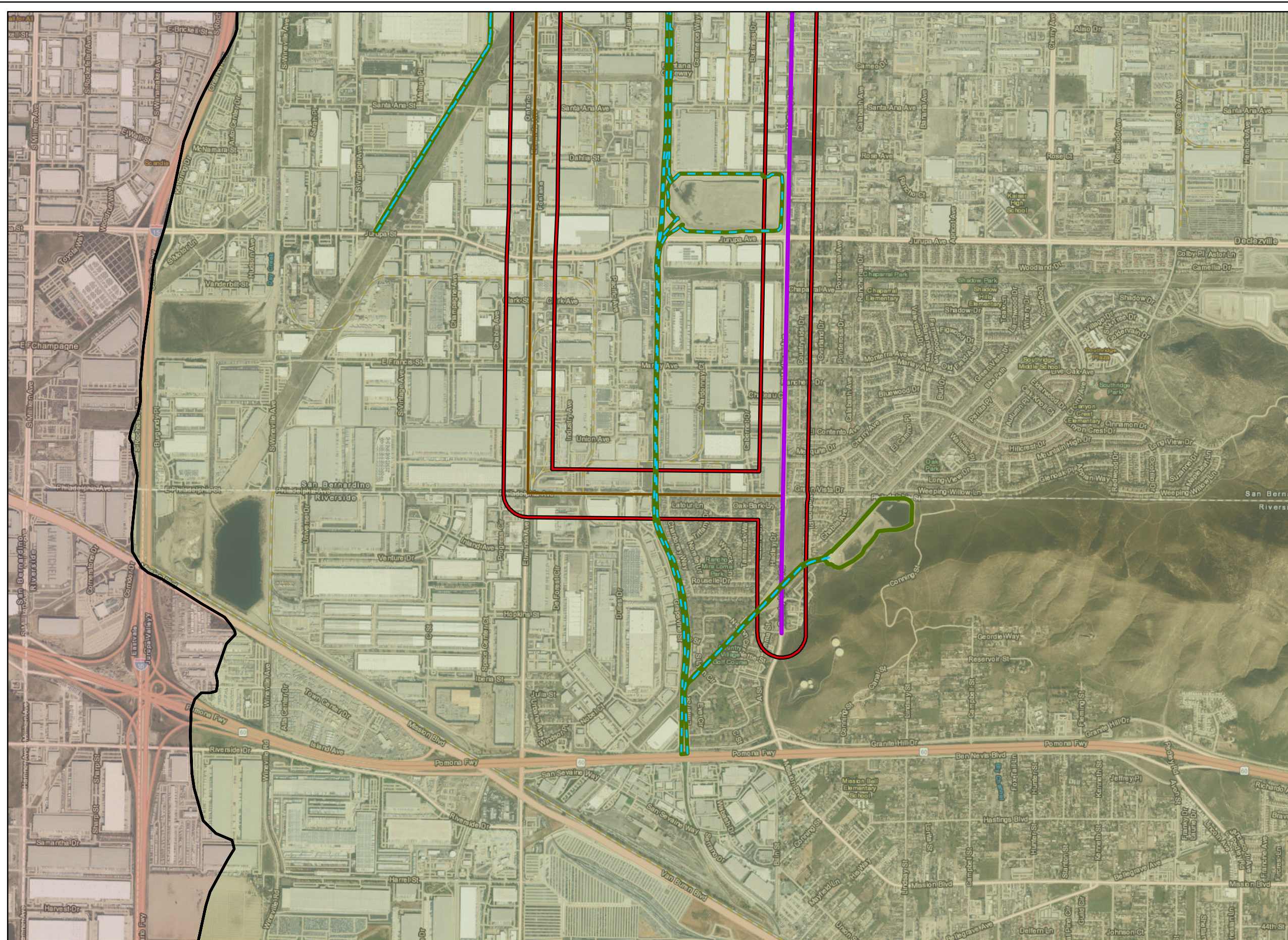
- ACOE
- CDFW
- Chino Creek Watershed (1807020307)
- Middle Santa Ana River Watershed (1807020308)
- Recommended Alignment**
- Phase 1
- Phase 2
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Project Alignment (500ft Buffer)










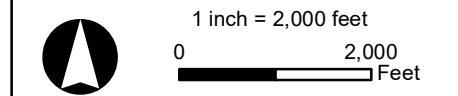
**FIGURE 3b**  
Watershed Boundaries  
Jurisdictional Delineation  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, CA



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Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



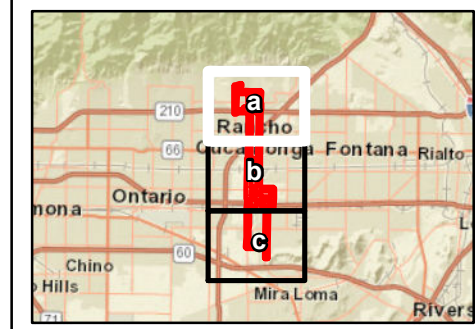
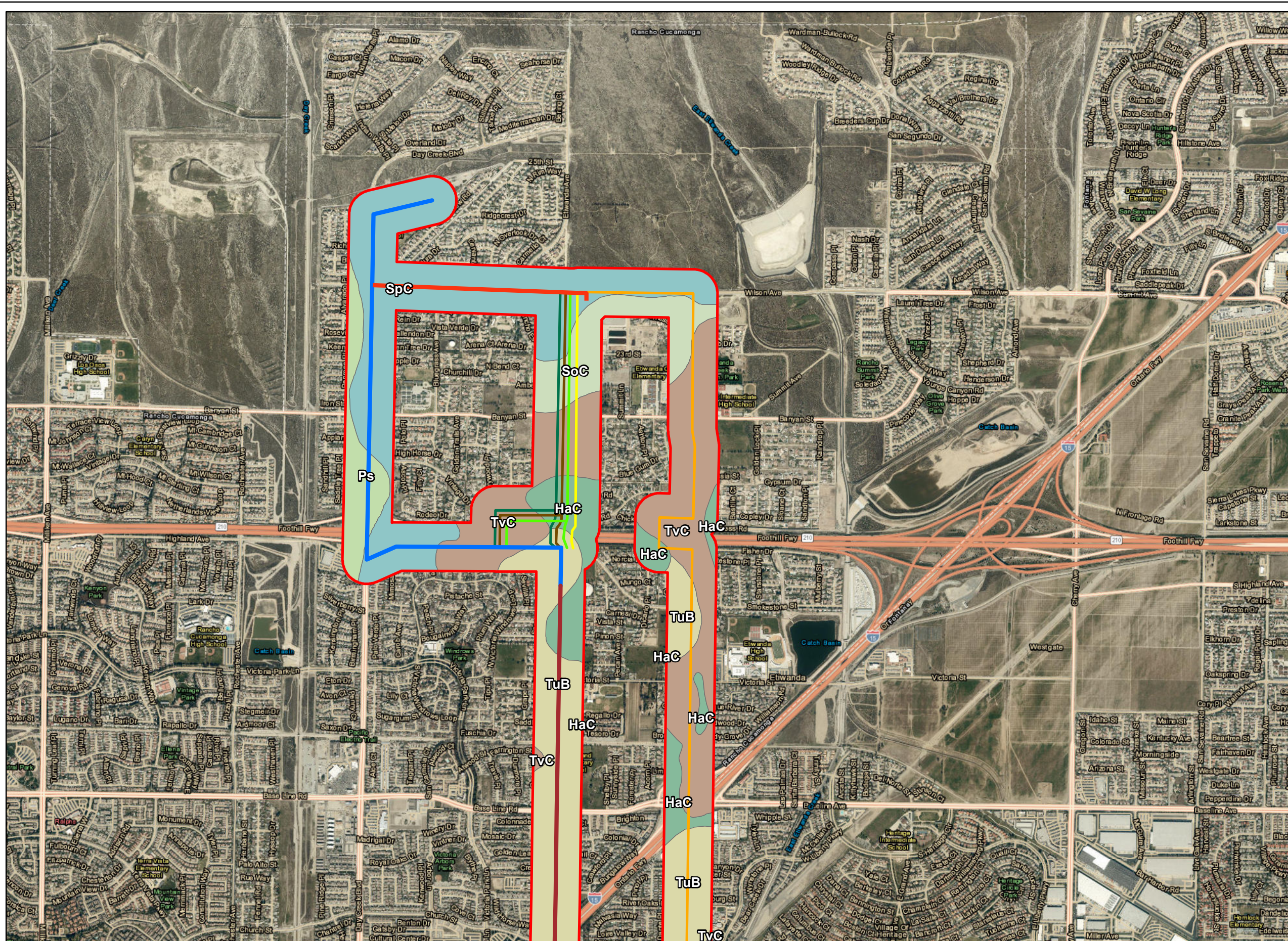
-  ACOE
-  CDFW
-  Chino Creek Watershed (1807020307)
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- Recommended Alignment**
-  Phase 1
- Optional Alignments**
-  Option A
-  Project Alignment (500ft Buffer)



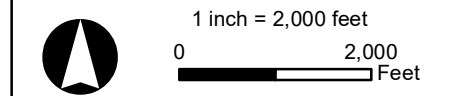
**FIGURE 3c**  
 Watershed Boundaries  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, CA



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 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
 GIS User Community  
 Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,



- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Soils**
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- Ps - Portola loam, moderately well drained variant
- SoC - Sobrante loam, 2 to 15 percent slopes
- SpC - Soboba stony loamy sand, 2 to 9 percent slopes
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TvC - Tretten fine sandy loam, 3 to 15 percent slopes

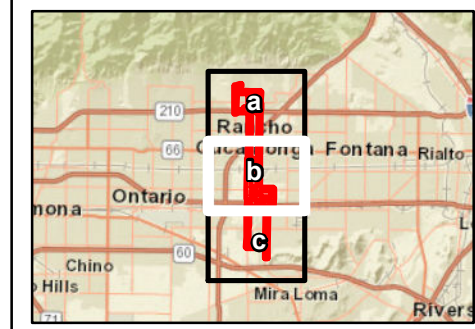
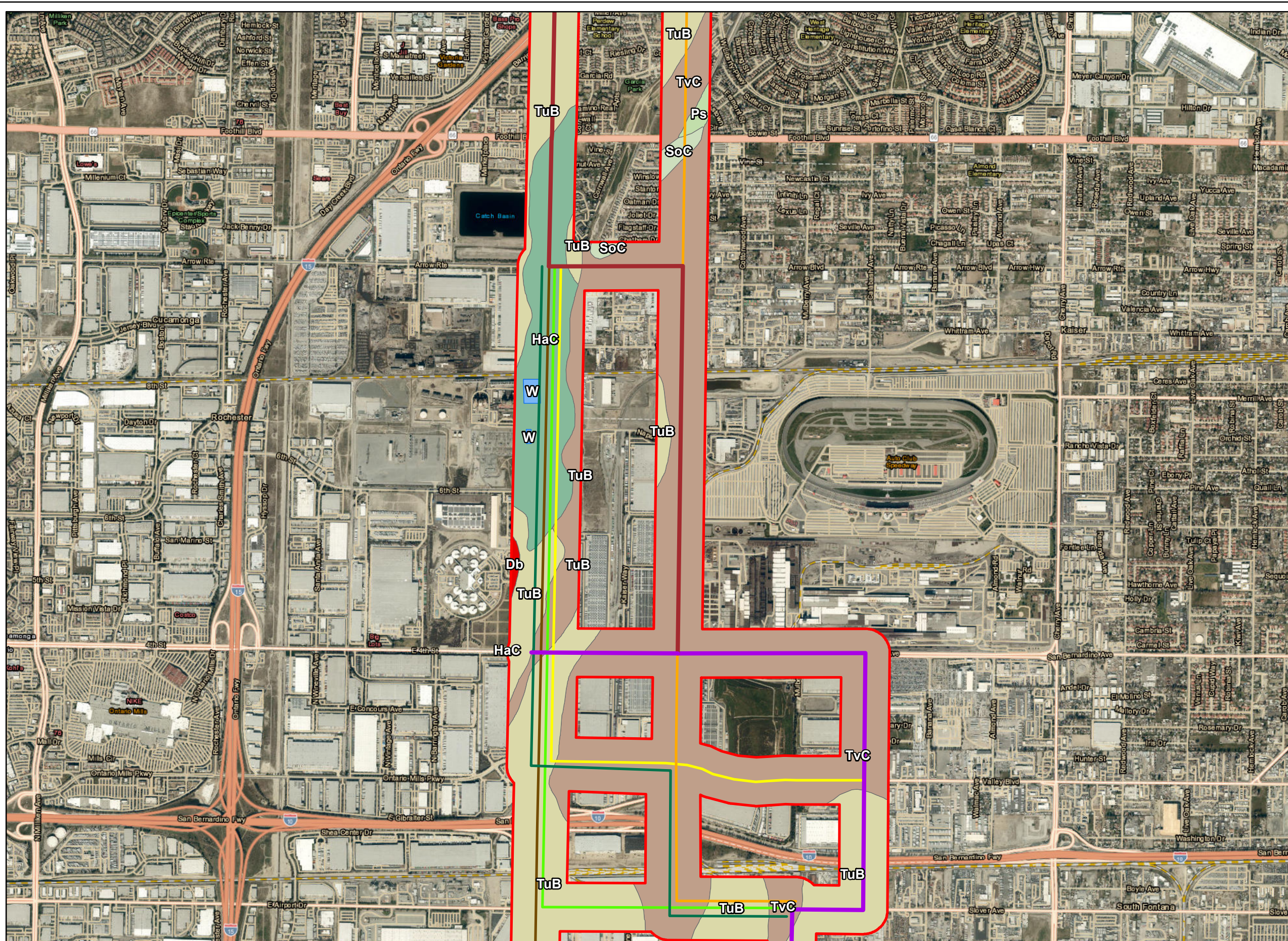


**FIGURE 4a**  
Soil Types  
Jurisdictional Delineation  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.

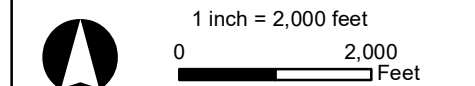


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Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P,





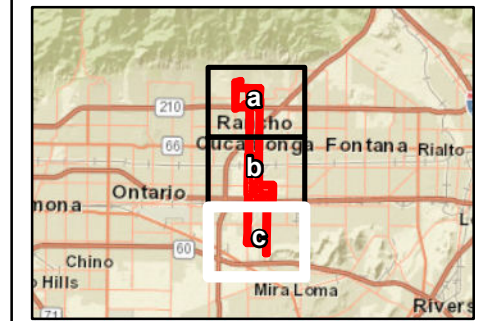
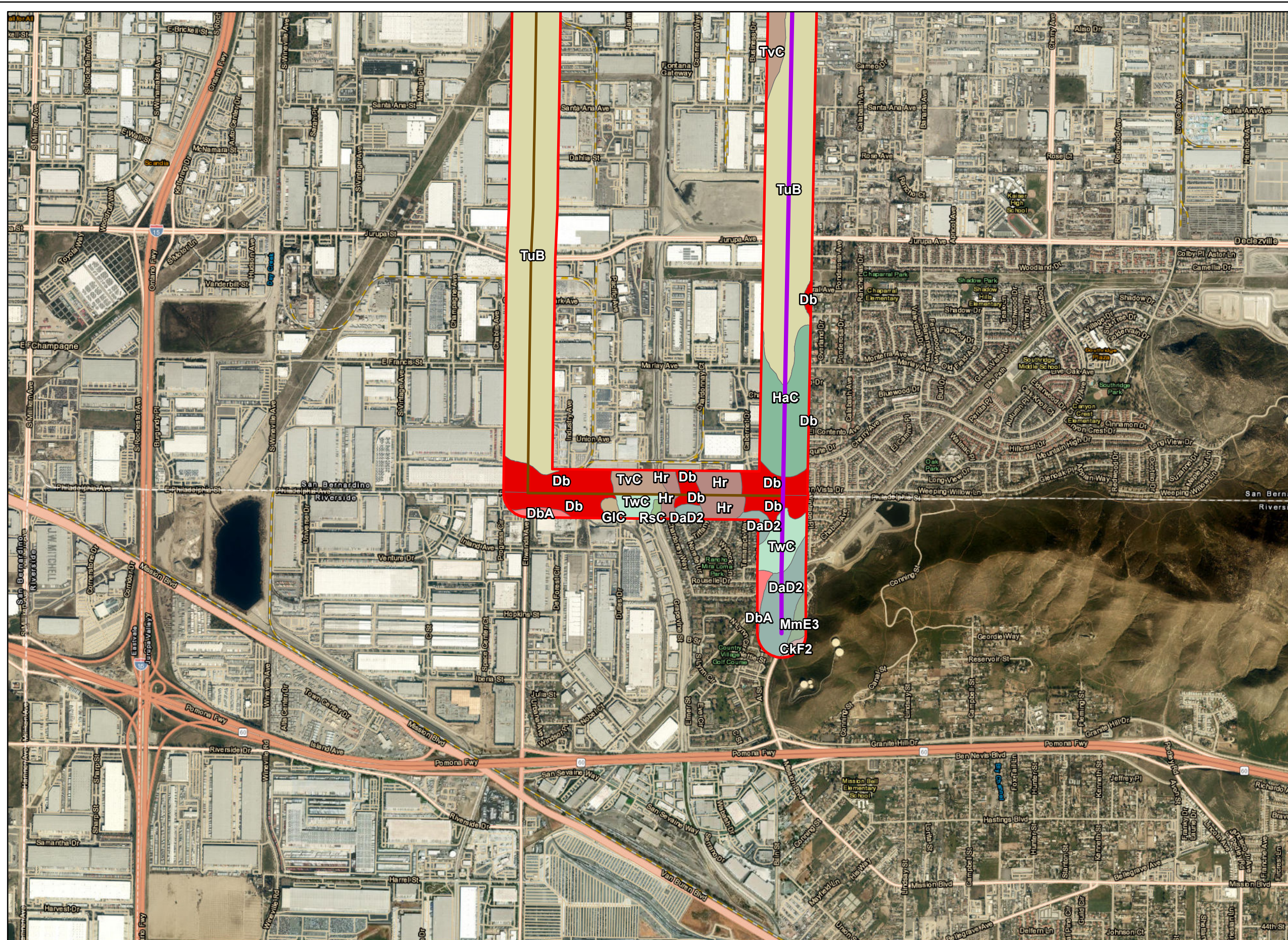
- Project Alignment (500ft Buffer)
- Recommended Alignment**
- Phase 1
- Phase 2
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Soils**
- Db - Delhi fine sand
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- Ps - Portola loam, moderately well drained variant
- SoC - Sobrante loam, 2 to 15 percent slopes
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TVC - Tretten fine sandy loam, 3 to 15 percent slopes
- W - Water



**FIGURE 4b**  
 Soil Types  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
 San Bernardino and  
 Riverside Counties, Ca.



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Project Alignment (500ft Buffer)

**Recommended Alignment**

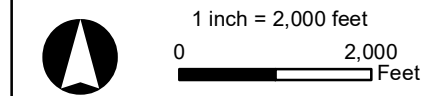
Phase 1

**Optional Alignments**

Option A

**Soils**

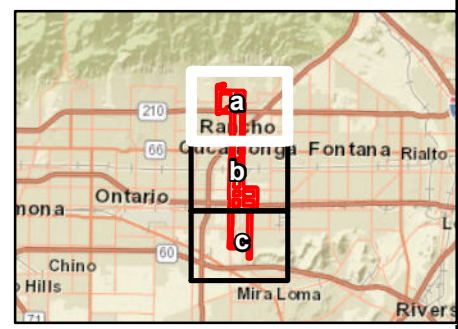
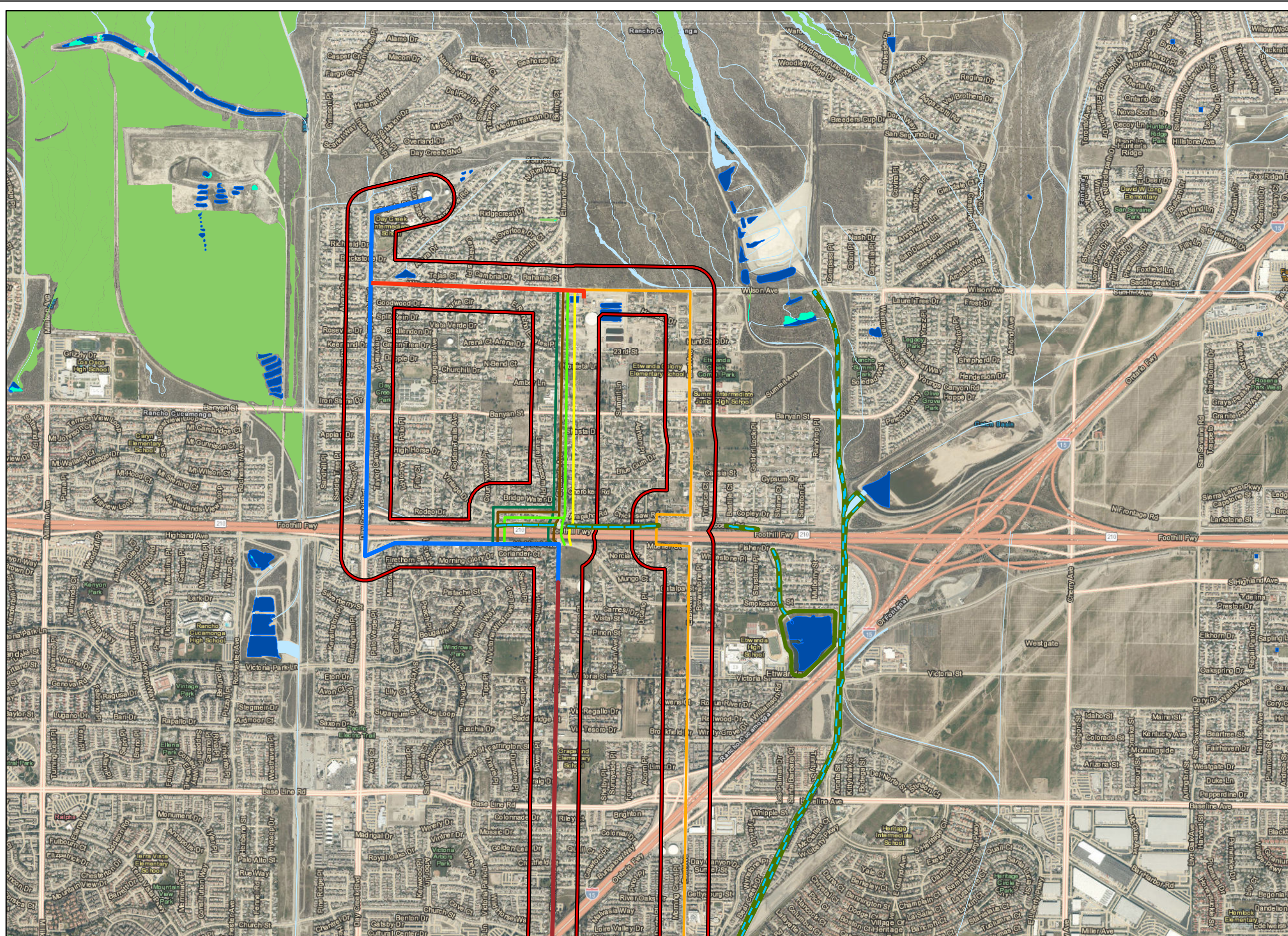
- CkF2 - Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded
- DaD2 - Daulton rocky silt loam, 8 to 30 percent slopes, eroded
- Db - Delhi fine sand
- DbA - Delhi loamy fine sand, 0 to 3 percent slopes
- GIC - Gorgonio loamy sand, deep, 2 to 8 percent slopes
- HaC - Hanford coarse sandy loam, 2 to 9 percent slopes
- HIA - Hilmar loamy very fine sand, 0 to 2 percent slopes
- Hr - Hanford fine sandy loam, hard substratum
- MmE3 - Miramar coarse sandy loam, steep, severely eroded
- RSC - Rincon silty clay loam, 2 to 9 percent slopes, MLRA 14
- TuB - Tuscan cobbly loam, 1 to 5 percent slopes
- TvC - Tretten fine sandy loam, 3 to 15 percent slopes
- TWC - Tujunga gravelly loamy sand, 0 to 8 percent slopes



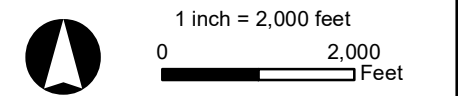
**FIGURE 4c**  
Soil Types  
Jurisdictional Delineation  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, Ca.



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
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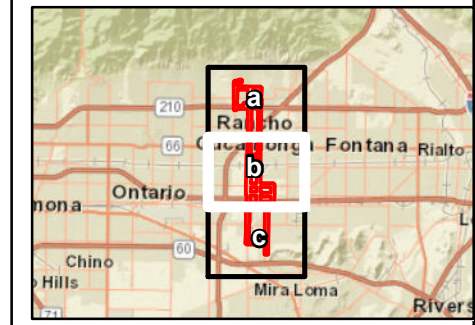
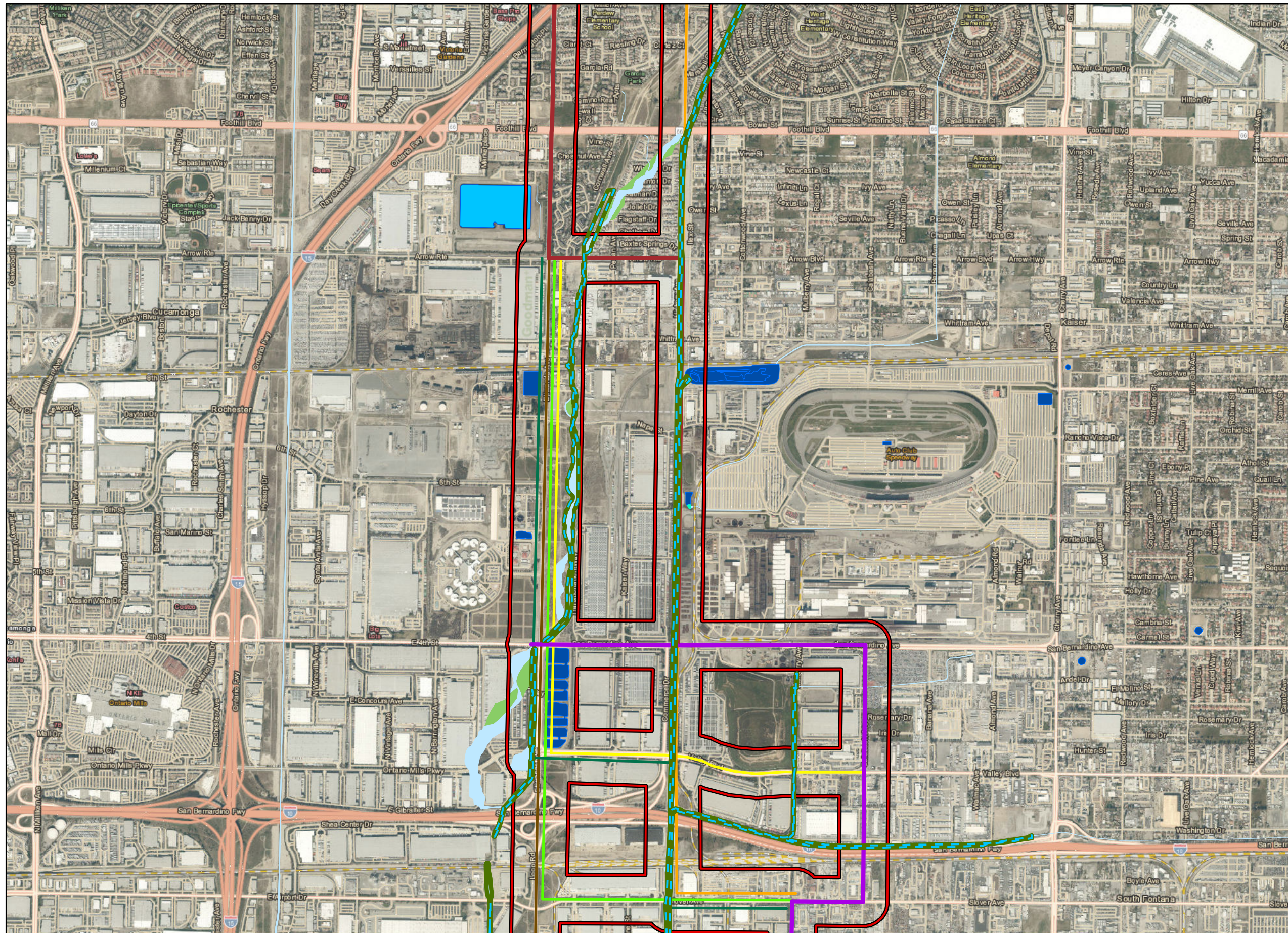
- ACOE
- CDFW
- National Wetlands Inventory**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine
- Recommended Alignment**
- Phase 2
- Phase 3
- Phase 4
- Optional Alignments**
- Option A
- Option B
- Option C
- Option D
- Option E
- Project Alignment (500ft)



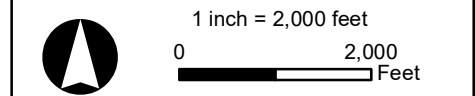
**FIGURE 5a**  
National Wetlands Inventory  
Jurisdictional Delineation  
Etiwanda Pipeline Project  
San Bernardino and  
Riverside Counties, CA



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Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
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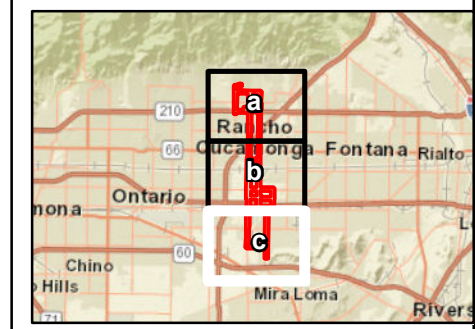
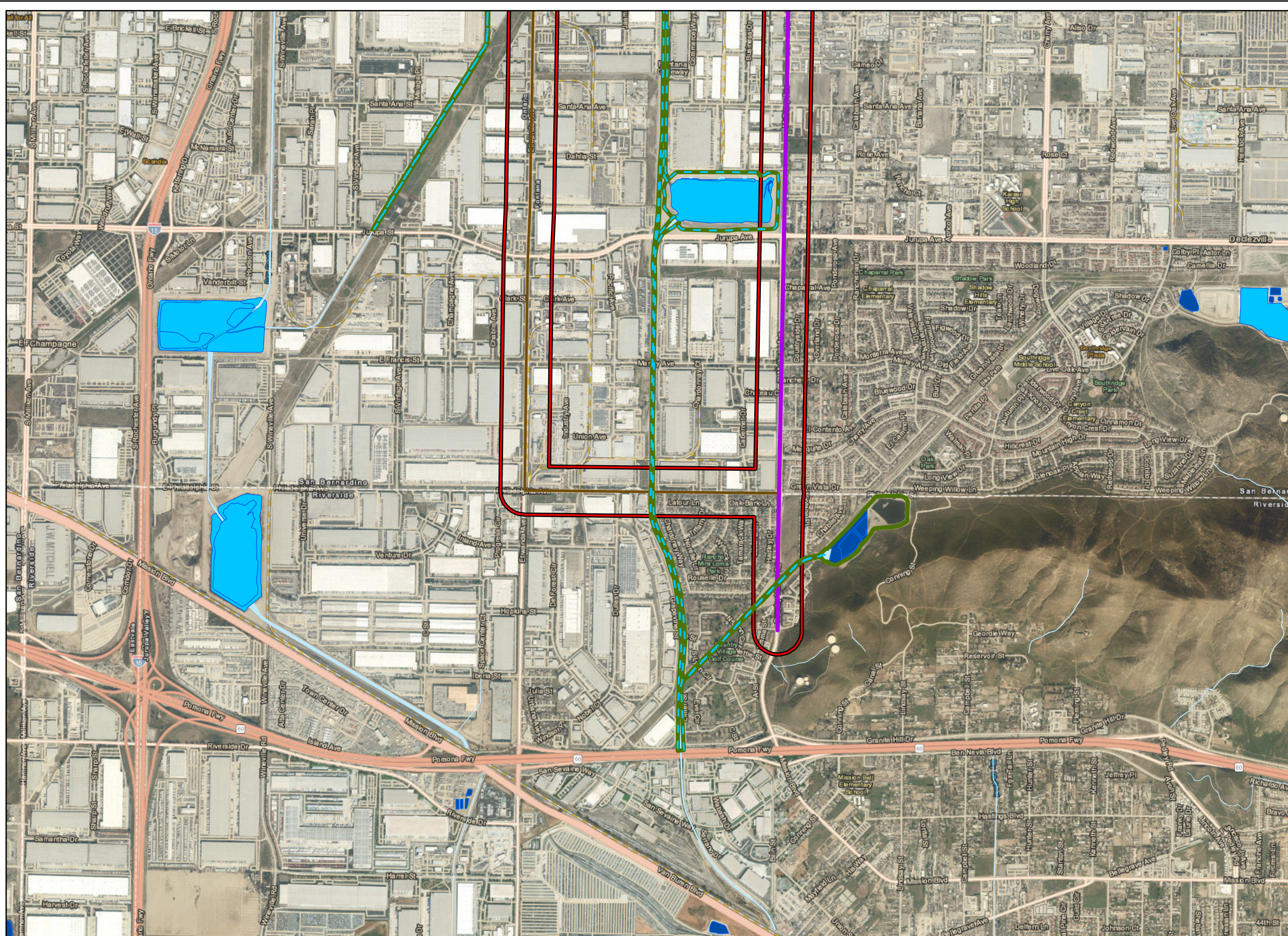
- ACOE
- CDFW
- National Wetlands Inventory**
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
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- Lake
- Riverine
- Recommended Alignment**
- Phase 1
- Phase 2
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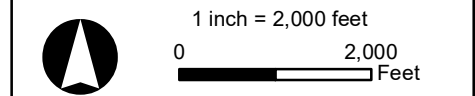
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Etiwanda Pipeline Project  
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Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the  
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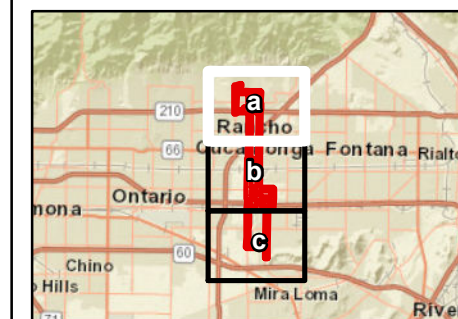
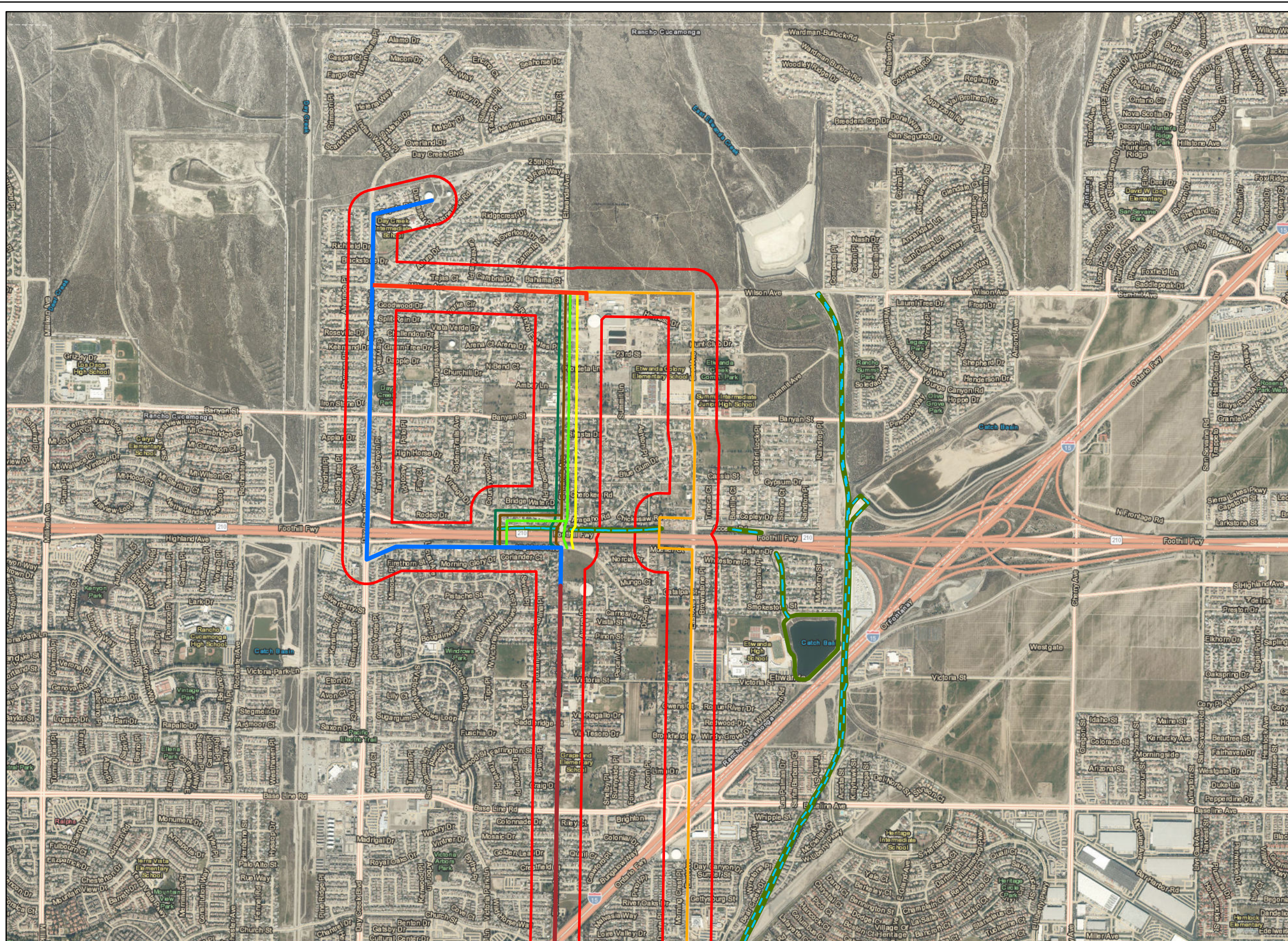
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- CDFW
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- Freshwater Emergent Wetland
- Freshwater Pond
- Lake
- Riverine
- Recommended Alignment**
- Phase 1
- Optional Alignments**
- Option A
- Project Alignment (500ft)



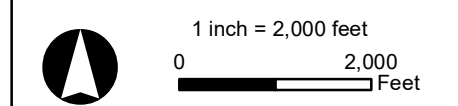
**FIGURE 5c**  
 National Wetlands Inventory  
 Jurisdictional Delineation  
 Etiwanda Pipeline Project  
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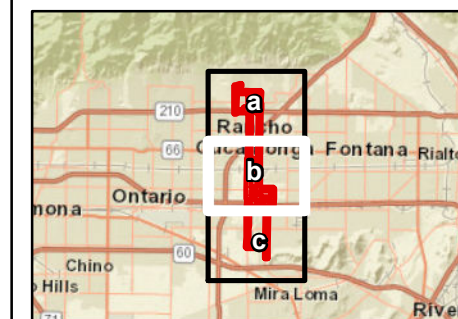
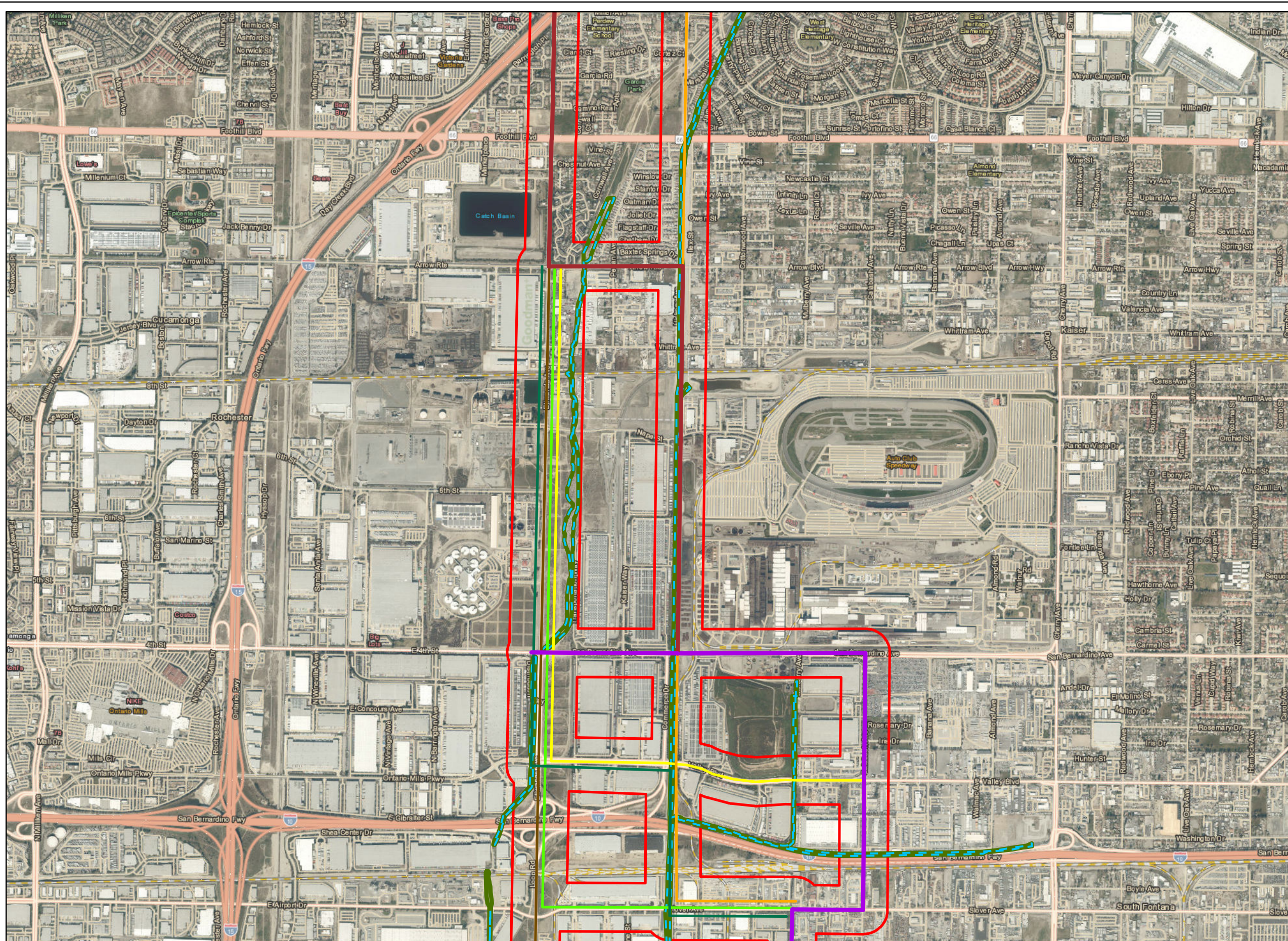
- Jurisdictional Areas**
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  - CDFW
- Recommended Alignment**
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  - Phase 4
- Optional Alignments**
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  - Option B
  - Option C
  - Option D
  - Option E
  - Project Alignment (500ft Buffer)



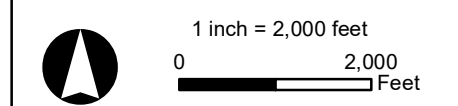
**FIGURE 6a**  
 Jurisdictional Delineation  
 Biological Assessment  
 Etiwanda Pipeline Project  
 San Bernardino and  
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Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar  
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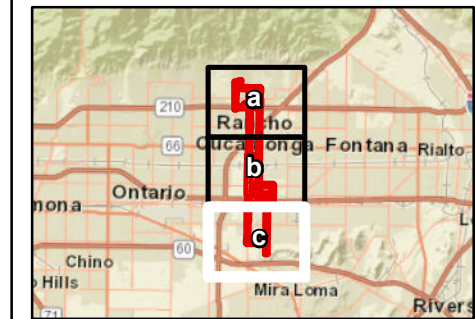
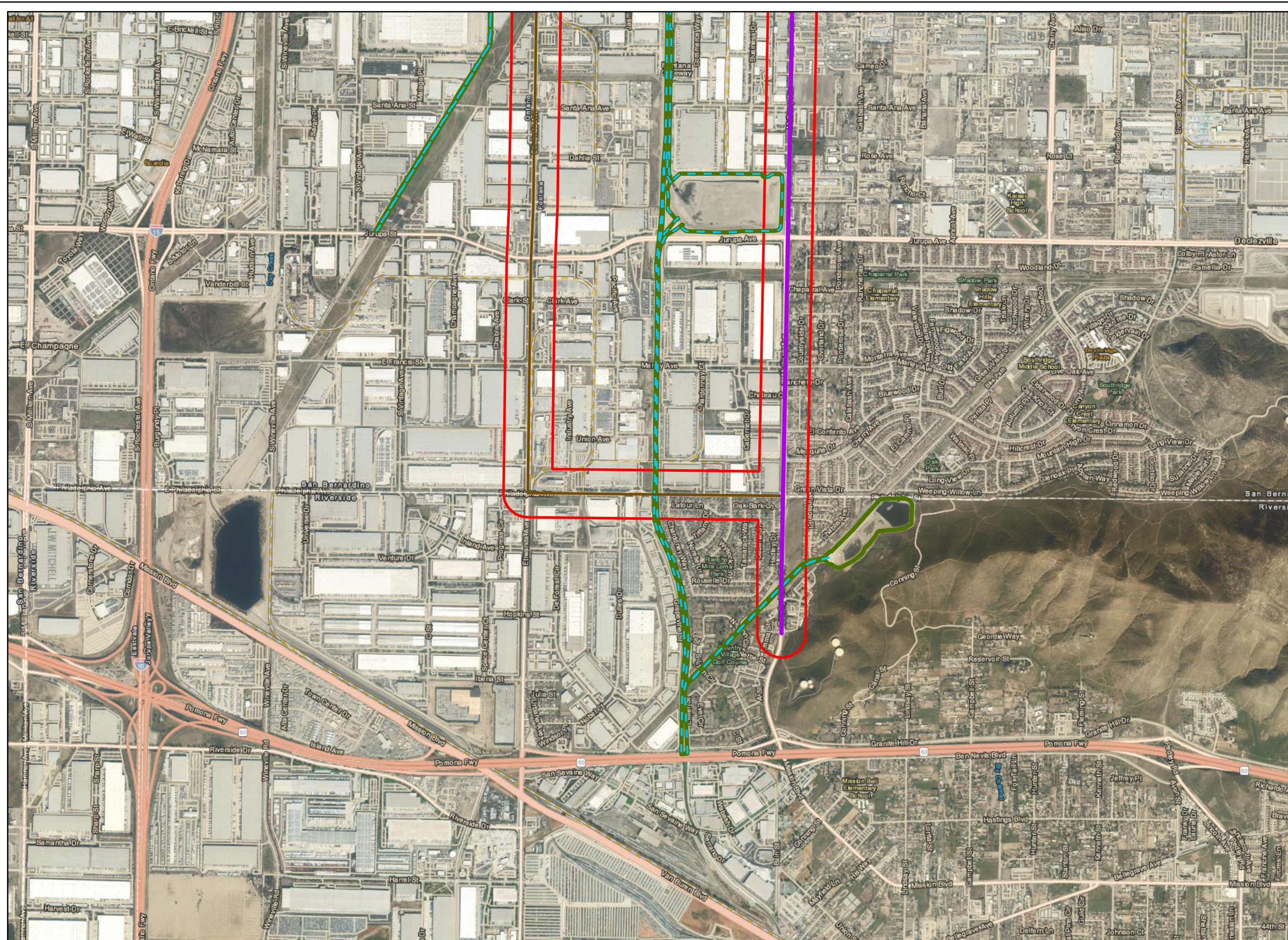
- Jurisdictional Areas**
- - - ACOE
  - CDFW
- Recommended Alignment**
- Phase 1
  - Phase 2
  - Phase 3
  - Phase 4
- Optional Alignments**
- Option A
  - Option B
  - Option C
  - Option D
  - Option E
- Project Alignment (500ft Buffer)



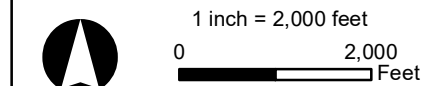
**FIGURE 6b**  
 Jurisdictional Delineation  
 Biological Assessment  
 Etiwanda Pipeline Project  
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**FIGURE 6c**  
 Jurisdictional Delineation  
 Biological Assessment  
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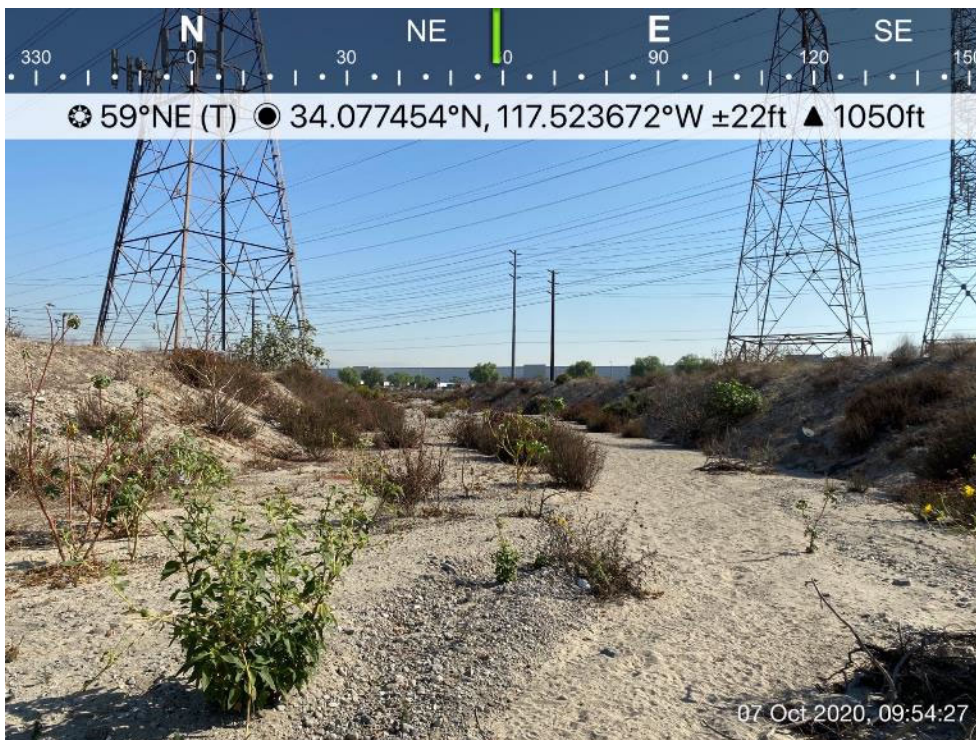


## **APENDIX B**

### **SITE PHOTOGRAPHS**



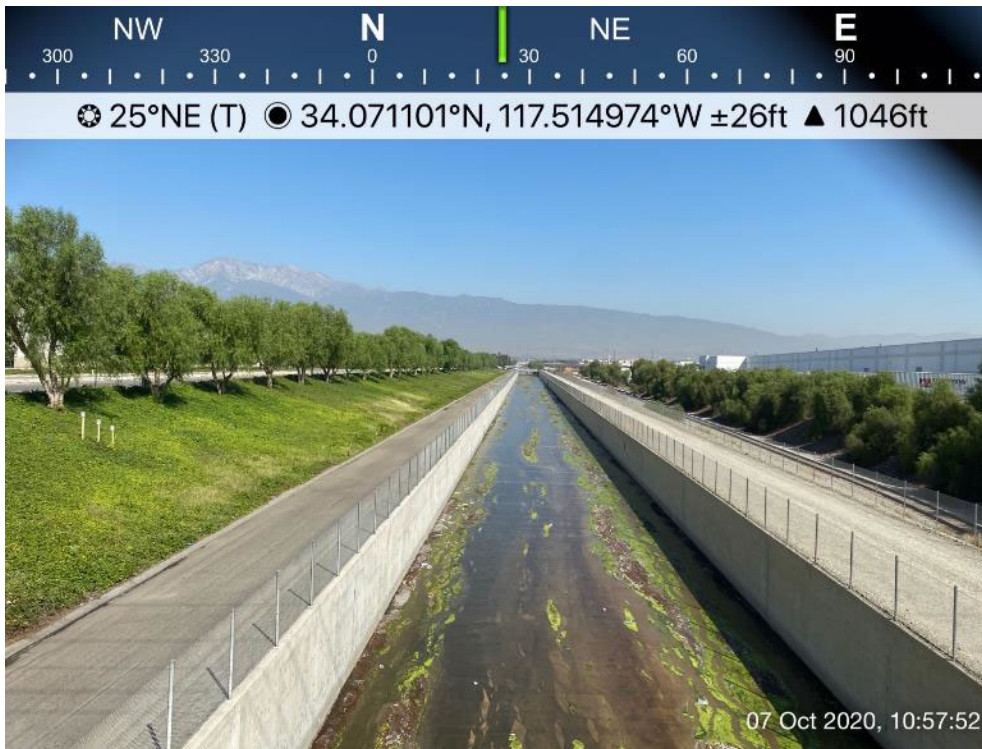
**Photo 1.** View of unnamed Drainage looking east (upstream) north of SR 210.



**Photo 2.** View of Etiwanda Creek looking upstream northeast of the corner of Etiwanda Avenue and San Bernardino Avenue.



**Photo 3.** Looking south (downstream) at Etiwanda Creek southwest of Etiwanda Ave and 4<sup>th</sup> St.



**Photo 4.** Looking north (upstream) at concrete Drainage from 4<sup>th</sup> Street north of I-10.



**Photo 5.** View of concrete drainage downstream



**Photo 6.** View of concrete Drainage looking downstream Country Village Road north of SR 60.



**Photo 7.** Looking southwest (upstream) at Caltrans flood control Drainage north of I-10.



**Photo 8.** Looking northeast showing large flood control basin north of Jurupa Avenue.

**APPENDIX C**  
**JURISDICTIONAL DELINEATION FORMS**

**APPENDIX C.1**  
**Cultural Resources Investigation**

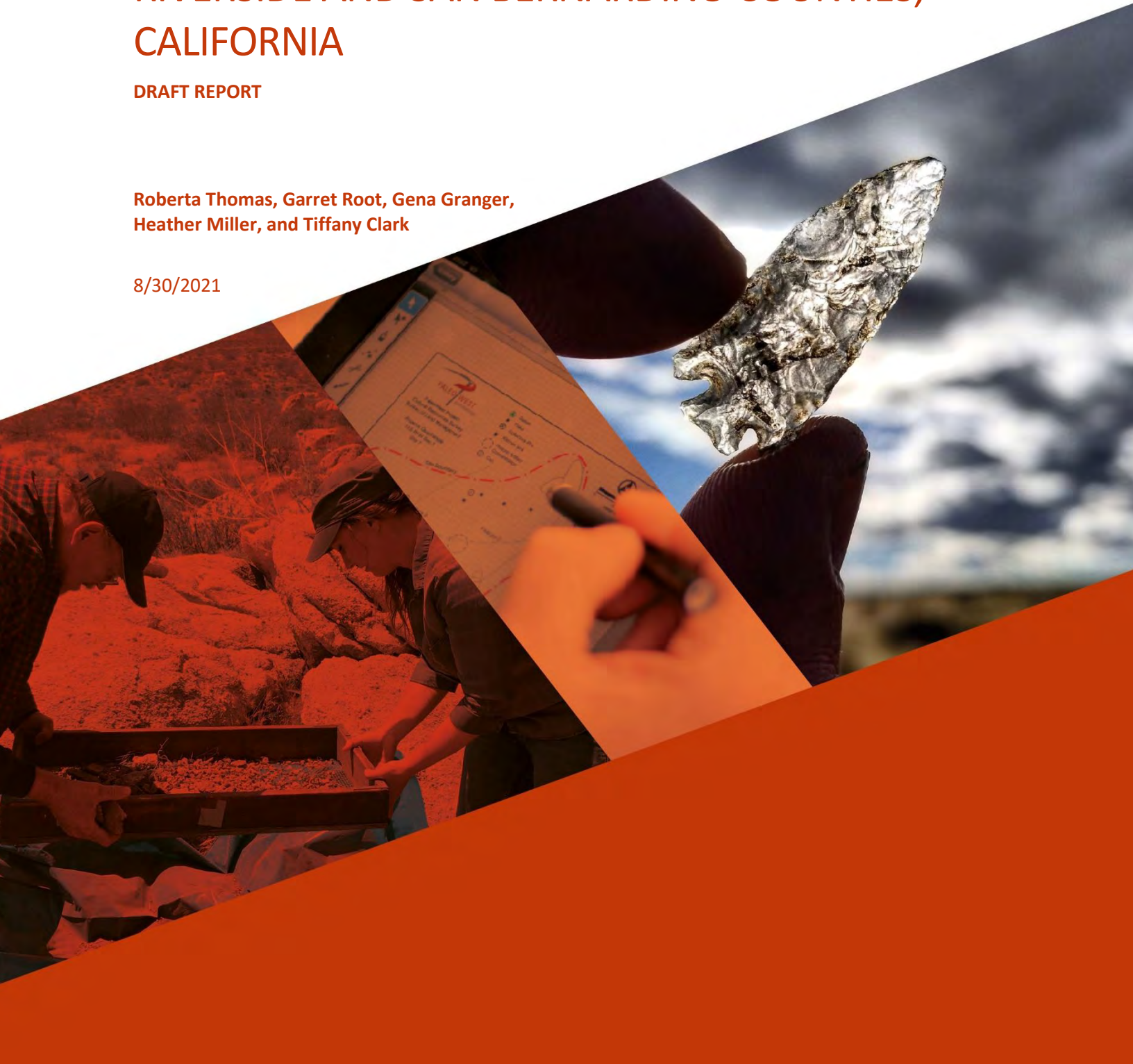


# CULTURAL RESOURCES INVESTIGATION IN SUPPORT OF THE JURUPA COMMUNITY SERVICE DISTRICT'S ETIWANDA PIPELINE PROJECT, RIVERSIDE AND SAN BERNARDINO COUNTIES, CALIFORNIA

DRAFT REPORT

Roberta Thomas, Garret Root, Gena Granger,  
Heather Miller, and Tiffany Clark

8/30/2021





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**Prepared by:**

Roberta Thomas, M.A., RPA, Garret Root, M.A., Gena Granger, M.A., RPA,  
Heather Miller, M.A., and Tiffany Clark, Ph.D., RPA

**Prepared for:**

Albert A. Webb Associates

**Technical Report No. 21-478**

**PaleoWest**

517 S. Ivy Avenue  
Monrovia, California 91016  
(626) 408-8006

**August 30, 2021**

Keywords: CEQA Plus; Riverside County; San Bernardino County; San Sevaine Channel; UPRR (P-36-01033/CA-SBR-010330H); Foothill Boulevard/U.S. Highway 66 (P-36-002910); Base Line Road (P-36-015497); Pacific Electric Railroad (P-36-020137/CA-SBR-01904H); Kaiser Steel Mill (P-36-004131/CA-SBR-004131H); SCE transmission line (P-36-026051); prehistoric bedrock milling feature (36-033130); historical clay sewer line (36-007099); historical refuse scatter (36-007322)

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# MANAGEMENT SUMMARY

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The Jurupa Community Service District (JCSD) is proposing to install a pipeline to connect their 1110 and 980 PZ tanks located in the Jurupa Hills to either the Lloyd Michael Water Treatment Plant or the Royer-Nesbit Water Treatment Plant in Rancho Cucamonga, California. The Etiwanda Pipeline Project (Project) would include installation of the proposed pipeline extending approximately 13 miles from the JCSD's 1110 and 980 PZ tanks to one of the water treatment facilities. PaleoWest, LLC (PaleoWest) was contracted by Albert A. Webb Associates to conduct a Phase I cultural resource assessment of the Project Area of Potential Effects (APE) in compliance with the requirements of California Environmental Quality Act (CEQA)-Plus, which includes an evaluation of project impacts under CEQA, Section 106 of the National Historic Preservation Act (NHPA), and the National Environmental Policy Act in case a federal nexus is established during the project (i.e., federal funding and/or permitting).

This report summarizes the methods and results of the cultural resources investigation of the APE. This investigation included background research, communication with the Native American Heritage Commission (NAHC) and interested Native American tribal groups, development of appropriate and focused historic contexts, a survey of the APE, and evaluation of resources using the significance criteria of the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR). The purpose of the investigation was to determine the potential for the Project to impact historical resources under CEQA and effects to historic properties under Section 106.

Literature reviews and records searches were conducted at the South Central Coastal Information Center and at the Eastern Information Center of the California Historical Resource Information System. The records searches indicated that eight previously recorded resources are mapped within or appear to intersect the Project APE. These resources include one prehistoric archaeological site (bedrock milling feature [36-033130]), two historic period archaeological sites (refuse scatter [36-0073220] and sewer pipeline segment [36-007099]), and five historic period built-environment resources (Kaiser Steel Mill [36-004131], Union Pacific Railroad [UPRR] [36-010330], Baseline Avenue [36-015497], Pacific Electric Railroad [36-020137], and a Southern California Edison [SCE] transmission line [36-026051]). The segment of the UPRR was previously recommended eligible for listing on the CRHR and the NRHP, while Baseline Avenue, the Pacific Electric Railroad, and the SCE transmission line were all previously recommended or determined as ineligible for listing in the NRHP and CRHR.

As part of the background research, PaleoWest also requested a search of the Sacred Lands File (SLF) from the NAHC. Results of the SLF search indicate that there is a known Native American cultural resource(s) within the immediate vicinity of the Project APE and that the Gabrieleno Band of Mission Indians – Kizh Nation should be contacted for additional information. The NAHC suggested contacting 16 additional individuals representing 11 Native American tribal groups to find out if they have additional information about the Project area. The 12 recommended tribal groups were contacted. To date, nine responses have been received. It is assumed that the JCSD and the State Water Resources Control Board will be responsible for conducting Assembly Bill 52 and Section 106 consultation, respectively with local Native American groups.

PaleoWest conducted a survey of the proposed Project APE from July 27-29, 2021. During the survey, an attempt was made to locate the eight previously recorded resources to assess their current condition and relation to the proposed Project activities. No evidence of the three archaeological sites (36-007099, 36-007322, and 36-033130) was observed within the Project APE. No new archaeological sites were identified during the survey.

The five previously recorded built-environment resources were also revisited during the survey. Although Base Line Road (P-36-015497) was unchanged since its last recordation, two of the previously recorded resources (Kaiser Steel Mill and the Pacific Electric railroad alignment) were no longer extant. The survey also determined that both the SCE transmission line and UPRR are located adjacent to, but outside of, the Project APE. Finally, two new identified historic built-environment resources, the San Sevaine Channel and a segment of the former U.S. Highway 66 (P-36-002910) (currently Foothill Boulevard), were documented within the APE.

PaleoWest evaluated both of these newly identified resources, along with Base Line Road (P-36-015497), as part of the cultural resources assessment. Results of the evaluations found that none of the resources appear to meet eligibility criteria for listing in the NRHP or CRHR. As such, no further management is recommended for these resources. Additionally, because the SCE transmission line and UPRR lie outside of the APE, neither of these resources is expected to be impacted by the Project.

Sediments throughout the APE have been extensively disturbed by the construction of roadways and flood control channels, as well as the installation of underground utilities. Therefore, it is unlikely that intact prehistoric archaeological deposits would be encountered in the APE. The historic period sewer line located along Etiwanda Avenue that was previously identified suggests that portions of the APE may be sensitive for buried historic period infrastructural remains. Underground utility replacement and improvement projects that have taken place within the APE over the last several decades along Etiwanda Avenue have likely impacted these early infrastructure systems. However, it is possible that portions of these systems are still extant.

PaleoWest recommends that initial Project-related ground-disturbing activities along Etiwanda Avenue be observed by an archaeological monitor. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for NRHP and CRHR eligibility. If monitoring of the initial ground-disturbing activities indicates there is a low potential for encountering intact historic-era infrastructural systems within the APE, monitoring activities may be reduced or halted at the discretion of the qualified archaeologist.

Based on these findings, PaleoWest recommends a finding of *less than significant impacts to historical resources with mitigation incorporated* under CEQA and *no adverse effects to historic properties* under Section 106 of NHPA.

# 1.0 INTRODUCTION

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The Jurupa Community Service District (JCSD) is proposing to install a pipeline to connect the JCSD's 1110 and 980 PZ tanks located in the Jurupa Hills to either the Lloyd Michael Water Treatment Plant (LMWTP) or the Royer-Nesbit Water Treatment Plant (RNWTP) in the city of Rancho Cucamonga, Riverside and San Bernardino Counties, California. The Etiwanda Pipeline Project (Project) would include installation of the proposed pipeline extending approximately 13 miles (mi) from the JCSD's 1110 and 980 PZ tanks to one of the water treatment facilities. PaleoWest, LLC (PaleoWest) was contracted by Albert A. Webb Associates to conduct a Phase I cultural resource assessment of the Project's Area of Potential Effects (APE) in accordance with California Environmental Quality Act (CEQA)-Plus standards for compliance with CEQA, the National Environmental Quality Act, and Section 106 of the National Historic Preservation Act (NHPA) (Section 106).

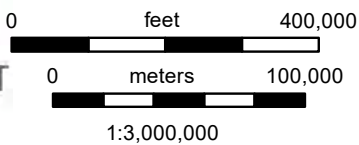
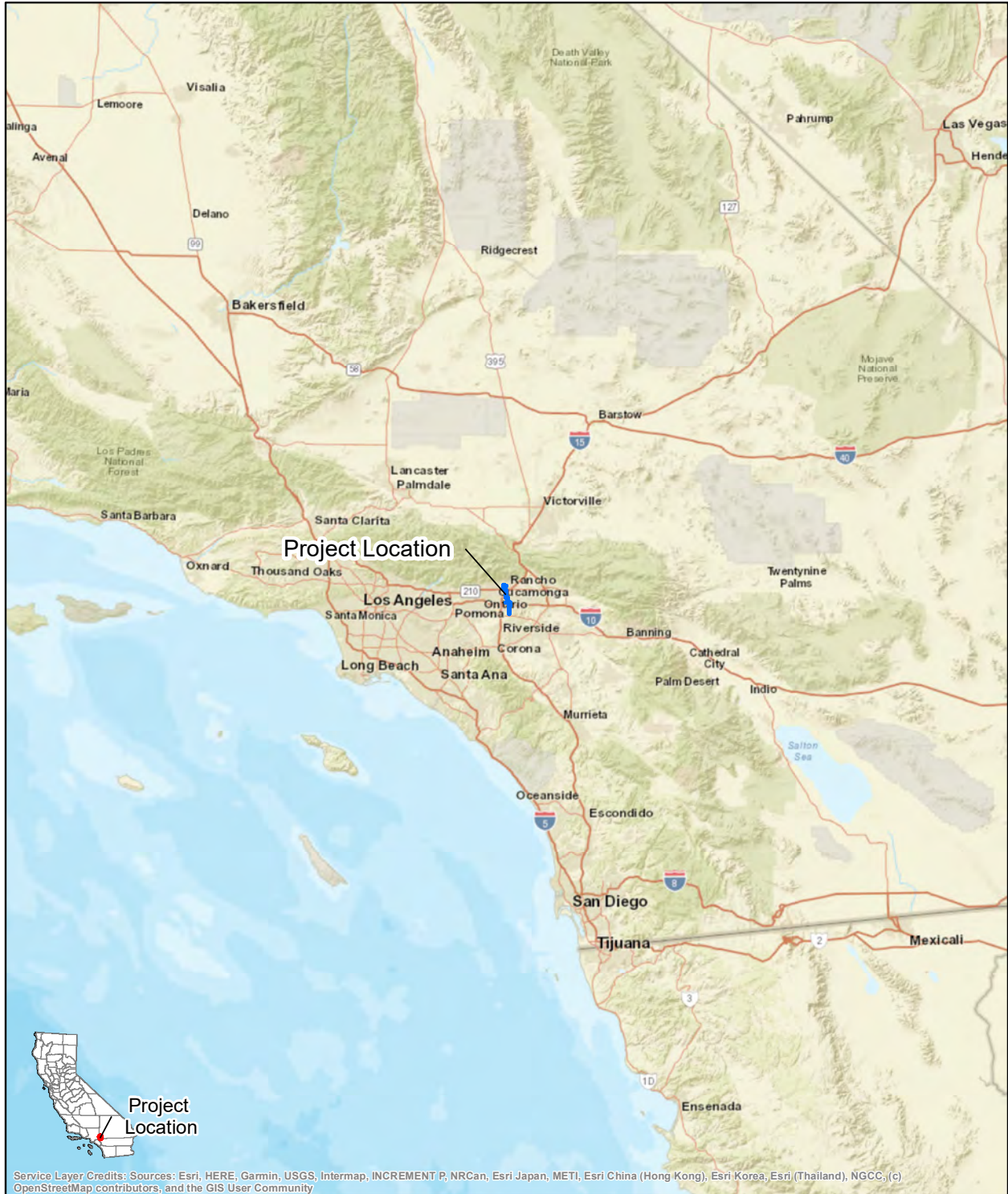
JCSD is the Lead Agency for the purposes of CEQA. PaleoWest understands that JCSD is applying for State Revolving Fund financing for the Project which necessitates compliance with NEPA and Section 106. The State Water Resources Control Board is the Lead Agency for the purposes of Section 106 and NEPA.

## 1.1 PROJECT LOCATION AND DESCRIPTION

The estimated length of the Etiwanda Pipeline will either be 70,420 or 68,600 linear feet (LF), depending on the final alignment and the selected treatment plant (LMWTP or RNWTP). The Etiwanda Pipeline alignment traverses through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga (Figure 1-1). The Project APE is situated within Sections 20, 28, 29, 32, and 33, Township 1 North, Range 6 West; Sections 4, 5, 8, 9, 15-17, 20-22, 27, 28, 33, and 34, Township 1 South, Range 6 West; and Sections 3 and 4, Township 2 South, Range 6 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Cucamonga Peak and Guasti, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangles (Figure 1-2). The elevation of the Project area is approximately 1,844 feet above mean sea level (amsl) at the northern extent of the alignment with a gradually decrease as the alignment moves south. The elevation at its southern terminus is approximately 811 amsl.

The Etiwanda Pipeline will be a 36-inch diameter welded steel transmission pipeline, except for the 20-inch diameter segment to Point of Connection (POC) No. 1. The Etiwanda Pipeline is proposed to be constructed in three phases from south to north.

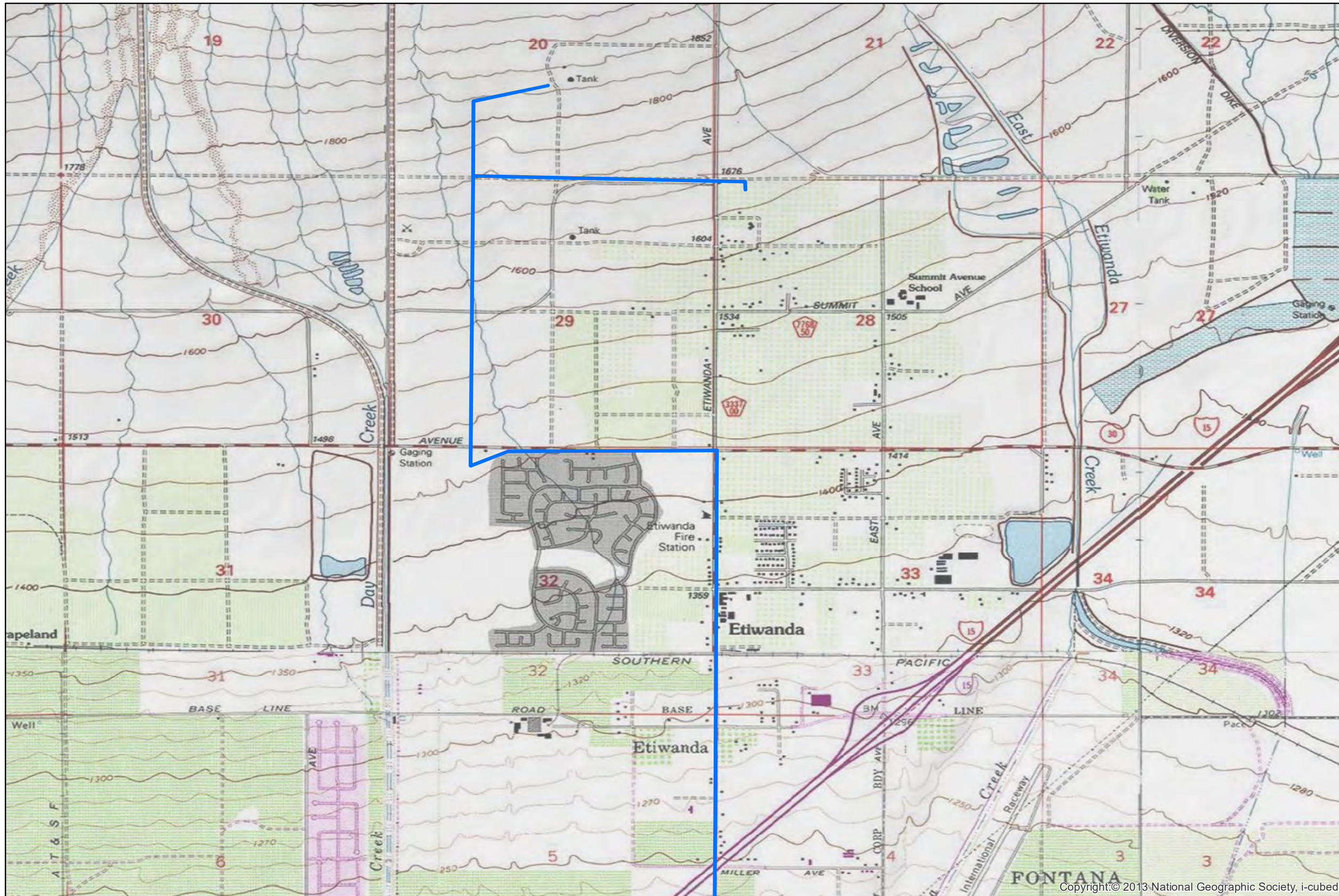
Phase I will be approximately 32,000 LF in length commencing at an existing JCSD 30-inch diameter pipeline approximately 1,000 LF south of the access road to JCSD's 1110 and 980 PZ tanks located in the Jurupa Hills. The Phase I Pipeline will connect to an existing Cucamonga Valley Water District (CVWD) water pipeline in Fourth Street approximately 2,450 feet (ft) west of the intersection of Fourth Street/San Bernardino Avenue/Etiwanda Avenue in the city of Rancho Cucamonga (referred to as Point of Connection or POC #1). Phase I of the Etiwanda Pipeline will be located within or along Country Village Road, Mulberry Avenue, Slover Avenue, Calabash Avenue, San Bernardino Avenue, and Fourth Street traversing through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga. Phase I construction will require crossings at: the Riverside County Flood Control and Water Conservation District Declez Channel at Country Village Road; Interstate 10 and the Union Pacific Railroad (UPRR) at Calabash Avenue; and the



**Etiwanda Pipeline Project**

**Figure 1-1  
Project Vicinity Map**

 Project APE



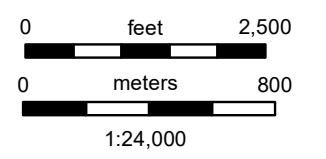
**Etiwanda Pipeline Project  
Project Location**

**Figure 1-2  
Sheet 1 of 3**

**USGS 7.5' Quadrangle(s):  
Cucamonga Peak, CA  
(1980) & Guasti, CA (1982)  
T1N R6W, Secs 20,  
28-29, & 32-33;  
T1S R6W, Secs 4-5 SBBM  
UTM Zone 11 NAD 83**

 Project APE

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(54 USC 307103)**

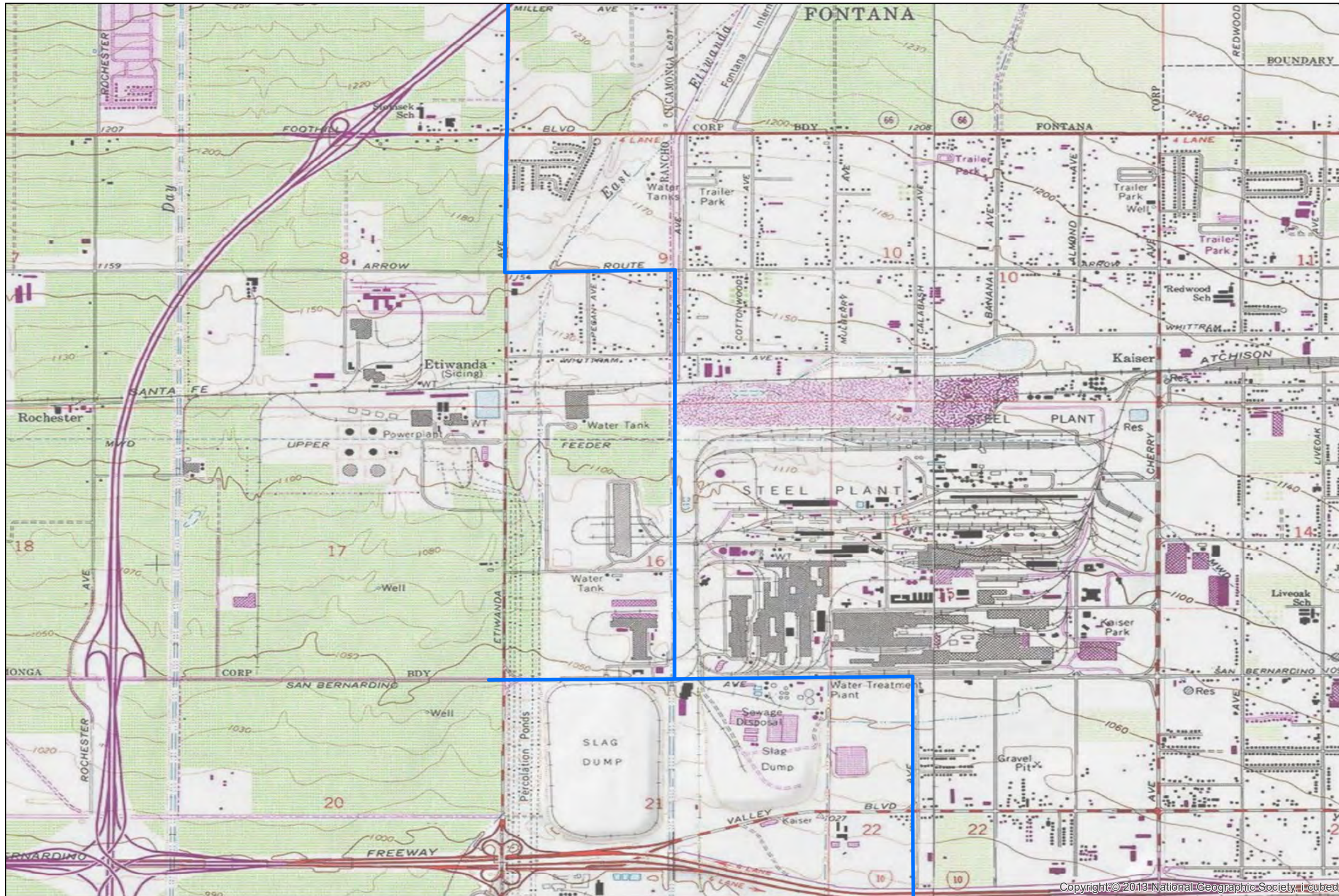


**Map Location**



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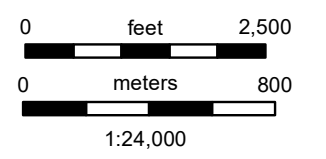
**Etiwanda Pipeline Project  
Project Location**

**Figure 1-2  
Sheet 2 of 3**

**USGS 7.5' Quadrangle(s):  
Guasti, CA (1982) T1S  
R6W, Secs 4-5, 8-9,  
15-17, & 20-22  
SBBM UTM Zone 11 NAD  
83**

Project APE

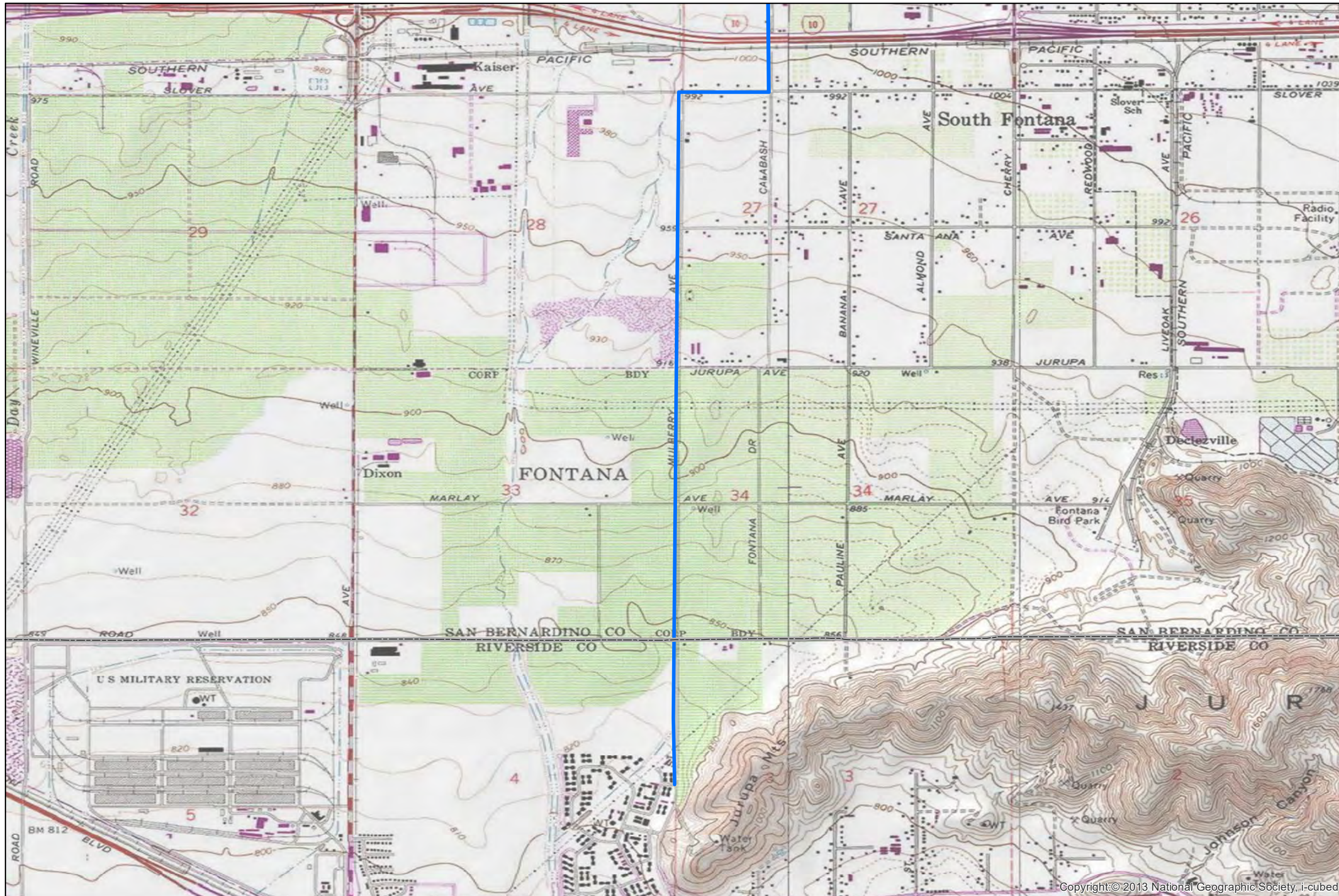
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**Map Location**





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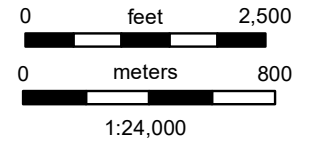
**Etiwanda Pipeline Project  
Project Location**

**Figure 1-2  
Sheet 3 of 3**

**USGS 7.5' Quadrangle(s):  
Guasti, CA (1982) T1S  
R6W, Secs 22, 27-28 &  
33-34; T2S R6W, Secs 3 &  
4 SBBM UTM Zone 11  
NAD 83**

-  Project APE
-  County Boundary

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**Map Location**



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San Sevaine Channel at Etiwanda Avenue. Construction at these crossings is proposed to be via jack-and-bore.

Etiwanda Pipeline Phase II will be approximately 23,320 LF and will connect to the Phase I Pipeline at the intersection of Fourth Street/San Bernardino Avenue/Etiwanda Avenue and continue north along the San Sevaine Channel (within San Bernardino County Flood Control right-of-way [ROW]), west in Arrow Route, north in Etiwanda Avenue to CVWD's Reservoir 2C (POC No. 2) in the city of Rancho Cucamonga. POC No. 2 is located approximately 950 ft south of Interstate 215. Phase II construction will require crossing Interstate 15. Crossing Interstate 15 is proposed to be via jack-and-bore.

Etiwanda Pipeline Phase III will be approximately 15,100 LF, assuming connection to the LMWTP. The pipeline will traverse north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, northwest in Coyote Drive to the LMWTP. If the Etiwanda Pipeline connects to the RNWTP, Phase III will be approximately 13,240 LF, with the pipeline continuing north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, and west in Wilson Avenue to the RNWTP. All of Phase III is within the city of Rancho Cucamonga. Regardless of which of the two water treatment plants (LMWTP or RNWTP) is the ultimate POC for the Etiwanda Pipeline, construction will entail crossing State Route (SR)-210 at Day Creek Boulevard. Crossing SR-210 will be either via jack-and-bore or open cut.

All phases of the Etiwanda Pipeline will include appurtenances and appurtenant structures such as manholes.

## 1.2 AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) refers to the geographic area within which the Project has the potential to directly or indirectly cause alterations to historic properties. The APE for the Project includes a 25-ft-wide pipeline alignment, which is approximately 13 mi long. The construction corridor includes areas that may be used for equipment staging and laydown areas (Figure 1-3). These additional areas are located within the paved road or road shoulder ROW along the recommended alignment. Along most of the alignment, the pipeline will be installed within a 6-7 ft wide open-cut trench. The horizontal APE for the Project encompasses approximately 39.5 acres.

The vertical APE extends from the ground surface to a maximum depth of 15 ft. Most of the Project elements are located at or below grade. Ground disturbance is not expected to exceed 7 ft below ground level along the majority of the pipeline alignment where open-cut trench activities will take place. Deeper excavations will occur at jack and bore locations with horizontal drilling occurring at a maximum depth of 15 ft below the ground surface.

## 1.3 REPORT ORGANIZATION

This report documents the results of a cultural resource investigation conducted for the proposed Project. Chapter 1 has introduced the project location and description and defined the APE. Chapter 2 states the regulatory context that should be considered for the Project. Chapter 3 synthesizes the natural and cultural setting of the Project area and surrounding region. The results of the cultural resource literature and records search conducted at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC), and the Sacred

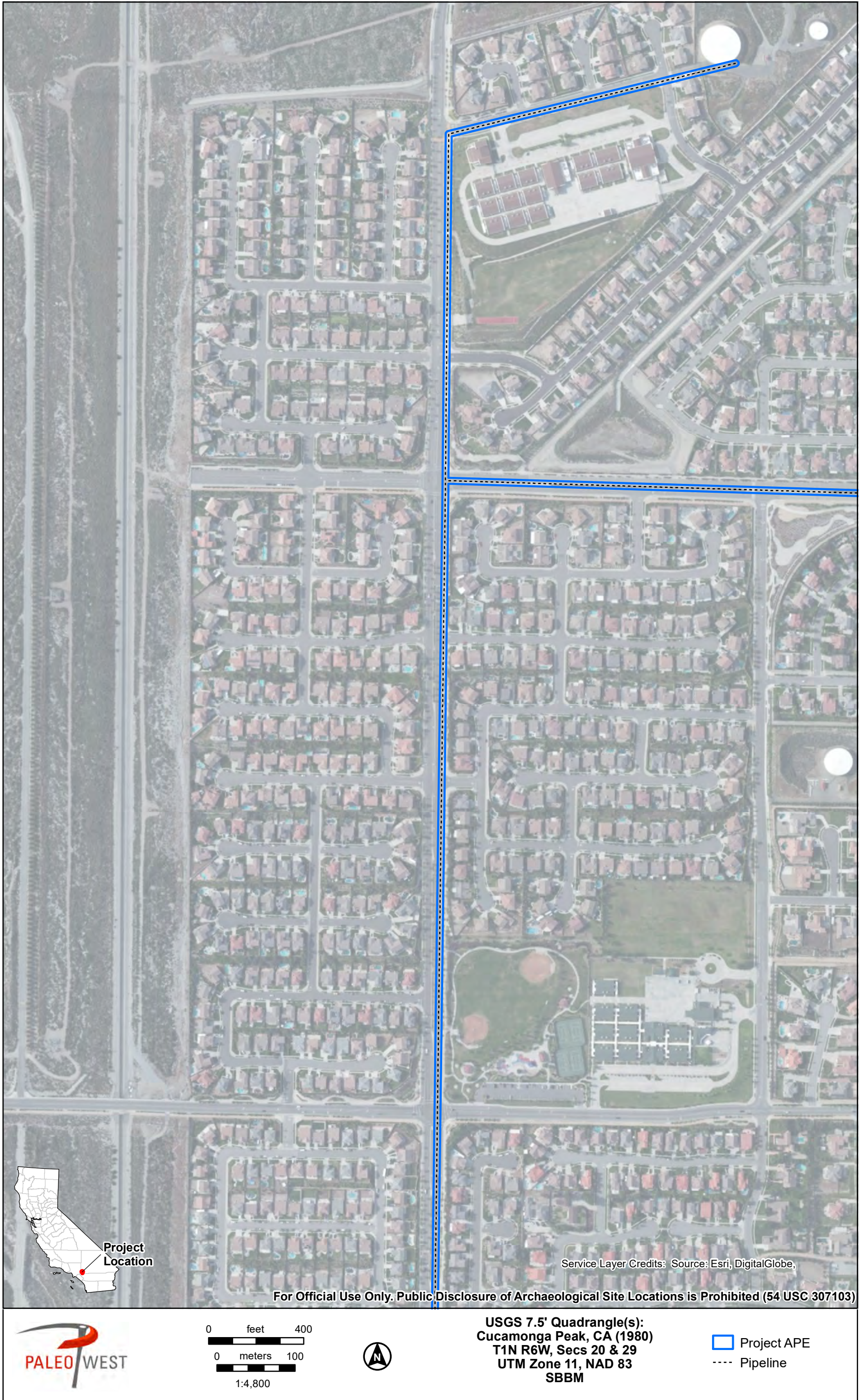


Figure 1-3. Project APE Map.

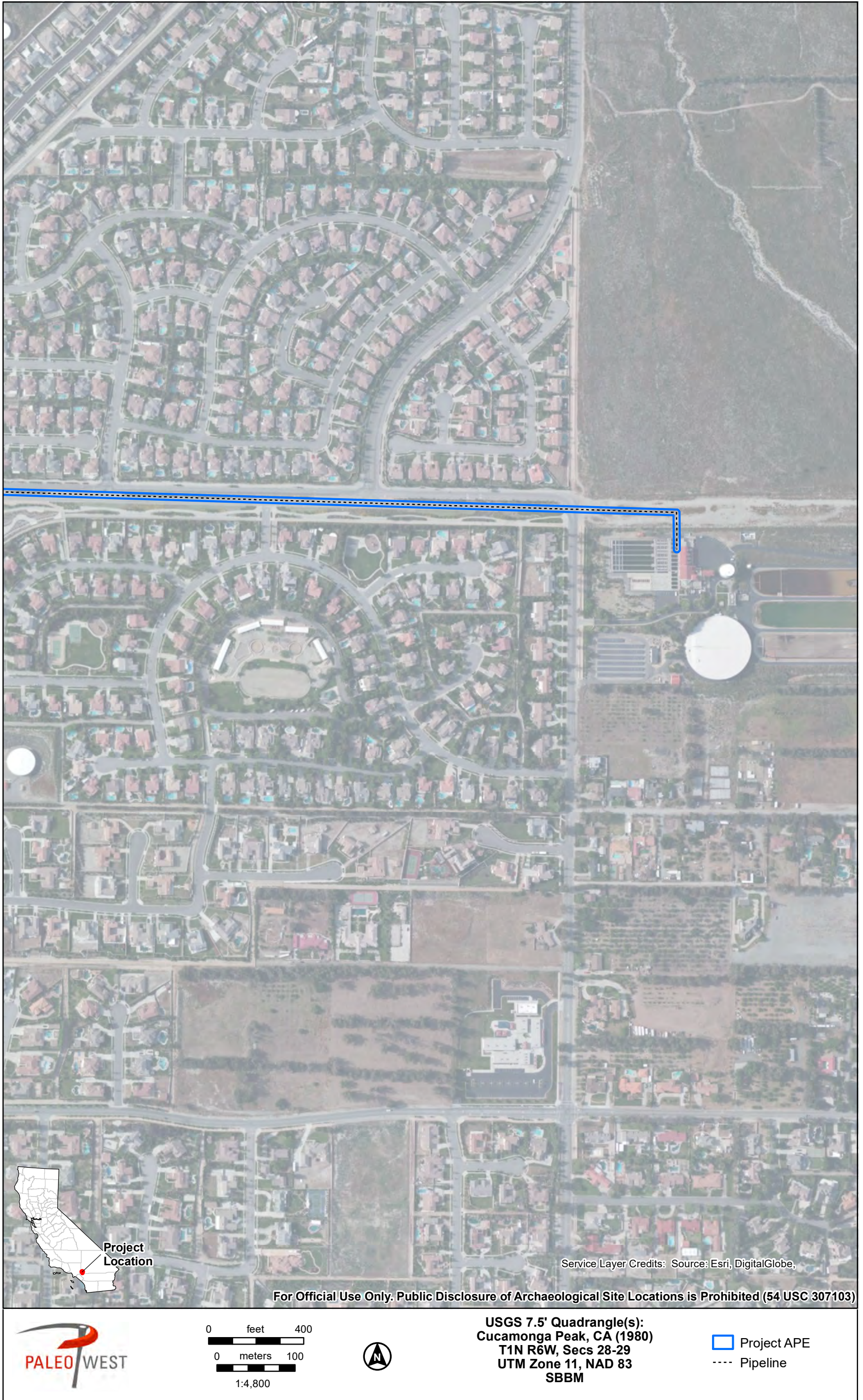


Figure 1-3. Project APE Map.



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|  |  |  |   |   |
|--|--|--|---|---|
|  | <p>0 feet 400</p> <p>0 meters 100</p> <p>1:4,800</p> |  | <p><b>USGS 7.5' Quadrangle(s):</b><br/> <b>Cucamonga Peak, CA (1980)</b><br/> <b>T1N R6W, Secs 29 &amp; 32</b><br/> <b>UTM Zone 11, NAD 83</b><br/> <b>SBBM</b></p> | <p> Project APE</p> <p> Jack-and-Bore Location</p> <p> Pipeline</p> |
|--|--|--|---|---|

Figure 1-3. Project APE Map.



Figure 1-3. Project APE Map.



Figure 1-3. Project APE Map.



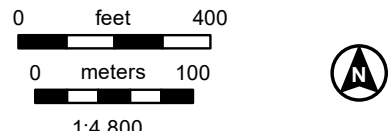


Figure 1-3. Project APE Map.



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**USGS 7.5' Quadrangle(s):**  
**Guasti, CA (1982)**  
**T1S R6W, Secs 9 & 16**  
**UTM Zone 11, NAD 83**  
**SBBM**

Project APE  
 Pipeline

Figure 1-3. Project APE Map.



Figure 1-3. Project APE Map.



Figure 1-3. Project APE Map.



Jack-and-Bore Location

Project Location

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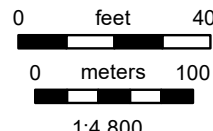



USGS 7.5' Quadrangle(s):  
 Guasti, CA (1982)  
 T1S R6W, Secs 22 & 27-28  
 UTM Zone 11, NAD 83  
 SBBM

- Project APE
- Jack-and-Bore Location
- Pipeline

Figure 1-3. Project APE Map.



**USGS 7.5' Quadrangle(s):**  
 Guasti, CA (1982)  
 T1S R6W, Secs 27-28 & 33-34  
 UTM Zone 11, NAD 83  
 SBBM



 Project APE  
 Pipeline

Figure 1-3. Project APE Map.

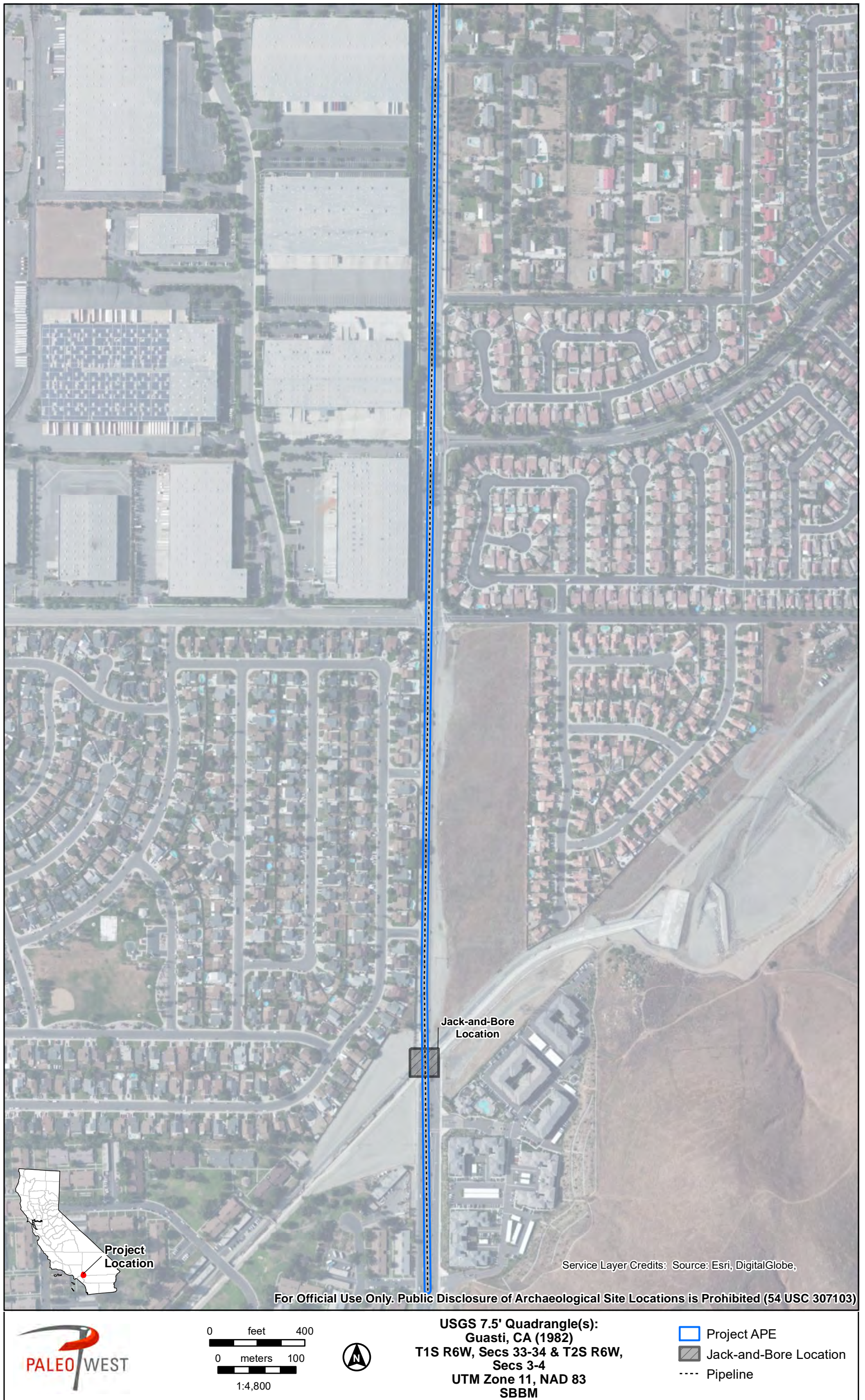


Figure 1-3. Project APE Map.

Lands File (SLF) search, and a summary of the Native American communications is presented in Chapter 4. The field methods employed during this investigation and findings are outlined in Chapter 5 with management recommendation provided in Chapter 6. Chapter 7 outlines the qualifications of the preparers of this report. This is followed by bibliographic references and appendices.



## 2.0 REGULATORY CONTEXT

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This section includes a discussion of the applicable federal and state ordinances, regulations, and standards governing cultural resources, to which the proposed Project should adhere before and during implementation.

### 2.1 CEQA-PLUS STUDIES

A CEQA-Plus study includes compliance with federal and state regulations in the event a federal nexus is established during the course of project execution. A federal nexus may be established if federal funding and/or permitting is obtained or required for the project. Compliance with both regulations allows the lead agency to apply the results of this technical study to both levels of regulation should a nexus be established later.

### 2.2 FEDERAL REGULATIONS

#### 2.2.1 National Historic Preservation Act

The proposed Project is subject to compliance with Section 106 of the NHPA, as amended. The NHPA, established in 1966, requires Federal agencies to take into account the effects of their undertakings on “historic properties” (i.e., cultural resources eligible for or listed on the National Register of Historic Places [NRHP]), which is done through the Section 106 process as established in 36 CFR Part 800. The NHPA established a national policy for historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels.

#### 2.2.2 National Register of Historic Places

The NRHP, created under the NHPA, was established as “an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment” (36 CFR 60.2). The NRHP identifies properties that are significant at the national, state, and local levels. Resources listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, prehistory, architecture, archaeology, engineering, and culture.

To guide the selection of properties included in the NRHP, the National Park Service has developed the NRHP Criteria for Evaluation. The criteria are standards by which every property that is nominated to the NRHP is evaluated. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- A) A property is associated with events that have made a significant contribution to the broad patterns of our history; or
- B) A property is associated with the lives of persons significant in our past; or

- C) A property embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possesses high artistic values, or that represents a significant and distinguishable entity whose components make lack individual distinction; or
- D) A property has yielded, or may be likely to yield, information important in prehistory or history (36 CFR Part 60).

If a cultural resource is determined to be an eligible historic property under 36 CFR Part 60.4, then Section 106 requires that the effects of the proposed undertaking be assessed and considered in planning the undertaking. In general, a resource must be 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

## 2.3 STATE REGULATIONS

### 2.3.1 California Environmental Quality Act

The proposed Project is subject to compliance with CEQA, as amended. Compliance with CEQA statutes and guidelines requires both public and private projects with financing or approval from a public agency to assess the project's impact on cultural resources (Public Resources Code Section 21082, 21083.2 and 21084 and California Code of Regulations 10564.5). The first step in the process is to identify cultural resources that may be impacted by the project and then determine whether the resources are "historically significant" resources.

CEQA defines historically significant resources as "resources listed or eligible for listing in the California Register of Historical Resources (CRHR)" (Public Resources Code Section 5024.1). A cultural resource may be considered historically significant if the resource is 45 years old or older and possesses integrity of location, design, setting, materials, workmanship, feeling, and association.<sup>1</sup> In addition, it must meet any of the following criteria for listing on the CRHR:

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

Cultural resources are buildings, sites, humanly modified landscapes, traditional cultural properties, structures, or objects that may have historical, architectural, cultural, or scientific importance. A resource can also be determined historically significant under CEQA by virtue of being included in a local register of historical resources regardless of CRHR eligibility (see Title 14 CCR §15064.5(a)(2)). CEQA states that if a project will have a significant impact on important cultural resources, deemed "historically significant," then project alternatives and mitigation

---

<sup>1</sup> The Office of Historic Preservation (OHP) guidelines recognize a 45-year-old criteria threshold for documenting and evaluating cultural resources (OHP 1995:2). This guideline assumes a 5-year lag between resource identification and the date that planning decisions are made. The age threshold is an operational guideline and not specific to CEQA statutory or regulatory codes.

measures must be considered. Additionally, the OHP may choose to comment on the CEQA compliance process for specific local government projects in an informal capacity but does not seek to review all projects that may affect historically significant cultural resources under CEQA provisions.

### 2.3.2 California Assembly Bill 52

Signed into law in September 2014, California Assembly Bill 52 (AB 52) created a new class of resources – tribal cultural resources (TCRs) – for consideration under CEQA. TCRs may include sites, features, places, cultural landscapes, sacred places, or objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing in the CRHR, included in a local register of historical resources, or a resource determined by the lead CEQA agency, in its discretion and supported by substantial evidence, to be significant and eligible for listing on the CRHR. AB 52 requires that the lead CEQA agency consult with California Native American tribes that have requested consultation for projects that may affect tribal cultural resources. The lead CEQA agency shall begin consultation with participating Native American tribes prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report. Under AB 52, a project that has potential to cause a substantial adverse change to a tribal cultural resource constitutes a significant effect on the environment unless mitigation reduces such effects to a less than significant level.

## 3.0 SETTING

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This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historic contexts of the general area. Several factors, including topography, available water sources, and biological resources, affect the nature and distribution of prehistoric, ethnographic, and historic-period human activities in an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region.

### 3.1 ENVIRONMENTAL SETTING

The Project area is situated south of the San Gabriel Mountains, which are part of the Transverse Ranges that separate the Los Angeles Basin and the Mojave Desert, in the eastern portion of the Pomona Valley. The Pomona Valley is bordered to the west by the San Gabriel Valley, to the north by the San Gabriel Mountains, to the east by the San Bernardino Valley, and to the south by the Santa Ana River. The alluvial valley was formed by the Santa Ana River and its tributaries. The Santa Ana River originates on the northern and eastern slopes of Mount San Gorgonio and is the largest hydrological feature near the Project area, approximately 8 mi away. The San Antonio Creek bisects the western portion of Pomona Valley and runs along the Los Angeles County and San Bernardino County border. Other notable tributaries emerging from the southern slopes of the San Gabriel Mountains include Lytle Creek, Cajon Wash, Deer Canyon Wash, Cucamonga Creek, and Etiwanda Creek.

As the climate of the region is largely determined by topographic features, climate, in turn, largely dictates the character of the biotic environment exploited by native populations. The climate of the Project area is characterized as Mediterranean, with hot, dry summers and cool, moist winters. It has a semi-arid precipitation regime; significant changes in temperature and moisture occur based on elevation and exposure, particularly in the nearby mountains.

Prior to historical development of the Project vicinity, vegetation in the area included representative species of the valley grassland plant community. Indigenous species present may have included rye grass (*Leymus condensatus*), blue grass (*Poa secunda*), bent grass (*Agrostis* spp.), needlegrass (*Stipa* spp.), three-awn (*Aristida divaricata*), and members of the sunflower family (*Asteraceae*). Additionally, restricted riparian communities also occurred near springs and along watercourses. Various floral species were available from early spring until winter, and the leaves, stems, seeds, fruits, roots, and tubers from many of these plant species formed an important subsistence base for the Native American inhabitants of the region (Bean and Saubel 1972; Hyde and Elliot 1994).

### 3.2 PREHISTORIC SETTING

Prehistoric occupation of the inland valleys of Southern California can be divided into seven cultural periods: Paleoindian (circa [ca.] 12,000–9,500 years before present [B.P.]); Early Archaic (ca. 9,500–7,000 B.P.); Middle Archaic (ca. 7,000–4,000 B.P.); Late Archaic (ca. 4,000–1,500 B.P.); Saratoga Springs (ca. 1,500–750 B.P.); Late Prehistoric (ca. 750–410 B.P.); and Protohistoric (ca. 410–180 B.P.), which ended in the ethnographic period.

The prehistoric cultural setting discussed below begins at the Late Prehistoric period based on the archival research conducted for the study area.

These periods are structured based on the archaeological research conducted at Diamond Valley Lake as part of the Eastside Reservoir Project (ESRP), located approximately 35 mi southeast of the Project area (Goldberg et al. 2001; McDougall et al. 2003). For the most part, the prehistory of the inland valleys of Southern California that characterizes the Project area has been less thoroughly understood than that of the nearby desert and coastal regions. Prior to the ESRP cultural resources studies, no comprehensive synthesis had been developed specifically for the interior valley and mountain localities of cismontane Southern California that characterize the region. The following has been adapted from Horne and McDougall (2003).

### 3.2.1 Late Prehistoric Period (ca. 750–410 B.P.)

The Medieval Warm extended into the Late Prehistoric Period, ending about 575 B.P. A period of lower temperatures and increased precipitation, known as the Little Ice Age, resulted in increased resource productivity in the inland region. Population increased in the region of the Project study area during this wet interval. In the ESRP area, several small, but apparently semisedentary occupations, date to this time period. Cottonwood Triangular points began to appear in inland assemblages at this time, and Obsidian Butte obsidian became much more common (Goldberg et al., 2001).

By about 500 B.P., strong ethnic patterns developed among native populations in Southern California. This may reflect accelerated cultural change brought about by increased efficiency in cultural adaptation and diffusion of technology from the central coastal region of California and the southern Great Basin (Douglas 1981).

Also during this period, Lake Cahuilla began to recede (Waters 1983) and the large Patayan populations occupying its shores began moving westward into areas such as Anza Borrego, Coyote Canyon, the Upper Coachella Valley, the Little San Bernardino Mountains, and the San Jacinto Plain (Wilke 1976). The final desiccation of Lake Cahuilla, which had occurred by approximately 400 B.P. (A.D. 1640), resulted in a population shift away from the lakebed into the Peninsular Ranges to the west, and the Colorado River regions to the east.

### 3.2.2 Protohistoric Period (ca. 410–180 B.P.)

The improved, dynamic conditions of the Little Ice Age continued throughout the Protohistoric period. Utilization of the bow and arrow promoted an increase in hunting efficiency while a renewed abundance of mortars and pestles indicates extensive exploitation of various hard nuts and berries. As a result of the increased resource utilization of the area, sedentism intensified with small, fully sedentary villages forming during the Protohistoric period. This is evidenced by sites containing deeper middens suggesting more permanent habitation. These would have been the villages, or rancherías, noted by the early nonnative explorers (True 1966, 1970).

The cultural assemblage associated with the Protohistoric period included the introduction of locally manufactured ceramic vessels and ceramic smoking pipes, an abundance of imported Obsidian Butte obsidian, Cottonwood Triangular points, and Desert Side-notched points as well as the addition of European trade goods, such as glass trade beads, late in the period (Meighan 1954).

### 3.3 ETHNOHISTORIC SETTING

Archival research and published reports suggest the Project area is situated where three traditional use territories of Native American groups meet. The traditional use territories of the Serrano, Cahuilla, and Gabrielino come together just southwest of the present-day city of San Bernardino which is very near the Project area. These cultural groups all spoke languages belonging to the Takic branch of the Shoshonean family, a part of the larger Uto-Aztecan language stock (Bean 1978:576; Geiger and Meighan 1976:19). In the following section, a brief synopsis of Serrano, Cahuilla, and Gabrielino ethnography is presented. This information has been summarized from Bean and Vane (2001) and McCawley (1996).

The Cahuilla and Serrano belonged to nonpolitical, nonterritorial patrimoieties that governed marriage patterns as well as patrilineal clans and lineages. Each clan, “political-ritual-corporate units” composed of 3 to 10 lineages, owned a large territory in which each lineage owned a village site with specific resource areas. Clan lineages cooperated in defense, in large communal subsistence activities, and in performing rituals. Clans were apt to own land in the valley, foothill, and mountain areas, providing them with the resources of many different ecological niches. Unlike their Cahuilla and Serrano neighbors, the Gabrielino had a hierarchically ordered social class that included groupings of elite, middle class, and commoners. Class membership played a major role in determining individual lifestyles, as it depended upon both ancestry and wealth (Bean and Smith 1978:543).

In prehistoric times Cahuilla, Gabrielino, and Serrano shelters are believed to have been dome shaped; after contact they tended to be rectangular in shape. Cahuilla and Serrano shelters were often made of brush, palm fronds, or arrowweed while the Gabrielino utilized reed. Most of the Serrano and Cahuilla domestic activities were performed outside the shelters within the shade of large, expansive *ramadas*; windbreaks, made of vertical poles covered with rush mats, provided open-air food preparation and cooking areas at Gabrielino settlements.

The Cahuilla, Gabrielino, and Serrano were, for the most part, hunting, collecting, harvesting, and protoagricultural peoples. As in most of California, acorns were a major staple, but the roots, leaves, seeds, and fruit of many other plants also were used. Fish, birds, insects, and large and small mammals were also available.

To gather and prepare these food resources, the Cahuilla, Gabrielino, and Serrano had an extensive inventory of equipment including bows and arrows, traps, nets, disguises, blinds, spears, hooks and lines, poles for shaking down pine nuts and acorns, cactus pickers, seed beaters, digging sticks and weights, and pry bars. In addition, the Cahuilla also had an extensive inventory of food processing equipment including hammers and anvils, mortars and pestles, manos and metates, winnowing shells and baskets, strainers, leaching baskets and bowls, knives (made of stone, bone, wood, and carrizo cane), bone saws, and drying racks made of wooden poles to dry fish.

Mountain tops, unusual rock formations, springs, and streams are held sacred to the Cahuilla, Gabrielino, and Serrano, as are rock art sites and burial and cremation sites. In addition, various birds are revered as sacred beings of great power and sometimes were killed ritually and mourned in mortuary ceremonies similar to those for important individuals. As such, bird cremation sites are sacred.

## 3.4 HISTORICAL SETTING

### 3.4.1 San Bernardino and Riverside counties

The earliest recorded historic period use of the lands within the San Bernardino Valley began in the 1770s, following establishment of the Mission San Gabriel approximately 40 mi west of the Project area. Euro-American settlement in San Bernardino began in the early 1800s through the establishment of Politana and the Asistencia but was largely fostered by the establishment of a Mormon colony under the leadership of Amasa Lyman and Charles Rich. Brothers Lyman and Rich bought the San Bernardino Rancho from Jose and Maria Armenta Lugo in 1851. The other large land grant, Cucamonga Rancho, remained largely undeveloped although the land owner, Tiburcia Tapia, had developed several outposts in failed attempts to lure perspective buyers in the 1840s (Gentlcore 1960). Tapia had acquired the 13,000-acre rancho, which encompasses modern day Fontana, Rancho Cucamonga, Ontario, and Upland, in 1839. He used the land to run 1,500 head of cattle along with raising other livestock, however, due to the arid nature of the land very little crops were grown. Cattle ranching would remain the dominant economic driver in the region until 1865 when disease, famine, and price competition largely ended the industry across the county (Gentlcore 1960).

San Bernardino County was established on April 26, 1853 and subsequently ceded a portion of its territory to the formation of Riverside County in 1893 (Chasteen 2015). By the time California had formed and the counties were established, those in the area had begun experimenting with new crops including barley and wheat which could be dry farmed. However, these endeavors proved fruitless due to a lack of transport, lack of labor, and small profit margins. The introduction of the orange fundamentally changed the landscape of the region. The first orange trees in San Bernardino were planted by Anson Van Leuven in 1857 with the Washington navel orange planted in the Riverside Colony in 1873. This variety proved perfect for the region as it prospered on foothills. Citrus quickly became the largest industry in Southern California, including growing, packing, and shipping. Growth of the region accelerated following completion of the Southern Pacific Railroad in 1876. By 1885, the region was synonymous with the growth of oranges (Gentlcore 1960).

Starting in the 1860s and 1870s, companies began to form across California with the intent of purchasing readily available land (much of it owned by railroad companies) to redevelop into land colonies. These land colonies were pivotal in the rapid development of regions across the West and specifically in San Bernardino County. The companies purchased the land, acquired water rights, established lots, and built infrastructure such as roads and water irrigation lines. These land colonies were key to agricultural growth in the region (Gentlcore 1960). In 1881, George and William Chaffey purchased 6,200 acres of land in what is today considered Upland (west of the Project area) for the formation of the Ontario Colony. The land provided was ideal for the growing of oranges. Happening concurrently, the Semi-Tropic Land and Water Company formed. The company purchased 28,000 acres and the water rights to Lytle Creek. The company laid out the townsites of Rosena (now known as Fontana), Rialto, Bloomington, and San Sevine. The Semi-Tropic Land and Water Company, though ultimately unsuccessful in its attempts, initiated early residential and commercial development in San Bernardino County (Chasteen 2015).

The Chaffey brothers' success in Ontario Colony was first realized east in Etiwanda. They purchased approximately 2,500 acres of land and water rights at the base of the San Gabriel

Mountains in the vicinity of Day, Etiwanda, Deer, and San Sevaine creeks in 1882 and formed the Etiwanda Water Company and a land colony. The 2,500 acres were divided into 10-acre plots that were guaranteed water delivery once a month, and one share of stock in the water company per acre purchased. The water was diverted from the Day and Etiwanda creeks through a wooden flume to a reservoir on the north end of the colony. From here seven parallel lines of 7- to 10-inch pipe were laid to deliver water to small reservoirs constructed by the landowners (36-007099 in APE). Another reservoir was located near the south end of the land colony to serve the town water supply line. The Chaffey brothers also installed a hydroelectric generator at the irrigation headworks to supply electricity to its landowners and installed a telephone line between Etiwanda and San Bernardino. This system of flumes and distribution pipes improved upon irrigation ditches that were already in the area, but much of the water in this arid region was lost through evaporation and seepage into the area's sandy soil. At this time, noted California historian Kevin Starr stated that the Chaffey's land, water, and electrical development in Etiwanda "was the most innovative agricultural colony in the Far West." Just the pipeline system alone set a standard for future irrigation development the Cucamonga Valley (Hall 1888; USGS 1907: 67-68; San Bernardino County Recorder 1882; Star 1991: 15; Hickcox 1980: 20; San Bernardino County n.d).

The success of the Chaffey brothers propelled the growth of the region and the success of their underground irrigation system was lauded across the state. In addition, concrete pipe was used as a model for future systems. The success of the Etiwanda system allowed for the success of the Ontario Colony and it became the new standard for land development across the arid west. From this success came the establishment cities of Rancho Cucamonga and Fontana. The area which became Fontana incorporated in 1913. Its growth benefited from the earlier land colonies and the arrival of the Pacific Electric Railway. However, Fontana's real growth came in 1942 with construction of the Henry J, Kaiser Steel Mill which quickly transformed the small agricultural hamlet to an industrial town. The steel mill and surrounding support business remained the top employer in the city from 1942 until it ceased operation in 1984 (City of Fontana 2021).

Rancho Cucamonga's growth began in earnest following completion of the Pacific Electric Railway line in 1913. Across California interurban rail networks had followed the success of the transcontinental railways systems. These smaller, more localized networks connected rural areas with larger metropolitan hubs resulting in development of bedroom communities and suburbs. Rancho Cucamonga followed this trajectory and by 1913 had enveloped much of Etiwanda. The small, largely rural town had benefited from the early land colony success and had paved streets and electric streetlights, outpacing many other communities in the area. Growth continued steadily through World War II as wartime industries and post-war growth resulted in a massive expansion across Southern California. In 1977, Rancho Cucamonga incorporated as a city (City of Rancho Cucamonga 2020).

While the region had early growth from irrigation, it also suffered from poor drainage and intense run off from the nearby creeks and alluvial drainages. Channelization of the creeks began with San Sevaine Creek. By 1938, the section of the creek south of Foothill Boulevard/ U.S. Highway 66 was straightened and the section of channelized creek south of the railroad tracks was realigned for stormwater protection in 1942 after approval of the Kaiser steel plant. The section of channelized creek within the current Project APE was constructed between 1952 and 1959 and continued south along the western boundary of the Kaiser Steel Mill plant



to Slover Avenue (*San Bernardino County Sun* 1942 Apr 14; *San Bernardino County Sun* 1942 Dec 4; HistoricAerials.com 1938, 1948, 1959; UCSB 1952).

Early channelization efforts of East Etiwanda Creek began between 1938 and 1948. During this time a section of the creek was straightened and channelized from the intersection of modern-day East Avenue and Foothill Boulevard northeast to the Pacific Electric Railroad alignment, north of the Project area (HistoricAerials.com 1938, 1948). Flooding occurred north of the Kaiser Steel Mill plant along San Sevaine Creek in 1969 and 1978 resulting in an outcry from local residents for improved storm drainage. Rapid residential and industrial growth in western Fontana in the late 1970s created more paved areas, but the local waterways were not adequate to handle current or increased water drainage needs. In March 1983, the San Bernardino County Flood Control District devised a plan to enhance the Etiwanda and San Sevaine Creek watersheds to the Riverside County border with a cohesive concrete channel system, including combining the two creeks into a single channel south of E. Foothill Boulevard. The following month Riverside County prepared a supplemental report that proposed to extend the concrete lined channel through Riverside County to the Santa Ana River. The two flood control districts worked in conjunction during the planning stages but were individually responsible for funding and construction of their respective areas (Edwards 1983: 1, 3; City of Fontana et al. 1989: 1; *San Bernardino County Sun* 1989 Sep 11).

This ambitious project, later called San Sevaine Creek Water Project, was expanded, and revised with construction officially beginning in 1996. The cohesive, channelized creek sections started on the north end in the foothills of the San Gabriel Mountains, south through the cities of Fontana and Rancho Cucamonga, and then continued south to the Santa Ana River, including the three-mile-long section between Foothill Boulevard and Slover Avenue. In 2009, 13 years after initial construction, the 11-mi, \$150 million project was completed and provides flood protection to more than 100,000 properties in San Bernardino and Riverside counties (San Bernardino County 2009 Apr 9).

## 4.0 CULTURAL RESOURCES INVENTORY

Literature reviews and records searches were conducted by California Historical Resources Information System staff at the SCCIC at California State University, Fullerton, on October 14, 2020, and at the EIC at the University of California, Riverside, on February 2, 2021. The record searches included the APE and surrounding one-mile radius, collectively termed the Project study area. The objective of this records search was to identify prehistoric or historical cultural resources that have been previously recorded within the study area during prior cultural resource investigations.

As part of the cultural resources inventory, PaleoWest staff also examined historical maps and aerial images to characterize the developmental history of the Project APE and surrounding area. A summary of the results of the record search and background research are provided below.

### 4.1 PREVIOUS CULTURAL RESOURCES INVESTIGATIONS

The records search results indicate that no fewer than 176 previous investigations have been conducted and documented within the Project study area since 1977 (See Table A-1 in Appendix A). Thirty-three of these studies encompass or include portions of the Project APE. Many of these prior studies were conducted in support of underground utility installation or improvement projects. In total, approximately 40 percent of the Project APE has been previously inventoried for cultural resources.

### 4.2 PREVIOUSLY RECORDED CULTURAL RESOURCES

The records search results also indicated that no fewer than 129 cultural resources have been previously documented within the Project study area (Table 4-1). These resources include 4 prehistoric archaeological sites, 33 historic period archaeological sites, 8 prehistoric isolated artifacts, 2 historic period isolated artifacts, 1 multi-component isolated artifact, and 81 historic period built-environment resources. Eight of these previously recorded resources are mapped within the Project APE. A description of each of these eight resources is provided below.

**Table 4-1 Cultural Resources Recorded within the Project Study Area**

| Primary No. | Trinomial     | Type    | Age         | Description  |
|-------------|---------------|---------|-------------|--|
| P-33-001237 | CA-RIV-001237 | Site    | Prehistoric | Sparse lithic scatter                                      |
| P-33-002101 | CA-RIV-002101 | Site    | Historical  | Abandoned Filippi Winery and Vineyard                      |
| P-33-002102 | CA-RIV-002102 | Site    | Prehistoric | Single slick on granite boulder                            |
| P-33-004105 | CA-RIV-004105 | Site    | Prehistoric | Lithic and ground stone scatter                            |
| P-33-006920 |               | Built   | Historical  | 3540 Campbell Street; single family property               |
| P-33-011288 |               | Isolate | Prehistoric | Granite, bifacial mano                                     |
| P-33-014963 |               | Built   | Historical  | Earthen reservoir  |
| P-33-016030 |               | Isolate | Prehistoric | Ground stone basal object; elongated multipurpose lapstone |
| P-33-016818 |               | Site    | Historical  | Remains of a WWII-era military complex                     |
| P-33-016935 |               | Isolate | Historical  | Two fragments of solarized glass                           |
| P-33-017127 |               | Built   | Historical  | 9930 Union Street; single family property                  |
| P-33-017128 |               | Built   | Historical  | 9910 Union Street  |
| P-33-017129 |               | Built   | Historical  | 9870 Union Street; single family property                  |

**Table 4-1 Cultural Resources Recorded within the Project Study Area**

| <b>Primary No.</b> | <b>Trinomial</b> | <b>Type</b> | <b>Age</b> | <b>Description</b>   |
|--------------------|------------------|-------------|------------|--|
| P-33-017130        |                  | Built       | Historical | 9860 Union Street; single family property  |
| P-33-017131        |                  | Built       | Historical | Cinder block water well structures   |
| P-33-026630        | CA-RIV-012534    | Site        | Historical | Remains of a residential structure   |
| P-33-028825        | CA-RIV-012935    | Site        | Historical | Abandoned granite quarry   |
| P-36-003131        | CA-SBR-003131H   | Site        | Historical | Rock wall remains and refuse scatter   |
| P-36-004131*       | CA-SBR-004131H   | Built       | Historical | Kaiser Steel Mill  |
| P-36-004946        | CA-SBR-004946H   | Site        | Historical | Etiwanda Cairns  |
| P-36-006252        | CA-SBR-006252H   | Site        | Historical | Remains of a farmstead; two structure foundations and debris   |
| P-36-006253        | CA-SBR-006253H   | Site        | Historical | Possible farmstead; house foundation, a cistern, and debris  |
| P-36-006254        | CA-SBR-006254H   | Site        | Historical | Structural remains; cobblestone/mortar foundation or retaining wall, wall extension, and debris                                  |
| P-36-006818        | CA-SBR-006818H   | Site        | Historical | Section of buried pipeline   |
| P-36-006847        | CA-SBR-006847H   | Built       | Historical | Old Kite Route; ATS&F/BNSF   |
| P-36-007095        | CA-SBR-007095H   | Site        | Historical | Abandoned irrigation system with concrete standpipe and refuse scatter   |
| P-36-007099*       | CA-SBR-007099H   | Site        | Historical | Remains of a sewer pipeline; possibly circa 1920s  |
| P-36-007199        | CA-SBR-007199H   | Site        | Historical | Residential and possible commercial property   |
| P-36-007322*       | CA-SBR-007322H   | Site        | Historical | Refuse Scatter   |
| P-36-007323        | CA-SBR-007323H   | Site        | Historical | Refuse Scatter   |
| P-36-007661        | CA-SBR-007661H   | Site        | Historical | Refuse Scatter and three concrete structure foundations  |
| P-36-007795        | CA-SBR-007795H   | Built       | Historical | Remains of ranch house property  |
| P-36-008076        | CA-SBR-008076H   | Built       | Historical | Partially buried structural foundation of parent rock and concrete   |
| P-36-008857        | CA-SBR-008857H   | Site        | Historical | So. Sierras Power Line; Lytle Canyon Transmission Lines  |
| P-36-009584        | CA-SBR-009584H   | Built       | Historical | Cecil Johnson Property   |
| P-36-009862        | CA-SBR-009862H   | Built       | Historical | Gasoline Filling Station Feature   |
| P-36-010296        | CA-SBR-010296H   | Site        | Historical | Three concentrations of historic refuse  |
| P-36-010297        | CA-SBR-010297H   | Site        | Historical | Hand-stacked, unmortared retaining wall of granite boulders; a large pile of smaller granite cobbles, and large eucalyptus trees |
| P-36-010330*       | CA-SBR-010330H   | Built       | Historical | Union Pacific Railroad   |
| P-36-012227        |                  | Built       | Historical | 10221 Redwood Ave; single family property  |
| P-36-012338        |                  | Built       | Historical | 13260 Miller Ave; single family property   |
| P-36-012356        | CA-SBR-012228H   | Site        | Historical | Cistern/well   |
| P-36-013027        | CA-SBR-012481H   | Site        | Historical | Remains of a water control system; weir, standpipe, rock alignment, eucalyptus windrows, concrete debris                         |
| P-36-013624        |                  | Built       | Historical | Frank & Maier Residence  |
| P-36-013625        |                  | Built       | Historical | Harold & Josephine Behrends Residence  |
| P-36-013739        | CA-SBR-012643H   | Site        | Historical | Three rock alignments and one cluster of rock piles  |
| P-36-013740        | CA-SBR-012644H   | Site        | Historical | Four structures, a trough, work areas, refuse scatters, tree breaks, and retaining walls   |
| P-36-013744        |                  | Built       | Historical | Casaletti's Polka Place  |
| P-36-013745        |                  | Built       | Historical | C.N. Ross House, 6527 Etiwanda   |
| P-36-013746        |                  | Built       | Historical | Tibbetts House, Jim's Landscaping and Nursery  |

**Table 4-1 Cultural Resources Recorded within the Project Study Area**

| <b>Primary No.</b> | <b>Trinomial</b> | <b>Type</b> | <b>Age</b> | <b>Description</b>  |
|--------------------|------------------|-------------|------------|---|
| P-36-013747        |                  | Site        | Historical | First Hydro-Electric Plant in California  |
| P-36-013748        | CA-SBR-016156H   | Site        | Historical | Etiwanda Colony water pipeline segment  |
| P-36-013883        | CA-SBR-012709H   | Site        | Historical | Remains of citrus grove and irrigation system                                     |
| P-36-013935        |                  | Built       | Historical | Sundown Motel   |
| P-36-013936        |                  | Built       | Historical | Heberle Motel Apartments; Pauline's Beauty Shop                                   |
| P-36-014997        |                  | Built       | Historical | Cour/Tilden House; single family property   |
| P-36-014998        |                  | Built       | Historical | 7637 Etiwanda Ave; single family property   |
| P-36-014999        |                  | Built       | Historical | 7649 Etiwanda Ave; single family property   |
| P-36-015232        |                  | Built       | Historical | Chaffey-Garcia House; single family property                                      |
| P-36-015497*       |                  | Built       | Historical | Base Line Road  |
| P-36-016420        |                  | Built       | Historical | Weir box (water control feature)  |
| P-36-016443        |                  | Built       | Historical | Ellena Brothers Winery; Del Monte Packing House                                   |
| P-36-016446        |                  | Built       | Historical | Pettitt House; Ernst Mueller House; single family property                        |
| P-36-016447        |                  | Built       | Historical | Etiwanda Domestic Water Cistern; McGuire House                                    |
| P-36-016448        |                  | Built       | Historical | Etiwanda Pacific Electric Depot; Etiwanda Pacific Electric Station                |
| P-36-016449        |                  | Built       | Historical | Etiwanda Congregational Church  |
| P-36-016451        |                  | Built       | Historical | Fisher House; single family property  |
| P-36-016452        |                  | Built       | Historical | Etiwanda Grape Products Company   |
| P-36-016465        |                  | Built       | Historical | Cucamonga Top Winery  |
| P-36-016489        |                  | Built       | Historical | Hippard Ranch; single family property   |
| P-36-016490        |                  | Built       | Historical | Jones House; single family property   |
| P-36-020006        |                  | Built       | Historical | Marcus Kemp House; single family property   |
| P-36-020009        |                  | Built       | Historical | Circle Inn Motel  |
| P-36-020010        |                  | Built       | Historical | 14560 Washington Dr; single family property                                       |
| P-36-020011        |                  | Built       | Historical | 14570 Washington Dr; single family property and ancillary building(s)             |
| P-36-020012        |                  | Built       | Historical | 10287 Redwood Ave; single family property   |
| P-36-020013        |                  | Built       | Historical | 10286 Redwood Ave; single family property   |
| P-36-020014        |                  | Built       | Historical | 14687 Washington Dr; single family property                                       |
| P-36-020015        |                  | Built       | Historical | 14711 Washington Dr; single family property                                       |
| P-36-020016        |                  | Built       | Historical | 14723 Washington Dr; single family property                                       |
| P-36-020017        |                  | Built       | Historical | 14747 Washington Dr; single family property                                       |
| P-36-020018        |                  | Built       | Historical | 14679 Washington Dr; single family property                                       |
| P-36-020019        |                  | Built       | Historical | 14671 Washington Dr; single family property                                       |
| P-36-020020        |                  | Built       | Historical | 14663 Washington Dr; single family property                                       |
| P-36-020021        |                  | Built       | Historical | 14655 Washington Dr; single family property                                       |
| P-36-020022        |                  | Built       | Historical | 14649 Washington Dr; single family property                                       |
| P-36-020023        |                  | Built       | Historical | 14641 Washington Dr; single family property                                       |
| P-36-020024        |                  | Built       | Historical | 14667 Washington Dr; single family property                                       |
| P-36-020025        |                  | Built       | Historical | 14759 Washington Dr; single family property                                       |
| P-36-020026        |                  | Built       | Historical | 14833 Washington Dr; single family property                                       |
| P-36-020027        |                  | Built       | Historical | 14843 Washington Dr; single family property                                       |
| P-36-020028        |                  | Site        | Historical | 14855 Washington Dr; single family property                                       |
| P-36-020031        |                  | Built       | Historical | 14771 Washington Dr; single family property                                       |
| P-36-020136        | CA-SBR-020136H   | Built       | Historical | Etiwanda Foothill Citrus Assn Packing House; Packing House                        |
| P-36-020137*       | CA-SBR-015904H   | Built       | Historical | Pacific Electric San Bernardino Line; Pacific Electric Southern Pacific Alignment |

**Table 4-1 Cultural Resources Recorded within the Project Study Area**

| <b>Primary No.</b> | <b>Trinomial</b> | <b>Type</b> | <b>Age</b>     | <b>Description</b>  |
|--------------------|------------------|-------------|----------------|---|
| P-36-020144        |                  | Built       | Historical     | Van Daele Development Corporation Project   |
| P-36-020146        |                  | Built       | Historical     | Grover Henderson House; single family property                                      |
| P-36-020173        |                  | Built       | Historical     | Foothill Fieldstone Stockpile-1   |
| P-36-020174        |                  | Built       | Historical     | Foothill Fieldstone Stockpile-2   |
| P-36-020175        |                  | Built       | Historical     | Foothill Fieldstone Stockpile-3   |
| P-36-020311        |                  | Built       | Historical     | 14127-14129 Foothill Blvd & 8155 Banana Ave; single family property                 |
| P-36-020376        |                  | Built       | Historical     | Harne's Garage/Etiwanda Auto Repair   |
| P-36-023214        |                  | Built       | Historical     | Levy House; single family property  |
| P-36-023491        |                  | Built       | Historical     | Johnston House; single family property/farm/ranch                                   |
| P-36-024085        | CA-SBR-015270H   | Site        | Historical     | Section of Mulberry Avenue  |
| P-36-024086        | CA-SBR-015271H   | Site        | Historical     | Section of East Avenue, paved two lane road   |
| P-36-024089        | CA-SBR-015274H   | Site        | Historical     | Section of Cottonwood Avenue; paved two lane road                                   |
| P-36-025410        | CA-SBR-016155H   | Site        | Historical     | Man-made flood control berm and two circular concrete bench markers                 |
| P-36-026051*       |                  | Built       | Historical     | Devers-San Bernardino 220 kV; SCE Hayfield-Chino 220 kV Transmission Line           |
| P-36-027692        | CA-SBR-017228H   | Site        | Historical     | Southern California Edison West of Devers   |
| P-36-029538        |                  | Built       | Historical     | West Fontana Flood Control Channel  |
| P-36-029643        |                  | Built       | Historical     | 14755 Slover Ave; single family property  |
| P-36-031682        |                  | Built       | Historical     | Etiwanda Debris Basin   |
| P-36-033027        |                  | Built       | Historical     | 13968 & 13992 Slover Ave; single family property                                    |
| P-36-033102        | CA-SBR-033102H   | Site        | Historical     | Historic-period granite quarry  |
| P-36-033107        |                  | Built       | Historical     | 10909 Banana Ave; single family property  |
| P-36-033108        |                  | Built       | Historical     | 10991 Banana Ave; single family property  |
| P-36-033109        |                  | Built       | Historical     | 11015 Banana Ave; single family property  |
| P-36-033110        |                  | Built       | Historical     | 11045 Banana Ave; single family property  |
| P-36-033111        |                  | Built       | Historical     | 14191 Santa Ana Ave; single family property   |
| P-36-033130*       | CA-SBR-033130    | Site        | Prehistoric    | Etiwanda School Stone Metate  |
| P-36-060215        |                  | Isolate     | Prehistoric    | Whole schist slab metate located in rocks piled on a cement foundation              |
| P-36-060216        |                  | Isolate     | Prehistoric    | One unifacial mano and one bifacial mano fragment                                   |
| P-36-060217        |                  | Isolate     | Prehistoric    | One granitic unifacial mano, one flake of meta-volcanic lithic material             |
| P-36-060221        |                  | Isolate     | Prehistoric    | One half of schist slab metate  |
| P-36-060255        |                  | Isolate     | Prehistoric    | Etiwanda Obsidian Blade   |
| P-36-060256        |                  | Isolate     | Historical     | Three sherds of transfer print china: blue/white, pink, green, black oriental scene |
| P-36-060257        |                  | Isolate     | Multicomponent | Secondary flake of black metasediment with milky quartz inclusions                  |
| P-36-060262        |                  | Isolate     | Prehistoric    | One half of schist slab metate  |

\* indicates a resource mapped in the Project APE.

#### 4.2.1 P-36-004131/CA-SBR-004131H (Kaiser Steel Mill)

P-36-004131 is the historic period Kaiser Steel Mill. The mill was built in 1942 and was one of the largest steel production mills west of the Mississippi (Hansberger 1975). In 1980, the San Bernardino County Museum created a site record form for the resource and noted its location on Cherry Avenue and that it is a Point of Historical Interest (Teal 1980). In 1997, LSA associates revisited P-36-004131 and documented six historic-era features (McLean et. al. 1997). In 2008, CRM Tech conducted a cultural resource study that found all major components of the Kaiser Steel Mill had been demolished and the resource was no longer extant (Tang et al. 2008).

#### 4.2.2 P-36-007099/CA-SBR-007099H

P-36-007099 is a historic period archaeological resource consisting of a 1000-ft-long section of a sewer line discovered approximately three feet below the ground surface. The Archaeological Research Unit of University of California, Riverside recorded the resource in 1992 during monitoring of construction activities in the area (Hogan 1992). The resource was described as a six-inch-diameter clay pipeline running in a north-south direction under Etiwanda Avenue that likely dated to the 1920s (Hogan 1992). Recorders noted that the sewer pipeline may continue farther north and south along Etiwanda Avenue. This resource was not evaluated for listing on the NRHP or CRHR.

#### 4.2.3 P-36-007322/CA-SBR-007322H

P-36-007322 is a historic period refuse scatter consisting of machine-made glass bottles and bottle fragments (liquor, food, and cosmetic), porcelain and stoneware ceramic fragments, metal sanitary and beverage cans, iron straps, and wire nails (Sutton and Zeller 1992). Additionally, a two-hole bone button, a machine-made brick, and other refuse were noted. At the time of its recordation, the site appears to be relatively intact. However, recorders noted that vandals may have removed whole bottles since most of what remained was fragmented. It does not appear that this resource was evaluated for listing on the NRHP or CRHR.

#### 4.2.4 P-36-010330/CA-SBR-010330H (Union Pacific Railroad)

P-36-010330 is the historic period Union Pacific Railroad (UPRR). In 1999, Jones and Stokes Associates recorded segments of the railroad located on the Los Angeles quadrangle, El Monte quadrangle, Baldwin Park quadrangle, La Habra quadrangle, Ontario quadrangle, Guasti quadrangle (including a section in the Project APE), Fontana quadrangle, and San Bernardino South quadrangle (Ashkar 1999). These rail lines were all acquired by UPRR but were originally part of other railroad lines (Southern Pacific, Los Angeles, and Salt Lake Railroad). Major portions of track and associated spurs, sidings, and station were constructed between 1869 and 1905. Jones and Stokes Associates recommended that the recorded railroad was eligible for listing on the NRHP under criteria A and B for its association with the transportation of goods and people and its association with the individuals who funded the railroad construction (Mark Hopkins, Callis P. Huntington, Leland Stanford, and Charles Crocker) (Ashkar 1999).

The UPRR intersects the proposed pipeline alignment. However, jack-and-bore drilling will be used to install the proposed pipeline under the in-use rail line. As such, this resource is not included in the Project APE.

#### 4.2.5 P-36-015497 (Base Line Road)

P-36-015497 consists of a segment of the historic period Base Line Road. The resource is a major thoroughfare through San Bernardino County and continues west as far as Azusa in Los Angeles County (George and Smallwood 2014). The road, constructed on the southern California Base Line, was surveyed by Colonel Henry Washington in 1853 (George and Smallwood 2014). A monument was erected on the summit of Mt. San Bernardino, and the line extended east and west. It became the basis for land titles established by California Courts. In 2014, a segment of the road was formally documented by Applied EarthWorks (George and Smallwood 2014). The segment was recorded as being a modern, six-lane asphalt-concrete roadway with a landscaped center median. This segment of pavement measured 90 feet wide and appeared to be completely modern in its appearance, design, construction, and materials. This segment of the resource does not appear to have been evaluated for listing on the NRHP or CRHR.

#### 4.2.6 P-36-020137/CA-SBR-015904H (Pacific Electric San Bernardino Line; Pacific Electric Southern Pacific Alignment)

P-36-020137 is a segment of the historic period Pacific Electric San Bernardino Line and Southern Pacific Alignment. The resource was recorded as a 3.25-mi-long single track section of the overall 22-mi-long Pacific Electric San Bernardino Line that lies between Haven Avenue and Etiwanda Avenue (White 2004). At the time of its recordation, all of the rails and ties had been removed with the exception of the rails embedded in the asphalt of the at-grade crossings on Rochester and Haven avenues. Track ballast remained in place over much of the section. The width of the rail corridor varied between 80 and 100 ft with the majority of the railbed elevated above grade to prohibit flooding. A short, steel girder bridge was noted as spanning the Day Creek Flood Control Channel. P-36-020137 was recommended not eligible for listing on the NRHP or the CRHR.

In 2005, an additional 3.5-mi-long segment of the Pacific Electric alignment was recorded by LSA Associates (Hansen 2005). The only extant features identified along the newly recorded segment were the roadbed and associated concrete drainage culverts. All the track, ballast, ties, hardware, and other features had been removed. Because this portion of the resource did not retain its integrity of design, workmanship, materials, setting, feeling, or association, Hansen (2005) recommended it ineligible for the NRHP or the CRHR.

In 2006, LSA Associates revisited an approximately 1,600-ft-long segment of the rail line between East Avenue and Interstate 15 (Fulton 2006). At the time of the revisit, the resource consisted of an 80-ft-wide ROW bounded by recent residential tract developments on the north and south. All railroad-related material had been removed and the alignment consisted of a graded dirt corridor containing nothing to indicate its former use as a rail line.

#### 4.2.7 P-36-026051 (Devers-San Bernardino 22 kV; SCE Hayfield-Chino 220 kV Transmission Line)

P-36-026051 is a historic period transmission line that was first recorded by LSA Associates in 2012 (Davidson et al. 2012). LSA Associates noted that the Devers-San Bernardino 220 kilowatt (kV) Transmission Line was previously recorded in 2006 in association with a historic-era access road that first appears on the 1953 edition of the Beaumont 7.5-minute USGS topographic

quadrangle map. The total length of the transmission line from the San Bernardino Substation to the Devers Substation is approximately 43 miles in length (Davidson et. al. 2012). Tower types along the line include mainly single circuit lattice steel towers, with some single circuit tubular steel poles in more densely populated and residential areas. It was noted that the construction of this transmission line is associated with the development of the San Bernardino to Desert Hot Springs corridor through San Gorgonio Pass and San Timoteo Canyon (Davidson et. al. 2012). LSA Associates noted that the poles and equipment have been updated and replaced as needed over the past 65 years and as such, the original integrity of the line as a whole has been minimized. The 220 kV line was recommended not eligible for the NRHP or the CRHR. A portion of this line was later revisited in 2018 by ECORP Consulting Inc. (Cunningham et. al. 2018); they noted that the condition of the resource was unchanged

#### 4.2.8 P-36-033130/CA-SBR-033130

P-36-033130 is a prehistoric archaeological site that was recorded as a large mortar boulder with 20 or more cupules (Lerch 1982). The feature appeared to have been moved from its original context and relocated near the Etiwanda School. Specifically, the mortar with cupules had been found to be cemented into the sidewalk at the corner of Etiwanda Avenue and Victoria Street (Lerch 1982). A revisit to the mapped location of P-36-033130 could not relocate the mortar boulder (Bouscaren 1987). The resource has not been evaluated for listing on the NRHP or the CRHR.

### 4.3 NATIVE AMERICAN COORDINATION

PaleoWest contacted the Native American Heritage Commission (NAHC) on August 14, 2020, for a review of the SLF. The objective of the SLF search was to determine if the NAHC had any knowledge of Native American cultural resources (e.g., traditional use or gathering area, place of religious or sacred activity, etc.) within the immediate vicinity of the Project APE. The NAHC responded on August 19, 2020, stating that the SLF was completed with positive results and that the Gabrieleno Band of Mission Indians – Kizh Nation should be contacted for additional information. The NAHC also recommended that 16 additional individuals representing 11 Native American tribal groups be contacted to elicit information regarding cultural resource issues related to the proposed Project (Appendix B). PaleoWest sent outreach letters to the 12 recommended tribal groups on August 4, 2021. These letters were sent via email and followed up with a hard copy sent via certified mail. This outreach effort was followed up by phone calls on August 20, 2021.

To date nine responses have been received. Ms. Lacy Padilla, Archaeologist for the Agua Caliente Band of Cahuilla Indians, responded via email stating that a records check of the Tribal Historic Preservation Office's cultural registry revealed that this Project is not located within the Tribe's Traditional Use Area. Therefore, the Tribe defers to the other tribes in the area. Mr. Ryan Nordness, Cultural Resources Technician for San Manuel Band of Mission Indians (SMBMI), responded via email stating that the Project is not located near any known sacred lands or tribal cultural resources. An email response from the Quechan Historic Preservation Officer stated that the Tribe has no comments on the Project and that they defer to the more local tribes and support their decisions on the Project. Mr. Robert Dorame, Chairperson for the Gabrielino Tongva Indians of California Tribal Council, expressed concern for the sensitivity of the area and requested that the Tongva Indians of California Tribal Council be notified in the



event any cultural or prehistoric resources are identified during construction activities. If human remains area identified, regardless of the NAHC-assigned Most Likely Descendent, the Tongva Indians of California Tribal Council request to be notified. Mr. Anthony Morales, Chairperson for the Gabrieleno/Tongva San Gabriel Band of Mission Indians, expressed concerns regarding the sensitivity of the Project area and recommended archaeological and tribal monitoring from the Gabrieleno/Tongva San Gabriel Band of Mission Indians during ground disturbance associated with the Project. Mr. Joseph Ontiveros, Soboba Band of Luiseño Indians, stated that the Project area falls in the Tribe's Cultural Use Areas and that culturally sensitive information will be disclosed to the lead agency. Mr. Charles Alvarez, Gabrielino-Tongva Tribe, requested to be sent the outreach letter again and provided an updated email address. The outreach letter was resent on August 23, 2021; no additional response has been received to date. A representative of the Gabrieleno Band of Mission Indians - Kizh Nation requested contact information for the lead agency. Contact information for the contact at the JCSD as well as contact information for the Project Manager at Albert A. Webb Associates was provided to the Tribe. Lastly, Mr. Mark Cochrane, Co-Chairperson for the Serrano Nation of Mission Indians, requested that he and Mr. Wayne Walker, Co-Chairperson, be notified if any inadvertent discoveries are made during construction activities related to the Project.

## 5.0 FIELD INVESTIGATION

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### 5.1 FIELD METHODS

A cultural resource survey of the Project APE was conducted by PaleoWest Archaeologist Gena Granger from July 27-29, 2021. The survey consisted of an initial reconnaissance-level survey to identify any areas of exposed ground surface and to revisit the mapped locations of all previously recorded cultural resources to assess their current condition. This was followed by a pedestrian survey of the undeveloped portions of the Project APE. The pedestrian survey was conducted by walking a series of transects across areas of exposed ground surface. The archaeologist carefully inspected all areas likely to contain or exhibit sensitive cultural resources to ensure discovery and documentation of any visible, potentially significant cultural resources within the Project APE.

Prehistoric site indicators may include areas of darker soil with concentrations of ash, charcoal, fragments of animal bone (burned or unburned), shell, flaked stone, ground stone, or even human bone. Historical site indicators may include fence lines, ditches, standing buildings, objects or structures such as sheds, or concentrations of materials at least 45 years in age, such as domestic refuse (e.g., glass bottles, ceramics, toys, buttons or leather shoes), refuse from other pursuits such as agriculture (e.g., metal tanks, farm machinery parts, horse shoes) or structural materials (e.g., nails, glass window panes, corrugated metal, wood posts or planks, metal pipes and fittings, railroad spurs, etc.). DPR forms of recorded resources are included in Appendix C.

### 5.2 FIELD RESULTS AND FINDINGS

The majority of the APE lies within existing road ROWs that are fully developed. Ground visibility within these areas was poor (0-10%) due to the presence of the paved roadway, hardscaping, and landscaping. Surficial sediments exhibit a high degree of disturbance as a result of the construction and maintenance of the roads (Figures 5-1 to 5-4). In addition, evidence for the placement of underground utilities along these roadways suggests subsurface sediments have also been extensively disturbed. Portions of the proposed pipeline alignment lying adjacent to the San Sevaine Channel were unpaved and inaccessible at the time of the survey; these areas were observed from the edge of the public ROW and exhibited a higher level of visibility (40-60%) though the ground surface was partially obscured by gravels. It is assumed that sediments in these areas were extensively disturbed by the construction and maintenance of the flood control channel.

The survey found no evidence of the three previously documented archaeological sites (36-033130, 36-007099, and 36-007322) in the Project APE and no new archaeological sites were identified. Of the five previously documented built-environment resources, Base Line Road (P-36-015497) was unchanged with the Kaiser Steel Mill (P-36-004131) and the Pacific Electric railroad alignment (P-36-020137) confirmed as no longer extant. In addition, the survey determined that both the SCE transmission line (P-36-026051) and UPRR are located adjacent to, but outside of, the Project APE. A summary of the current conditions of these resources as well as evaluation efforts, if necessary, are provided below (Figure 5-5) (also see updated Department of Parks and Recreation [DPR] forms in Appendix C).



Figure 5-1. Overview of northern end of the APE at end of Coyote Drive, facing southwest.



Figure 5-2. Overview of the APE at the corner of Day Creek Boulevard and Coyote Drive, facing south.



Figure 5-3. Overview of the APE at Etiwanda Avenue and San Bernardino Boulevard, facing southeast.



Figure 5-4. Overview of the APE at San Bernardino Boulevard and Calabash Avenue, facing west.

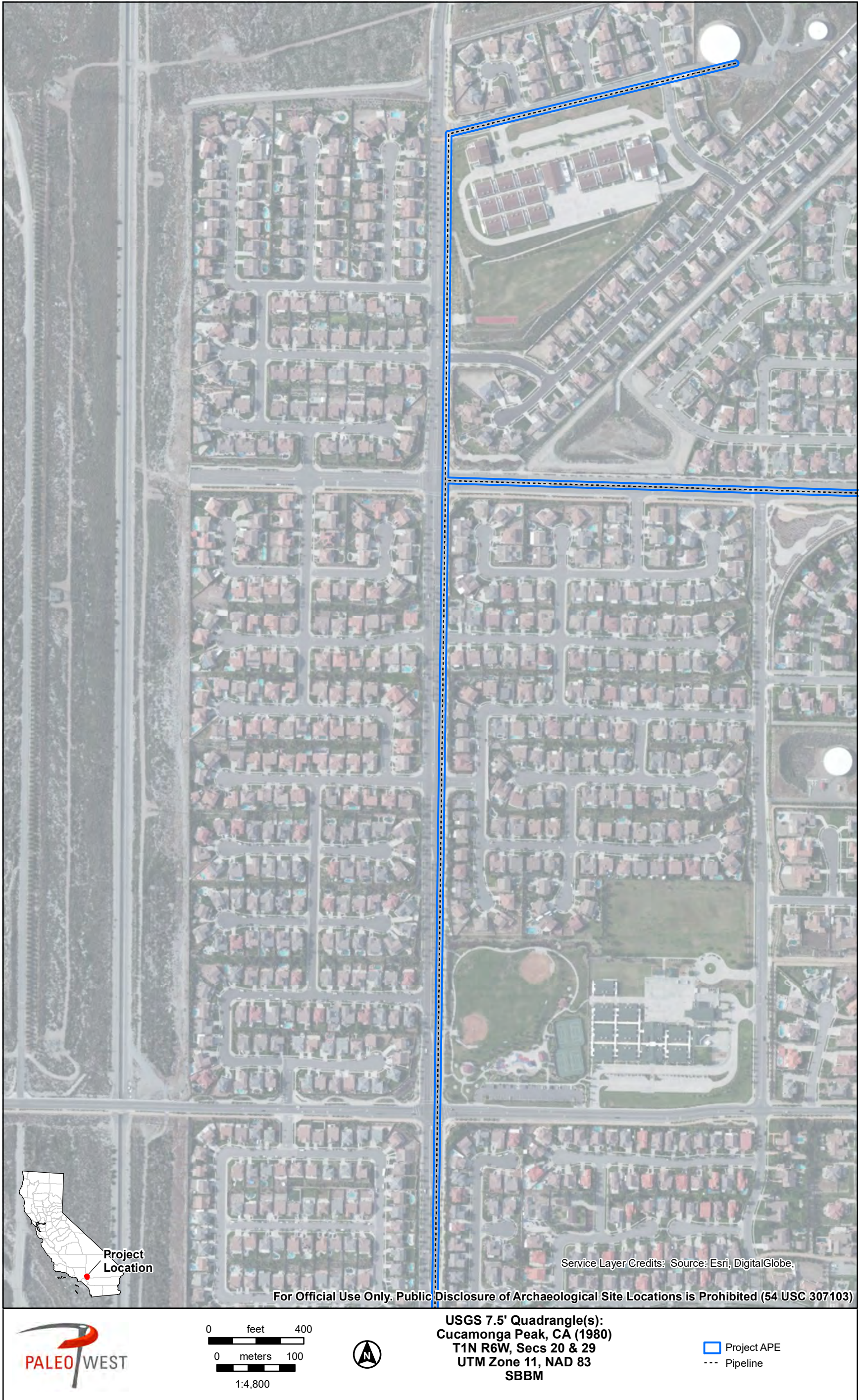


Figure 5-5. Project Resources Map.

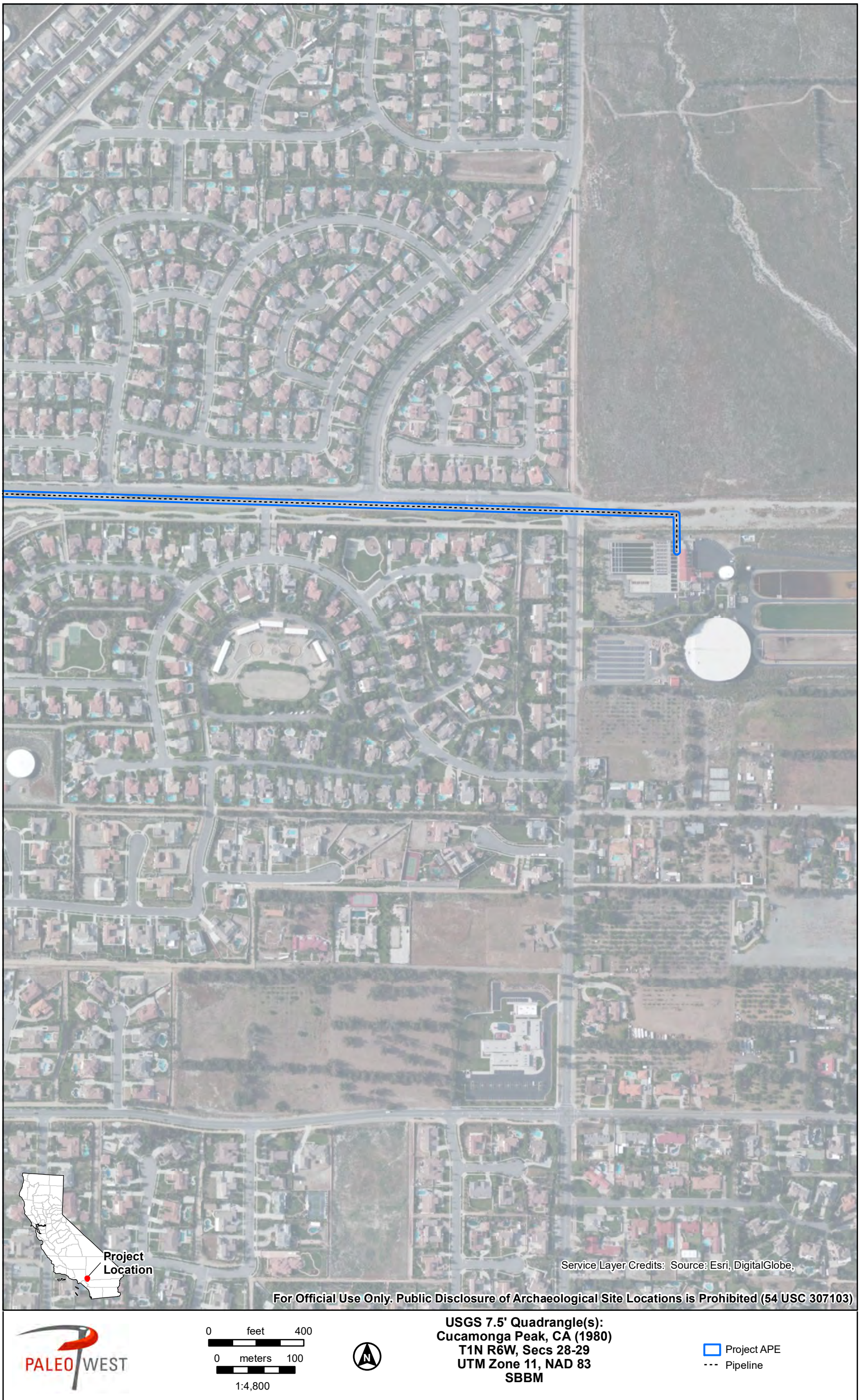


Figure 5-5. Project Resources Map.



Figure 5-5. Project Resources Map.

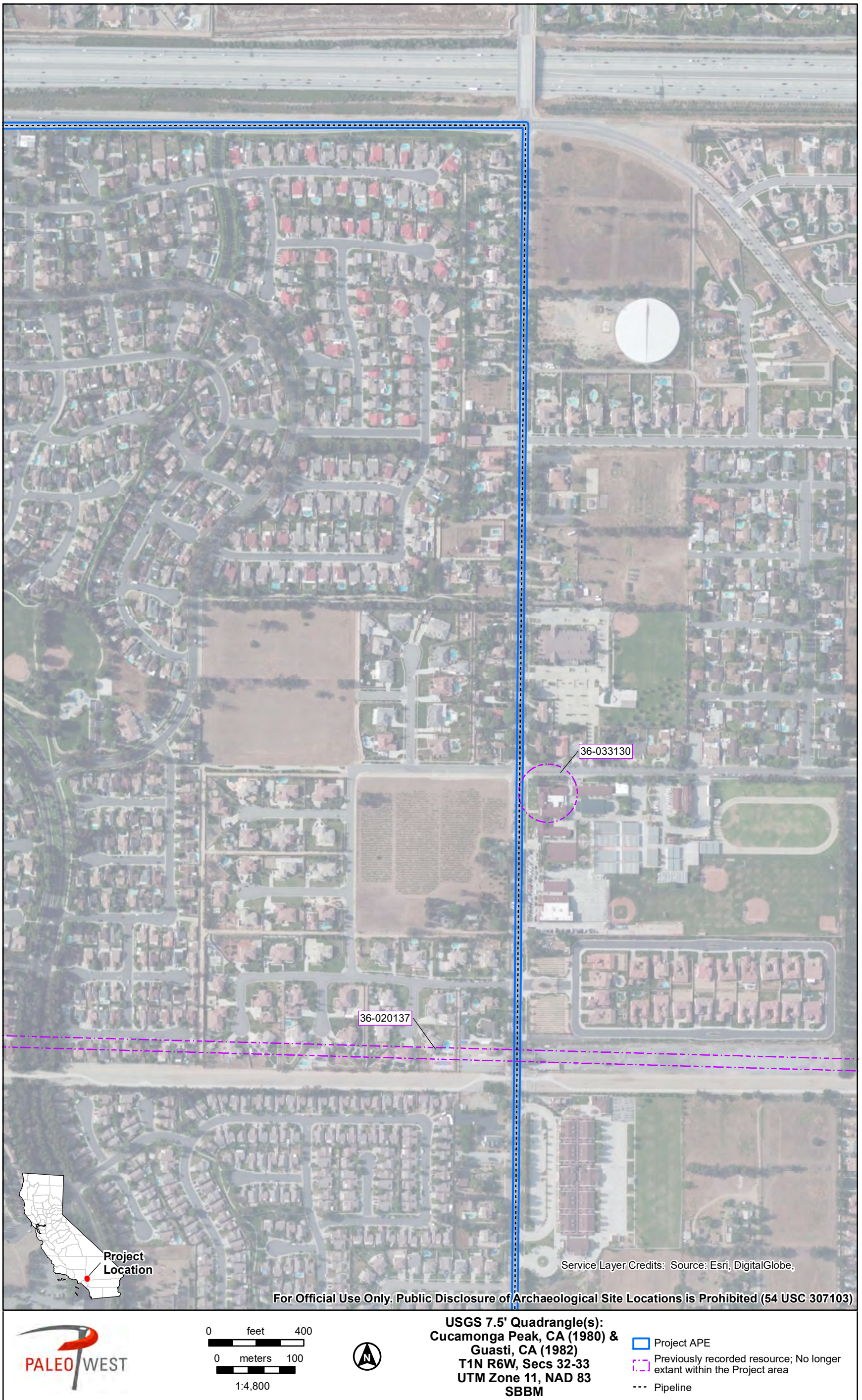


Figure 5-5. Project Resources Map.

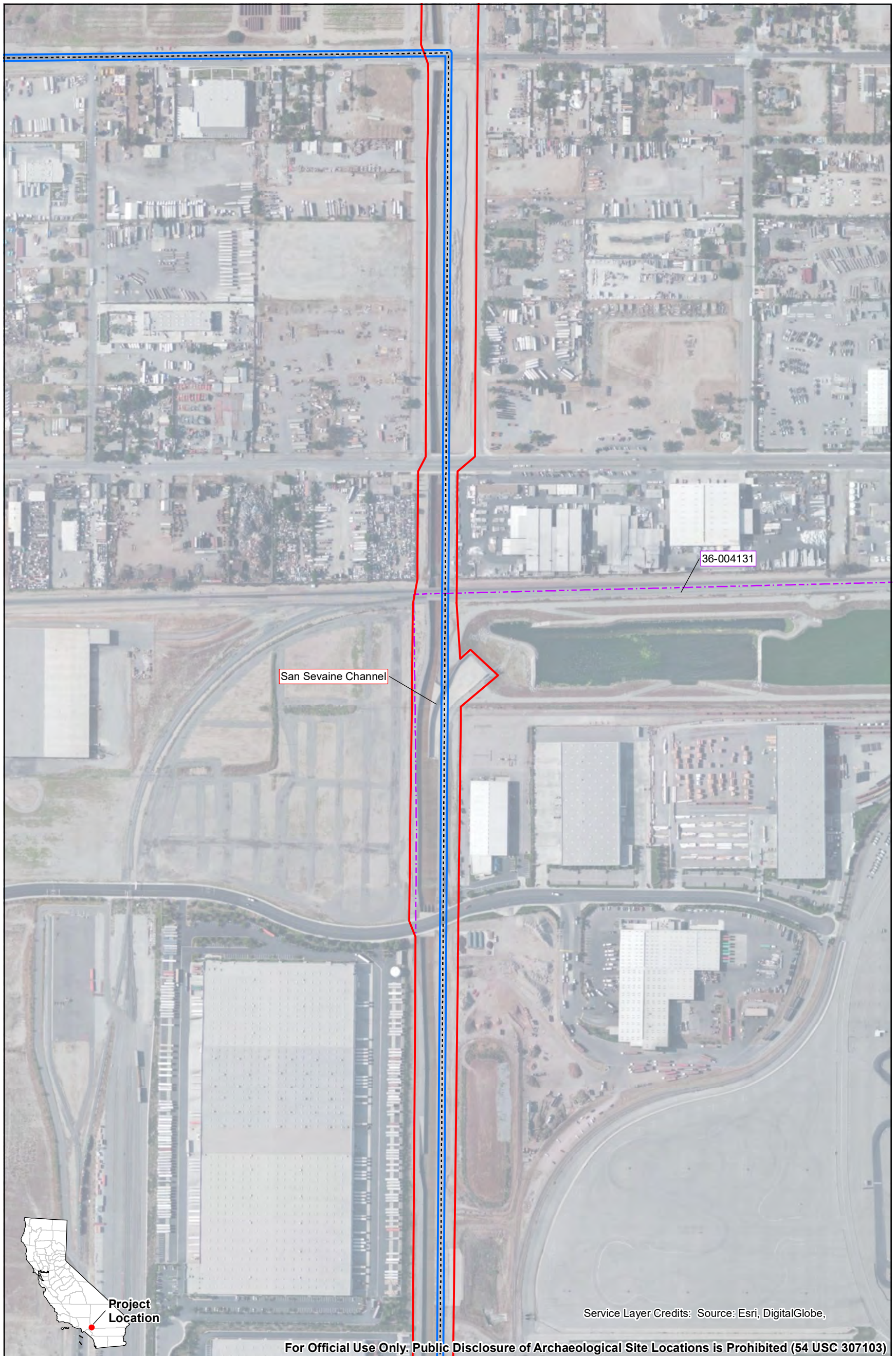




Figure 5-5. Project Resources Map.

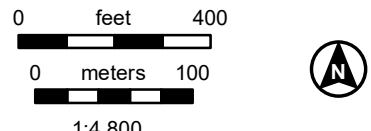


Figure 5-5. Project Resources Map.



Service Layer Credits: Source: Esri, DigitalGlobe,

For Official Use Only. Public Disclosure of Archaeological Site Locations is Prohibited (54 USC 307103)



**USGS 7.5' Quadrangle(s):**  
**Guasti, CA (1982)**  
**T1S R6W, Secs 9 & 16**  
**UTM Zone 11, NAD 83**  
**SBBM**

- Project APE
- Newly recorded resource
- Previously recorded resource; No longer extant within the Project area
- Pipeline

Figure 5-5. Project Resources Map.

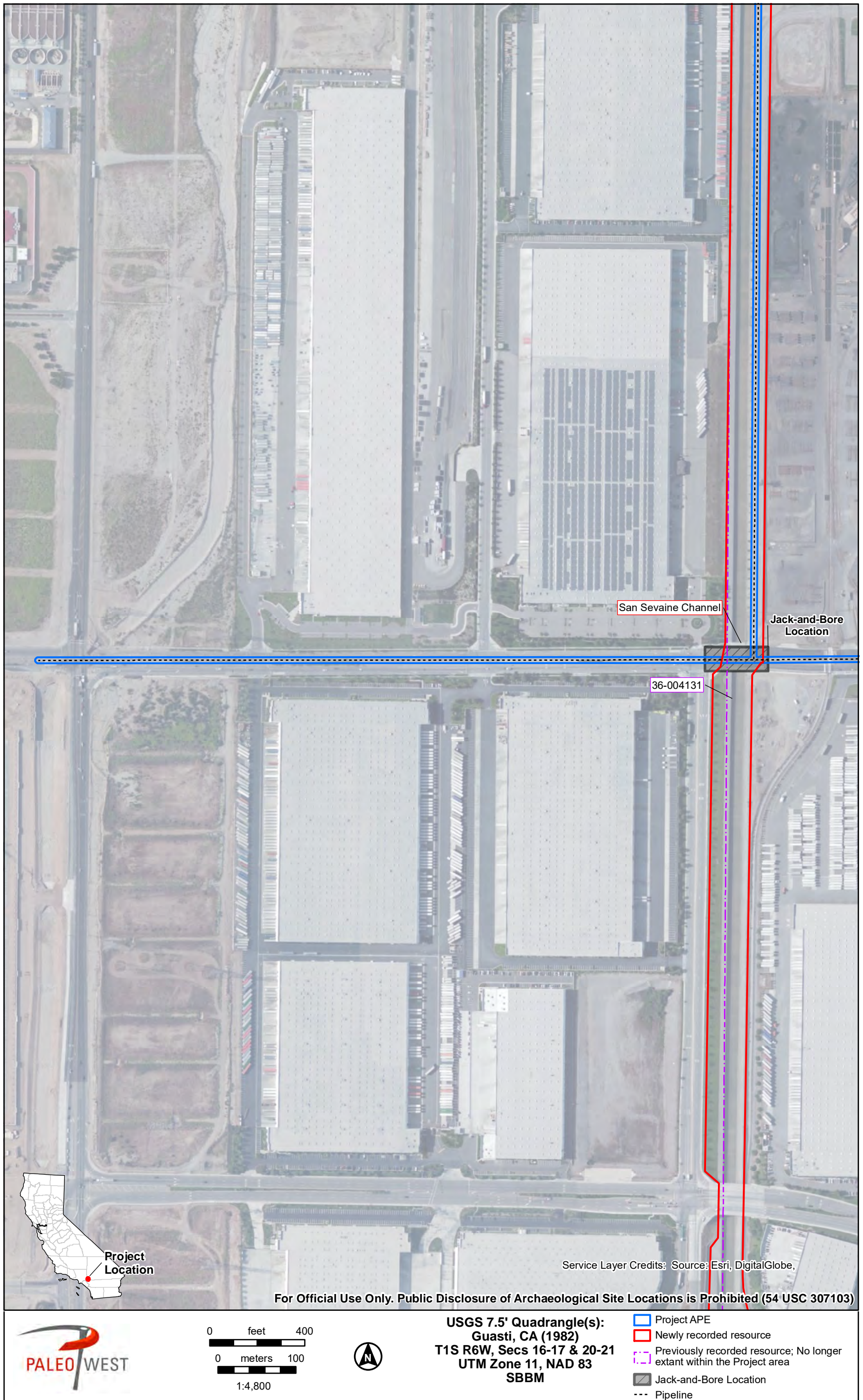


Figure 5-5. Project Resources Map.



Figure 5-5. Project Resources Map.

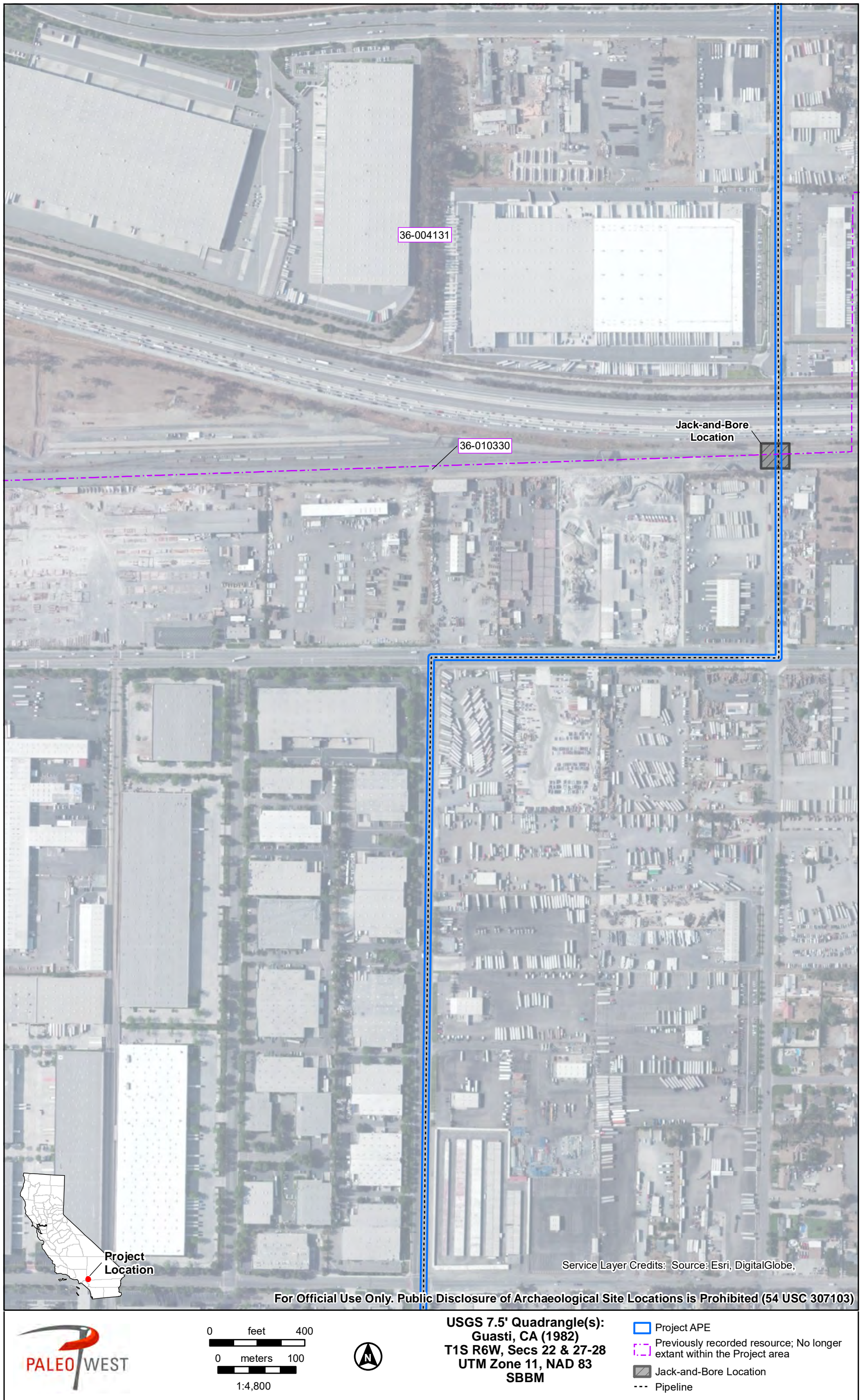
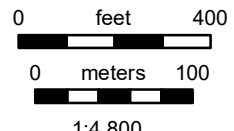


Figure 5-5. Project Resources Map.



Service Layer Credits: Source: Esri, DigitalGlobe,

For Official Use Only. Public Disclosure of Archaeological Site Locations is Prohibited (54 USC 307103)



**USGS 7.5' Quadrangle(s):**  
**Guasti, CA (1982)**  
**T1S R6W, Secs 27-28 & 33-34**  
**UTM Zone 11, NAD 83**  
**SBBM**

Project APE  
 --- Pipeline

Figure 5-5. Project Resources Map.

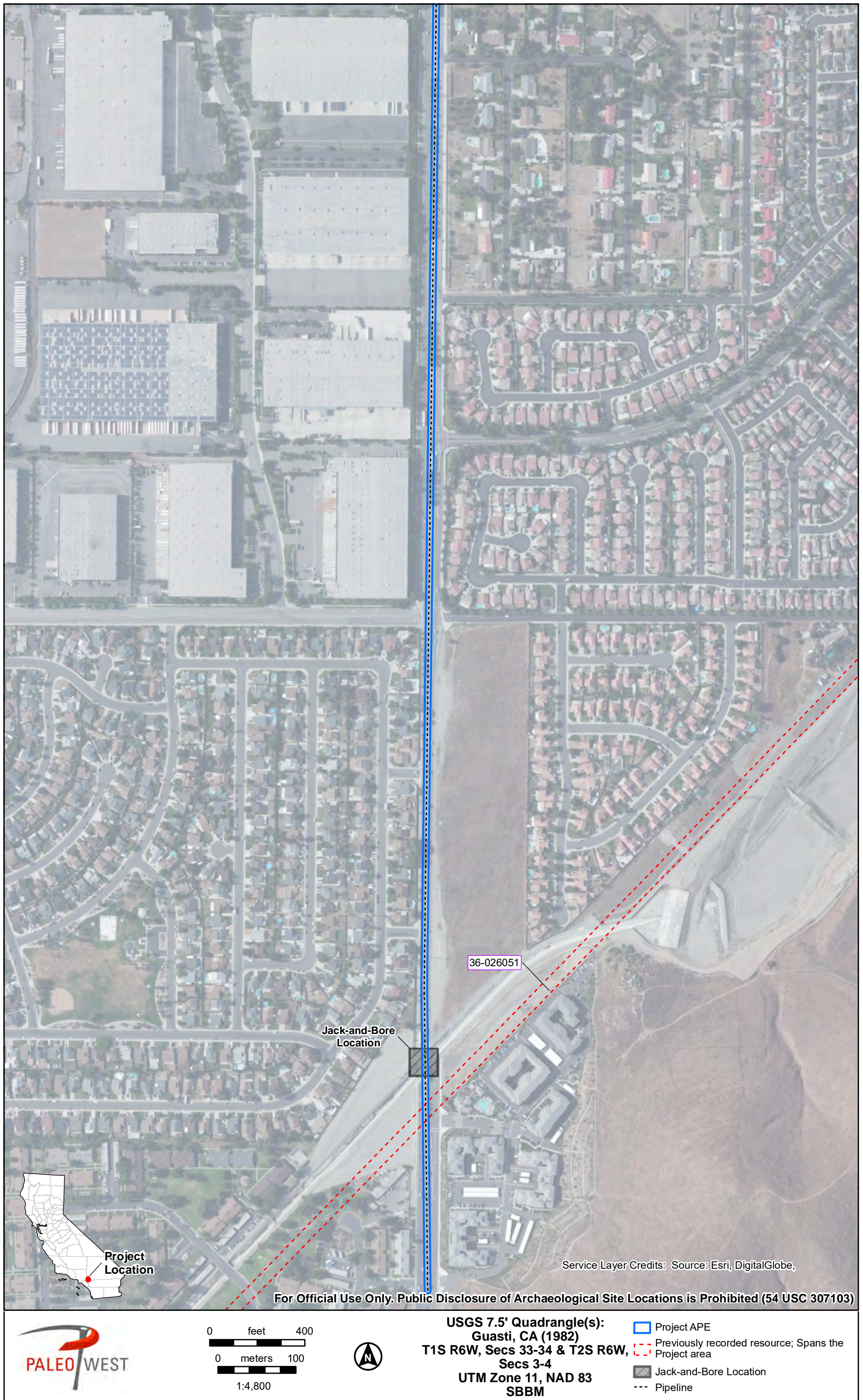


Figure 5-5. Project Resources Map.



Two newly identified historic period built-environment resources were recorded in the APE during the survey (Figure 5-5). These resources include a previously undocumented segment of Foothill Boulevard/ U.S. Highway 66 (P-36-002910) and the San Sevaine Channel. A description and summary of the evaluation efforts for these resources is provided below (see DPR 523 forms in Appendix C).

### 5.2.1 Previously Recorded Archaeological Resources

#### **P-36-007099/CA-SBR-007099H**

P-36-007099 consisted of a 1,000-ft-long segment of an underground sewer line that ran along Etiwanda Avenue south of Foothill Boulevard. The DPR form noted the resource was removed from this location at the time of its recordation and is no longer extant. No evidence of the resource was observed during the survey (Figure 5-6).

#### **P-36-007322/CA-SBR-007322H**

Revisit to the mapped location of P-36-007322 found no evidence of the historic period refuse scatter. The resource is mapped in the vicinity of the Interstate 210 Freeway eastbound offramp (**Error! Reference source not found.**). It is likely that the resource was destroyed during the construction and maintenance of the freeway construction and is no longer extant within the Project APE. A DPR update for this resource is provided in Appendix C.

#### **P-36-033130/CA-SBR-033130**

Survey in the vicinity of P-36-033130 found no evidence of the archaeological site within the Project's APE. The DPR noted that the feature was removed from its original context and placed near the Etiwanda School. Other granitic boulders in the vicinity of the school front were examined but none of them appear to be culturally modified. A previous attempt to locate the resource in 1987 was also unsuccessful. It is possible that the resource has been destroyed by the placement of utility boxes and vaults located at the same corner (Figure 5-8). Based on these findings, PaleoWest concludes that the resource is no longer extant within the Project APE. A DPR update for this resource is provided in Appendix C.

### 5.2.2 Previously Recorded Historic Period Built-Environment Resources

#### **P-36-004131/CA-SBR-004131H (Kaiser Steel Mill)**

A reconnaissance survey within the vicinity of the mapped location of the P-36-004131 found no evidence of the steel mill facility within the Project's APE. Most, if not all, of the Kaiser Steel Mill appears to have been demolished and replaced by a complex of industrial warehouses and an auto speedway. A steel plant owned and operated by the California Steel Industry lies east of the APE. It is not known if this facility contains components of the original Kaiser Steel Mill. Results of the survey indicate that P-36-004131 is no longer extant within the Project APE.

#### **P-36-010330/CA-SBR-010330H (Union Pacific Railroad)**

The portion of UPRR that intersects the proposed Project alignment consists of an in-use rail line located south of Interstate 10. The proposed pipeline will be installed under the active rail line using jack-and-bore drilling. As such, the APE in this portion of the Project underlies P-36-



Figure 5-6. Overview of southern end of location of 36-007099 along Etiwanda Avenue, facing northwest.



Figure 5-7. Overview of previously recorded location of 36-007322; resource is no longer extant, facing southeast



Figure 5-8. Overview of previously recorded location of 36-033130; resource is no longer extant, facing north

010330. The survey confirmed that the UPRR is located adjacent to, but outside of the APE. Because P-36-010330 will not be impacted or affected by the proposed Project, no further consideration is necessary for this resource.

### **P-36-015497 (Base Line Road)**

The segment of Base Line Road within the Project APE intersects Etiwanda Avenue. It consists of an in-use six-lane road with two turn lanes. A hardscaped center divider bisects the opposing lanes. This segment of the resource is approximately 90-ft-wide and is paved. Although some cracks and ruts are noted in the roadway, the resource appears to be well maintained with modern materials and construction (Figure 5-9). A DPR update for this portion of Base Line Road is included in Appendix C.

### ***NRHP and CRHR Evaluation***

This segment of Base Line Road does not appear to meet any criterion for listing in the NRHP or CRHR. The road is historically associated with the Southern California Baseline of 1853. However, the survey line itself is an imaginary map line, with no physical manifestation of it or the survey markers located within or adjacent to the Project APE (George and Smallwood 2014). Furthermore, archival research found no indication that it is associated with significant persons in history. Thus, it does not appear eligible for listing on the NRHP Criterion A/CRHR Criterion 1 and NRHP Criterion B/CRHR Criterion 2. Although first constructed as a simple dirt road, it has been expanded over time into a six-lane asphalt-concrete roadway. Today, the roadway is completely modern in its appearance, design, construction, and materials and does



Figure 5-9. Overview of segment of Baseline Road that intersects the Project and Etiwanda Avenue from the southwest corner of the intersection, facing northeast

not exhibit any architectural or engineering merits that would set it apart from the many similar roads in the region. Therefore, this segment of Base Line Road does not appear eligible for the NRHP Criterion C/CRHR Criterion 3. Finally, it does not have the potential to yield any information important to the study of our local, state, or national history and is therefore not eligible under NRHP Criterion D/CRHR Criterion 4.

### **P-36-020137/CA-SBR-015904H (Pacific Electric San Bernardino Line; Pacific Electric Southern Pacific Alignment)**

An intensive survey within the vicinity of the mapped location of the P-36-020137 found no evidence of the resource within the Project APE. All traces of the resource have been removed and replaced with a modern walking/biking path (Figure 5-10). A pillar on the west side of Etiwanda Avenue marks and commemorates the former Pacific Electric alignment. Based on these findings, PaleoWest concludes that the resource is no longer extant within the Project APE.

### **P-36-026051 (Devers-San Bernardino 22kV; SCE Hayfield-Chino 220kV Transmission Line)**

This transmission line is composed of a series lattice steel, type-S suspension towers that measure approximately 50 ft wide and 150 ft tall. The transmission towers have a wide set base placed in concrete anchor footings. The towers taper upward, supporting a three-phase double circuit configuration (Figure 5-11). Results of the survey indicate that the transmission line spans the Project APE. As no towers or structures associated with P-36-026051 are located



Figure 5-10. Overview of segment of former Pacific Electric Line at Etiwanda Avenue; rail line has been demolished and converted to a walking/bike path, facing southeast



Figure 5-11. Overview of segment of SCE transmission line (P-36-026051) from the east side of Country Village Road, facing southwest

in the Project APE, PaleoWest concludes the resource will not be impacted or affected by the proposed Project and no further consideration is necessary.

### 5.2.3 Newly Recorded Historic Period Built-Environment Resources

#### **San Sevaine Channel**

This resource consists of a three-mi-long segment of the historic-era San Sevaine Channel in the cities of Fontana and Rancho Cucamonga. The northernmost recorded point commences at Foothill Boulevard and extends south to Slover Avenue. The flood control channel consists of a rectangular concrete open channel that ranges from 30- to 50-ft in width with an approximate depth of 15 ft. The edges of the concrete structure are lined with 6-ft-tall chain link fence and a paved access road runs alongside the channel. Associated structures include wall outfalls, basin outlet structures, and reinforced concrete overcrossings that carry vehicular and railroad traffic over the channel (Figure 5-12).

The San Sevaine Channel carries water from East Etiwanda and San Sevaine creeks. The north end of the San Sevaine Channel is fed through a wash at the base of foothills of the San Gabriel Mountains, north of Wilson Avenue in Rancho Cucamonga. The wash feeds into five San Sevaine basins with an outfall into the East Etiwanda Channel just north of Interstate 210 that continues south as the San Sevaine Channel. The north end the East Etiwanda Channel commences at the Etiwanda Dam and Debris Basin just north of Wilson Avenue to the outfall from San Sevaine Basin.

The combined creeks of the San Sevaine Channel travel approximately 0.8 mi south along the former Pacific Electric Railroad alignment continuing in a southwestern alignment for approximately 1.4 miles to the intersection of East Avenue and E. Foothill Boulevard. The channel travels directly south for 5 miles into Riverside County, then continues in a southeasterly path for approximately 2.15 miles to the Santa Ana River.

The recorded segment of the San Sevaine Channel was constructed in different stages at different times. The northern 1-mi-long section was an underground pipe installed between 1948 and 1952 that carried East Etiwanda Creek water. The center 1-mi-long section dates to 1942 and was a storm water channel that rerouted the San Sevaine Creek around the Kaiser Steel Mill property that terminated at San Bernardino Avenue. The southern 1-mi-long section was an open channel that continued just past Slover Avenue and was constructed between 1952 and 1959. Between 1996 and 2009, all of the historic-era materials and different channel designs along the 11-mile-long San Sevaine channelized creek were improved through the efforts of the San Bernardino County Flood Control District and the Riverside County Flood Control District into the existing cohesive rectangular concrete open channel in place today.

#### ***NRHP and CRHR Evaluation***

The 3-mi-long segment of San Sevaine Channel recorded during the current survey effort consists of two channelized creek segments that were constructed between 1942 and 1959 using different techniques and materials. The entire San Sevaine Channel was improved between 1996 and 2009 with the existing channel replaced and upgraded with a rectangular concrete open channel structure.



Figure 5-12. Overview of San Sevaine Channel at intersection of Hickory and Whittram avenues (BNSF Railroad crossing in background), facing south.

The San Sevaine Channel, including the segment recorded and evaluated during this effort, functions to drain water from the East Etiwanda and San Sevaine creeks, reducing the possibility of property damages from periodic flooding. The subject channel segment is one of many flood control structures constructed along the foothills of the San Gabriel Mountains. It constitutes a minor, utilitarian feature within the larger, overall scheme of flood control development within the region, and is one of many similar flood protective works built throughout southern California. It does not stand out as an important aspect of flood control and is not a principal feature within the larger system of flood control in this region. The channel is not an important engineering project within the history and development of San Bernardino County and is not known to be directly associated with any other important historical events. Therefore, San Sevaine Channel is not eligible under NRHP Criterion A/CRHR Criterion 1.

Research into the history of the channelization efforts of the East Etiwanda and San Sevaine creeks did not result in the identification of any association with noteworthy people in the past. Even if such a person was identified, this channelized creek system would unlikely be the locus of their importance. As there is no evidence the channel has an important association with any person or persons who made significant contributions to history at the local, state, or national level, the channel is not eligible under NRHP Criterion B/CRHR Criterion 2.

The San Sevaine Channel does not exemplify a type, period, or methods of construction, and does not possess high artistic merit, or appear to be the work of a master. Early channelization efforts employed techniques and materials common to their time of construction. The improved San Sevaine Channel is a rectangular concrete open channel that is a common

engineering type implemented across California and the United States. It is therefore not eligible under NRHP Criterion C/CRHR Criterion 3.

The San Sevaine Channel does not appear to be a source, or likely source, of important information regarding history, building materials, construction techniques, or advancements in floodwater control or engineering. Such structures are well documented in the historic record and use common construction materials and techniques. Therefore, the channel is not eligible under NRHP Criterion D/CRHR Criterion 4.

In conclusion San Sevaine Channel, including the segment recorded and evaluated during the current effort, does not meet the eligibility criteria for listing in the NRHP or CRHR.

### **Foothill Boulevard/U.S. Highway 66 (36-002910)**

Sections of U.S. Highway 66 in San Bernardino County have recorded 28 times between 1977 and 2009. Research conducted prior to field work indicated that the section of Foothill Boulevard intersecting the Project APE is part of the former alignment of U.S. Highway 66. Because this portion of U.S. Highway 66 had not been previously documented, the segment was recorded by PaleoWest as part of the current survey effort.

The recorded segment of Foothill Boulevard/U.S. Highway 66 lies at the intersection with Etiwanda Avenue and serves as a main throughway for the city of Rancho Cucamonga (Figure 5-13). It consists of an approximately 105-ft-long segment of asphalt-paved roadway with two center turn lanes. The road at this location consists of six lanes and is 84-ft wide. The pavement is fairly even but shows evidence of having been cut and repaired for utilities trenching. This segment of road is flanked by vacant lots to the northeast, southeast, and northwest; a shopping complex exists to the southwest.

### ***NRHP and CRHR Evaluation***

U.S. Highway 66 is listed on the NRHP and is considered significant under criteria A and C. In 2011, Mead & Hunt, Inc. submitted a NRHP Multiple Property Documentation (MPD) Form for U.S. Highway 66 in California that was certified by the State Historic Preservation Office and the Keeper of the National Register (Roland et al. 2011). The MPD form identified character-defining features (CDFs) of highway segments (still in use and abandoned) which included original surface material associated with its period of significance (1926-1974) (sections of gravel, bituminous/asphalt, concrete, etc.) and the presence of road-related structures (culverts; retaining walls; spillways; and guardrails). Additional CDFs were identified in relationship to their original construction setting (urban and desert/rural). When the section of Foothill Boulevard/U.S. Highway 66 recorded by PaleoWest was originally constructed, it was located in rural agricultural lands that connected the communities of Cucamonga, Rialto, and San Bernardino. The CDFs for desert/rural segments include graded portions of road shoulder; banked curves; side slopes; and roadbed raised from surrounding landscape (Roland et al. 2011: F88-F89).

Per the integrity guidance provided in the National Register Nomination,

“To meet the requirements for National Register listing under Criterion A, highway and road-related structures should retain integrity of location, association, feeling, and setting as these are important to establish the properties’ relationship to the transportation development of U.S. Highway 66. Integrity of design, materials, and





Figure 5-13. Overview of Foothill Boulevard/ U.S. Highway 66 at intersection with Etiwanda Avenue, facing south.

workmanship are also needed but are less important to establishing the relationship with U.S. Highway 66. Slight realignment from the original alignment is not enough to make an otherwise eligible road segment not eligible. Realignment that was completed during the period of significance can be eligible as it tells a story of the evolution of the route. A road segment and/or road-related structures retain integrity of setting and feeling if a sense of the automobile travel experience on U.S. Highway 66 during the period of significance can be understood. The length of road segment and the retention of landscape and built environment features from the period of significance with limited non-historic age intrusions are determinants in measuring these areas of integrity. Sections must be long enough to convey the sense of a continuous road across the California desert or through the urban environs of the Los Angeles basin” (Roland et al. of Mead & Hunt, Inc. 2011: F89).

Using these integrity parameters on the segment of Foothill Boulevard/U.S. Highway 66 at the intersection with Etiwanda Avenue, the road retains integrity of location because it has not been realigned and its continued use as a primary roadway means it retains integrity of association with U.S. Highway 66. The expansion of the rural four-lane road at this location into a six-lane road with added turn lanes with medians, modern curbs, sidewalks, lighting, and traffic signals has affected the design, workmanship, and materials of the original rural four-lane highway. The setting of U.S. Highway 66 at this location has changed from open rural land with small farms and orchards that lined the highway to dense urban residential and commercial development. The change in setting and the change in design, workmanship, and materials of the original rural four-lane highway has resulted in a total loss of feeling as a rural stretch of U.S. Highway 66 through this community. Because the portion of Foothill Boulevard/U.S.

Highway 66 within the Project APE has been altered over time and because the visual integrity of the surrounding area has been fundamentally compromised, this road segment does not contribute to the overall significance of the historic property.

## 6.0 FINDINGS AND RECOMMENDATIONS

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The results of the cultural resources records search, Native American outreach, archival research, and field survey identified segments of three historic period built-environment resources in the Project APE – Base Line Road (P-36-015497), the San Sevaine Channel, and Foothill Boulevard/U.S. Highway 66 (P-36-002910). Significance evaluations indicate that none of the resources meet eligibility criteria for listing in the NRHP or the CRHR. The study did not identify any other cultural resources in the Project APE.

Sediments throughout the APE have been extensively disturbed by the construction of roadways and flood control channels, as well as the installation of underground utilities. Therefore, it is unlikely that intact prehistoric archaeological deposits would be encountered in the APE. The 1920s sewer line (P-36-007099) that was previously identified under Etiwanda Avenue suggests that portions of the APE may be sensitive for buried historic period infrastructural remains. Record search results indicate that several underground utility replacement and improvement projects have taken place along Etiwanda Avenue over the last several decades. Although construction activities associated within these projects have likely impacted these early infrastructure systems, it is possible that portions of these systems are still extant.

PaleoWest recommends that initial Project-related ground-disturbing activities along Etiwanda Avenue be observed by an archaeological monitor. If archaeological resources are encountered during ground-disturbing activities, work in the immediate area shall halt and the find shall be evaluated for NRHP and CRHR eligibility. If monitoring of the initial ground-disturbing activities indicates there is a low potential for encountering intact historic-era infrastructural systems within the APE, monitoring activities may be reduced or halted at the discretion of the qualified archaeologist.

Based on these findings, PaleoWest recommends a finding of *less than significant impacts to historical resources with mitigation incorporated* under CEQA and *no adverse effects to historic properties* under Section 106 of NHPA.

## 7.0 PREPARER'S QUALIFICATIONS

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PaleoWest Senior Archaeologist Roberta Thomas (M.A. Anthropology, California State University, Long Beach) served as project manager and oversaw fieldwork for this cultural resource investigation. Ms. Thomas has more than 13 years of experience as project manager and field supervisor on various cultural resource management projects in southern California. Based on her education and experience she meets the Secretary of the Interior's Professional Qualification Standards for work in archaeology and is certified by the Register of Professional Archaeologists (RPA).

PaleoWest Senior Architectural Historian Garret (M.A. Public History with a concentration in Cultural Resource Management, California State University, Sacramento) authored and conducted senior review of this cultural resource investigation. Mr. Root has more than 12 years of experience working as a consulting historian and architectural historian on a wide variety of projects throughout California. Based on his education and experience he meets the Secretary of the Interior's Professional Qualification Standards for work in history and architectural history.

PaleoWest Associate Archaeologist Gena Granger (M.A. Anthropology, California State University, Long Beach) conducted fieldwork for this cultural resource investigation. Ms. Granger has more than 10 years of experience working as a consulting archaeologist on a wide variety of projects throughout the southern California. Based on her education and experience she meets the Secretary of the Interior's Professional Qualification Standards for work in archaeology and is certified by the RPA.

PaleoWest Associate Architectural Historian Heather Miller (M.A. Public History with a concentration in Cultural Resource Management, California State University, Sacramento) conducted research and authored this cultural resource investigation. Ms. Miller has more than 12 years of experience working as a consulting historian and architectural historian on a wide variety of projects throughout California. Based on her education and experience she meets the Secretary of the Interior's Professional Qualification Standards for work in history and architectural history.

PaleoWest Senior Archaeologist, Tiffany Clark (Ph.D. Anthropology, Arizona State University, Tempe) served as Principal Investigator and provided senior oversight for this cultural resource investigation and final senior review and quality assurance/quality control for this report. Dr. Clark has more than 25 years of experience cultural resource management in California, Arizona, and New Mexico. Based on her education and experience she exceeds the Secretary of the Interior's Professional Qualification Standards for work in archaeology and is certified by the RPA.

## 8.0 REFERENCES

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- Ashkar, S.  
1999 Department of Parks and Recreation 523 Form P-36-010330. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Ballester, Daniel  
2014 Department of Parks and Recreation 523 Form for 36-026051. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Bean, Lowell J.  
1978 Cahuilla. In *Handbook of North American Indians, Vol. 8 (California)*, edited by R.F. Heizer, pp. 575–587. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Bean, L. J., and K. S. Saubel  
1972 *TEMALPAKH, Cahuilla Indian Knowledge and Usage of Plants*. Malki Museum Press, Banning, CA.
- Bean, Lowell J., and Charles R. Smith  
1978 Serrano. In *Handbook of North American Indians, Volume 8: California* (edited by R.F. Heizer), pp. 571–574. Smithsonian Institution, Washington, D.C.
- Bean, Lowell J., and Sylvia B. Vane  
2001 *Eastside Reservoir Project Phase III: Ethnography and Ethnohistory*. Report prepared by Cultural Systems Research, Inc., Menlo Park, California. Report submitted to the Metropolitan Water District of Southern California, Los Angeles, California.
- Bouscaren, S.J.  
1987 Department of Parks and Recreation 523 Form for 36-033130. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Brown, John, Jr. and James Body  
1922 *History of San Bernardino and Riverside Counties*. Volume 1. The Western Historical Society. The Lewis Publishing Co., Chicago, IL. Electronic book.
- California Governor's Office of Planning and Research  
2015 *CEQA: California Environmental Quality Act, Statutes and Guidelines*. State of California, Sacramento, California.
- Carmack, S., D. Howell-Ardila, S. Treffers, S. Zamudio-Gurrola, R. Perzel.  
2019 *Historic Resources Survey, City of Indio General Plan Update, City of Indio, Riverside County, California*. Rincon Consultants Project No. 17-03923.

- Chasteen, Carrie  
2015 *Historical Resources Evaluation Report for the I-10 Corridor Improvement Project*. Report prepared by Applied EarthWorks, Inc., Pasadena, California. Report submitted to State of California Department of Transportation, District 8, San Bernardino, California.
- City of Fontana  
2021 "About the City of Fontana." Available at: <https://www.fontana.org/31/About-Us> (Accessed August 2021).
- City of Fontana, et al.  
1989 *Upper Etiwanda Creek and San Sevaine Creek Area Drainage Plans*. September.
- City of Rancho Cucamonga  
2021 "City of Rancho Cucamonga History: Portal to the Past." Available at: <https://storymaps.arcgis.com/stories/8446a917d02145f48ed8c9eca30c7d5d> (Accessed August 2021).
- Cleland, James H.  
1998 From Paleo-Indian to Protohistoric: The Chronology of Human Occupation of the Salton Sea Test Base. KEA Environmental, Inc. *Proceedings of the Society for California Archaeology*, Volume 12, pp. 10–14.
- Cucamonga Valley Water District (CVWD)  
2021 "Cucamonga Valley Water District 2020 Urban Water Management Plan." Available at: <https://www.cvwdwater.com/DocumentCenter/View/4741/Final-Cucamonga-Valley-Water-District-2020-UWMP?bidId=> (Accessed August 2021).
- Cunningham, Robert, John O' Conner, and Steve Wintergerst  
2018 Department of Parks and Recreation 523 Form for 36-026051. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Davidson, L, R. Goodwin, and B. Smith  
2012 Department of Parks and Recreation 523 Form for 36-026051. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Douglas, R. C.  
1981 Archaeological, Historical/Ethnohistorical, and Paleontological Assessment, Weir Canyon Park-Road Study, Orange County, California. Larry Seeman Associates, Tustin. Manuscript on file, University of California Institute of Archaeology, Los Angeles, California.
- Edwards, Kenneth L.  
1983 *Master Plan for the San Sevaine Channel, Riverside County Flood Control and Water Conservation District, Riverside, California*. April.

- Fulton, Phil  
 2006 Department of Parks and Recreation 523 Form for 36-020137. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Graumlich, L. J.  
 1993 A 1000-year Record of Temperature and Precipitation in the Sierra Nevada. *Quaternary Research* 39(2):249–255.
- Geiger, Maynard, O.F.M., and Clement W. Meighan  
 1976 *As the Padres Saw Them: California Indian Life and customs as Reported by the Franciscan Missionaries, 1913-1815*. Santa Barbara Mission Archive Library, Santa Barbara, California.
- Gentilcore, R.  
 (1960). Ontario, California and the Agricultural Boom of the 1880s. *Agricultural History*, 34 (2), 77-87. Available at: <http://www.jstor.org/stable/3740001> (Accessed August 2021).
- Goldberg, S. K., C. J. Klink, J. A. Onken, W. G. Spaulding, M. C. Robinson, M. C. Horne, and R. L. McKim  
 2001 *Metropolitan Water District of Southern California Eastside Reservoir Project Final Report of Archaeological Investigations*, Vol. IV: Synthesis of Findings. Report prepared by Applied EarthWorks, Inc., Hemet, California. Report submitted to the Metropolitan Water District of Southern California, Los Angeles, California.
- Google Earth Pro  
 2020 Fontana, CA. Aerial imagery. April.
- Hall, William Hammond  
 1888 "Detail Irrigation Map Ontario Sheet" in *Irrigation in California (Southern) – The Field, Water-Supply, and Works, Organization and Operation in San Diego, San Bernardino, and Los Angeles Counties*. Sacramento, CA: State Printing Office.
- Hansberger, Dennis  
 1975 Point of Historical Interest Form for P-36-004131. Form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Hansen, Janet  
 2005 Department of Parks and Recreation 523 Form for 36-020137. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Hickcox, Robert L.  
 1980 Oral History Interview with Robert L. Hickcox, Interviewed by Betty Maxie. Available through Claremont Colleges Digital Library at: <https://ccdlib.claremont.edu/digital/collection/cwd/id/11683> (Accessed August 2021).

Hogan, Michael

- 1992 University of California Archaeological Research Unit Archaeological Site Record for CA-SBR-7099H. On-file at the Report on file, Eastern information Center, University of California, Riverside.

Hyde, V., and E. Elliot

- 1994 Yumayk: Long Ago. University of California Press, Berkeley.

*Los Angeles Herald*

- 1897 "Etiwanda." February 4: 2.  
1897 "Etiwanda." April 7: 7.  
1898 "Etiwanda." January 21: 7.

Lerch, M.K.

- 1982 Department of Parks and Recreation 523 Form for 36-033130. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

McLean, Deborah, Steve Conkling, Jani Monk, and Judy Berryman

- 1997 Department of Parks and Recreation 523 Form Update for P-36-004131. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

McDougall, D. P., M. C. Horne, and J. Sander

- 2003 *Cultural Resources Survey of a Portion of the Lake Mathews Inundation Zone*. Report prepared by Applied EarthWorks, Inc., Hemet, California. Report submitted to the Metropolitan Water District of Southern California, Los Angeles, California.

McGroarty, John Steven

- 1914 Southern California Comprising the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura. Southern California Panama Expositions, Los Angeles.

Meighan, Clement W.

- 1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10(2):215–227.

Moratto, Michael J.

- 1984 *California Archaeology*. Academic Press, New York.

National Parks Service (NPS)

- 1995 "National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation."

NETROnline

- 1938 Fontana, CA. Historical aerial imagery. Available at: <https://www.historicaerials.com/viewer> (Accessed August 2021).



NETROnline (cont.)

- 1948 Fontana, CA. Historical aerial imagery. Available at:  
<https://www.historicaerials.com/viewer> (Accessed August 2021).
- 1959 Fontana, CA. Historical aerial imagery. Available at:  
<https://www.historicaerials.com/viewer> (Accessed August 2021).

Horne, Melinda C., and Dennis P. McDougall

- 2003 *Cultural Resources Element of the City of Riverside General Plan Update*. Applied EarthWorks, Inc., Hemet, California. Submitted to Cotton Bridges and Associates, Pasadena, California.

Paul, Daniel

- 2012 Department of Parks and Recreation 523 Form Update for P-36-010330. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

Peters, Gary L., David W. Lantis, Rodney Steiner, and Arthur E. Karinen

- 1999 *California*. 3<sup>rd</sup> ed. Kendall/Hunt, Dubuque, Iowa

San Bernardino County

- n.d. "Water Source Management: The Evolution of Today's Water Agency." Available through San Bernardino County Special Districts Department at:  
<http://web.sbcnep.org/modules/showdocument.aspx?documentid=918> (Accessed August 2021).
- 2009 "County Marks Completion of Major Flood Control Project." Available at:  
<http://www.sbcounty.gov/uploads/CAO/pressreleases/content/sansevainededicatio nrelease4-9-09.pdf> (Accessed August 2021). April 9.

San Bernardino County Recorder

- 1882 "Preliminary Map of the Etiwanda Colony Lands." Map Book 2, Page 24. Available through San Bernardino County Public Works at:  
<http://170.164.60.159/WebLink/DocView.aspx?id=550893&dbid=3&searchid=65e498a2-7dd5-476f-8ae9-ae9815b3b94e&cr=1> (Accessed August 2021).

*San Bernardino County Sun*

- 1942 "County Takes Over Acreage Near Fontana." April 14: 10.
- 1942 "County Forces Rushing Flood Control Work." December 4: 7.
- 1989 "County Weighs Flood Project in West End." September 11: B1-B2.

Smallwood, Josh

- 2014 Department of Parks and Recreation 523 Form Update for 36-020137. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

- Spaulding, W. Geoffrey  
2001 The Paleoenvironmental Context of the Study Area. In *Applied Earthwork's Metropolitan Water District of Southern California Eastside Reservoir Project, Final Report of Archaeological Investigations, Volume IV: Prehistoric Archaeology Synthesis of Findings*, S. K. Goldberg (ed.). Report on file, Eastern information Center, University of California, Riverside.
- Starr, Kevin  
1991 *Material Dreams: Southern California Through the 1920s*. New York: Oxford University Press.
- Stine, Scott  
1994 Extreme and Persistent Drought in California and Patagonia during Mediaeval Time. *Nature* 369:546–549.
- Sutton, Paul, and Andrea Zeller  
1992 Department of Parks and Recreation 523 Form P-36-0007322. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Tang, Bai "Tom", John J. Eddy, Harry M. Quinn, Terri Jacquemain, Daniel Ballester, and Laura H. Shaker  
2008 Department of Parks and Recreation 523 Form Update for P-36-004131. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- Teal, G.  
1980 Department of Parks and Recreation 523 Form P-36-004131. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- von Till Warren, E., R. H. Crabtree, C. N. Warren, M. Knack, and R. McCarty  
1981 A Cultural Resources Overview of the Colorado Desert Planning Units. U.S. Department of the Interior, Bureau of Land Management, California Desert District, Riverside.
- Tinsley Becker, Wendy L., Steven Treffers and Audry Williams  
2013 Department of Parks and Recreation 523 Form for 36-026051. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.
- True, D. L.  
1966 *Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles, CA.  
1970 *Investigations of a Late Prehistoric Complex in Cuyamaca State Park, San Diego County, California*. Archaeological Survey Monographs No. 1, University of California, Los Angeles, CA.

UCSB (University of Santa Barbara) Library

- 1952a Flight ID AXL-1953b, Frame 35k-111. Historic aerial photography.
- 1952b Flight ID AXL-1953b, Frame 35k-109. Historic aerial photography.

U.S. Geological Survey (USGS)

- 1904 Indio, CA. 30-minute (1:125,000 scale) topographic quadrangle.
- 1907 *Surface Water Supply of the North Pacific Coast Drainage, 1906*. Washington, D.C.: Government Printing Office.
- 1943 Coachella, CA. 15-minute (1:62,500 scale) topographic quadrangle.
- 1947 Santa Ana, CA. 60-minute (1:250,000 scale) topographic quadrangle.
- 1956 Coachella, CA. 15-minute (1:62,500 scale) topographic quadrangle.
- 1956 Indio, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.
- 1959 Santa Ana, CA. 60-minute (1:250,000 scale) topographic quadrangle.
- 1965 Santa Ana, CA. 60-minute (1:250,000 scale) topographic quadrangle.
- 1966 Guasti, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.
- 1972 Indio, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.
- 1973 Guasti, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.
- 1980 Fontana, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.
- 1982 Guasti, CA. 7.5-minute (1:24,000 scale) topographic quadrangle.

Warren, Claude

- 1984 The Desert Region. In *California Archaeology*, by M. J. Moratto. New York, NY: Academic Press.

Waters, M. R.

- 1983 Late Holocene Lacustrine Chronology and Archaeology of Ancient Lake Cahuilla, California. *Quaternary Research* 19: 373–387.

White, Laura S.

- 2004 Department of Parks and Recreation 523 Form for 36-020137. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

Wilke, Phillip J.

- 1976 Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

# **Appendix A. Study Area Report Table**

**Table A-1. Previous Cultural Investigations within the Project Study Area**

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>   | <b>Title</b>   |
|-------------------|-------------|--|--|
| RI-00241          | 1977        | Renee Giansanti  | Environmental Impact Assessment: Archaeological Survey for the Proposed Jurupa Community Services District Alternative 1, Water System, Riverside, County, California                        |
| RI-00283          | 1977        | David M. Van Horn  | Ultrasystems Project # 4333: Archaeological Report   |
| RI-01145          | 1977        | David M. Van Horn  | Ultrasystems Project # 4334: Archaeological Report   |
| RI-01191          | 1981        | D.M. Van Horn  | Archaeological Survey Report: the 64 Acre A. Filippi Winery and Vineyard Near Glen Avon in Unincorporated Riverside County   |
| RI-01506          | 1992        | Seymour, Gregory and David Dook                              | the Santa Ana Regional Interceptor Project, Sawpa-Sari Reaches IV D&E; A Cultural Resource Survey of an 18 Mile Right of Way from Mira Loma To Colton, Riverside & San Bernardino Counties.  |
| RI-02102          | 1987        | Cottrell, M.G.   | Archaeological Resources Assessment Completed for Tract 22293 In Glen Avon Riverside County, California  |
| RI-02309          | 1988        | Scientific Resource Surveys, Inc                             | Archaeological Assessment form: 12.55 Acres in Johnson Canyon, Riverside County, California  |
| RI-02599          | 1989        | Drover, Christopher E.                                       | An Archaeological Assessment of C.F.D. #1 Proposed 1110 Pressure Zone Reservoir Mira Loma, California.   |
| RI-02931          | 1978        | Scientific Resource Surveys, Inc.                            | Archaeological Survey Report on 45 Acres of Property Located at Van Buren Boulevard and Bellegrave Avenue, Prado-Mira Loma District, Riverside County.                                       |
| RI-03122          | 1990        | Drover, Christopher E.                                       | An Archaeological Assessment of Parcel Map 26365, Mira Loma, California  |
| RI-03525          | 1992        | Keller, Jean A.  | An Archaeological Assessment of Tentative Tract Map 27069, 2.84 Acres of Land Near Glen Avon, Riverside County, California   |
| RI-04595          | 2002        | Demcak, Carol R.   | Phase I Archaeological Assessment of A one-Acre Parcel in Mira Loma Area of Riverside County, California   |
| RI-04618          | 2002        | Drover, Christopher E.                                       | An Archaeological Impact Assessment of Mira Loma Commerce Center Parcels, Mira Loma, Riverside County, California  |
| RI-04746          | 2004        | Erika Thal   | Letter Report: Proposed Cellular Tower Project in Riverside County, California, Site Name/Number: CA-8878A/ Mission  |
| RI-05052          | 2003        | Mckenna Et Al.   | A Phase I Cultural Resources Investigation for the Proposed Eastvale Water and Sewer Master Plan, Riverside County, California   |
| RI-05979          | 2003        | Tang, Bai, Michael Hogan, Casey Tibbet, and Daniel Ballester | Historical/Archaeological Resources Survey Report, Jurupa Hills Lindsay Tanks Project, Near the Community of Glen Avon, Riverside County, California   |
| RI-06116          | 2004        | Taniguchi, Christeen   | Letter Report: Records Search Results Ans Site Visit for Sprint Telecommunications Facility Candidate Rv60Xc816D (Truck Center) 377 De forest Court, Mira Loma, Riverside County, California |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>   |
|-------------------|-------------|---|--|
| RI-06812          | 2007        | Tang, Bai "Tom", Michael Hogan, Clarence Bodmer, Thomas Melzer, and Laura H. Shaker | Historical/Archaeological Resources Survey Report, Assessor's Parcel No. 173-160-020, Near the Community of Glen Avon, Riverside County, California                                |
| RI-06899          | 2006        | Mckenna, Jeanette A.  | A Phase I Cultural Resources Investigation, of the SM Realty & Development, LLC, Property, 3810 Conning Street, Riverside, Riverside County, California                            |
| RI-07392          | 2007        | Dice, Michael   | Phase I Cultural Resources Assessment, 3150 Country Village Road, Mira Loma, Riverside County, California  |
| RI-07545          | 2008        | Tang, Bai "Tom" and Michael Hogan   | Phase I Archaeological Assessment: Assessor's Parcel Nos. 156-140-042, -043, and -044, Near the Community of Mira Loma, Riverside County, California                               |
| RI-08001          | 2008        | Jean A. Keller  | A Phase I Cultural Resources Assessment of Plot Plan 20276 Suddhavasaa Buddhist Meditation Center  |
| RI-08171          | 2008        | Jennifer M. Sanka and Marnie Aislin-Kay   | Cultural Resources Assessment Public Safety Enterprise Communication Project Riverside, Orange, San Bernardino, and San Diego Counties, FM 04174400010                             |
| RI-08536          | 2010        | Bai "Tom" Tang, Deirdre Encanacion, Daniel Ballester, and Laura H. Shaker           | Chino Desalter Phase 3 Expansion Project   |
| RI-08658          | 2011        | Wayne H. Bonner and Arabesque Said  | Cultural Resources Records Search and Site Visit Results for T-Mobile USA Candidate IE04158-A  |
| RI-08772          | 2010        | Terri Jacquemain  | Historical/Archaeological Resources Survey Report: Jurupa Community Services District Sewer System Capital Improvements Project, Jurupa Area, Riverside County, California         |
| RI-09000          | 2014        | Bai "Tom" Tang  | Re: Update to Historical/ Archaeological Resources Survey, Chino Desalter Phase 3 Expansion Project, Riverside and San Bernardino Counties, California, CRM TECH Contract No. 2767 |
| RI-09307          | 2014        | David Brunzell  | Cultural Resources Assessment of the CNTU Project, Mira Loma, Unincorporated Riverside County, California (BCR Consulting Project No. TRF1401)                                     |
| RI-09329          | 2015        | Bai Tang, Mariam Dahdul, Daniel Ballester, Harry M. Quinn, and Nina Gallardo        | Identification and Evaluation of Historic Properties: Assessor's Parcel NO. 156-210-093, City of Jurupa Valley, Riverside County, California                                       |
| RI-09341          | 2015        | Jeanette McKenna  | A Phase I Cultural Resources Investigation of the Property at 6240 E. Mission Blvd., Jurupa Valley, Riverside County, California   |
| RI-09564          | 2015        | John Etheridge and MacKensie Cornelius  | Archaeological Survey Report, Iberia/Ensite #23081 (279228), EBI Project No. 6115000017  |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>  |
|-------------------|-------------|---|---|
| RI-09679          | 2016        | Carrie D. Wills, Sarah A. Williams, and Kathleen A Crawford | Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate IE943441 (County Village SCE Lattice Tower Mira Loma Visit #1, M3-T2), 3600 De forest Circle, Mira Loma, Riverside County, California |
| RI-10294          | 2017        | Sarah A. Williams and Carrie D. Wills                       | Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC SL02190 (11060 Mission Boulevard, Mira Loma, Riverside County, California, CASPR No. 3551A06RCA   |
| RI-10336          | 2001        | Fred E. Budinger, Jr.                                       | Letter Report: Verizon Wireless Country Village Cellular Telecommunications Facility at 10180 Granite Hill Drive, Riverside, California   |
| RI-10362          | 2016        | Curt Duke, Matthew Stever, and Benjamin Scherzer            | Cultural and Paleontological Resources Assessment Space Center Mira Loma Jurupa Valley, Riverside County, California  |
| RI-10571          | 2018        | Sarah A. Williams and Carrie D. Wills                       | Cultural Resource Records Search and Site Visit Results for AT&T Mobility, LLC Candidate CLU4471, 3125 Progress Circle, Mira Loma, Riverside County, California (EBI Project Number 6118008686)                                 |
| RI-10696          | 2015        | Karen Sauler and Matthew Beazley                            | Archaeological Assessment TCNS ID #125258 Proposed 70-Foot by 30-Foot (23-Meter by 9-Meter) Lease Area CA16667A (Mira Loma UPRR) 4500 Etiwanda Avenue, Mira Loma, Riverside County, California                                  |
| RI-10732          | 2018        | B. Lloyd, S. Loftus, and M. Pfeiffer                        | Cultural Resources Review and Section 106 Compliance for the Crown Castle #644624 Jurupa Circle site (9220 Granite Hill Drive (APN 173-153-009)), City of Jurupa Valley, Riverside County, California.                          |
| SB-01087          | 1981        | Schroth, Adella   | Archaeological Assessment of the Southridge Village Project, City of Fontana, San Bernardino County   |
| SB-01088          | 1981        | Drummy-Chapel, Vada   | Historical Assessment of Southridge Village   |
| SB-01089          | 1981        | Drummy-Chapel, Vada   | Addendum to Historical Assessment of the Southridge Village Project, City of Fontana, California  |
| SB-01501          | 1985        | Mason, Roger D.   | Cultural Resource Survey Report for the Etiwanda Pipeline and Power Plant EIR   |
| SB-01506          | 1985        | Swope, Karen K. and Meg McDonald                            | Environmental Impact Evaluation: Archaeological Assessment of Tentative Tract 13000, City of Fontana, San Bernardino County, California   |
| SB-01582          | 1986        | Lerch, Michael K.   | Class III Cultural Resources Inventory: San Sevaine Creek Water Project, San Bernardino County, California  |
| SB-01591          | 1986        | Lerch, Michael K.   | Class III Cultural Resources Inventory: Day Creek Water Project, San Bernardino County, California  |
| SB-01613          | 1986        | Budy, Elizabeth E.  | Final Report: Cultural Resource Inventory and Evaluation for Proposed Williams Telecommunication Company's Fiber Optic Cable Right-of-Way: California-Nevada State Line to Etiwanda   |
| SB-01655          | 1987        | Lerch, Michael K.   | Cultural Resource Field Reconnaissance: Caryn Project, West Valley Foothills Community Plan   |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>   |
|-------------------|-------------|---|--|
| SB-01868          | 1989        | Padon, Beth, John Elliott, and Steve Dies   | North Etiwanda Specific Plan: Cultural Resource Assessment   |
| SB-02041          | 1989        | Hammond, Stephen R.   | Negative Archaeological Survey Report: Route 15, 30, Post Mile 7.6/9.3, 11.8/13.1  |
| SB-02316          | 1991        | Mckenna, Jeanette A.  | Cultural Resources Investigations of the Etiwanda North Specific Plan EIR City of Etiwanda, San Bernardino County  |
| SB-02413          | 1991        | Sutton, Paula A.  | First Addendum Archaeological Survey Report for the Construction of the Interstate 15/State Route 30 Interchange In the Cities of Ranch Cucamonga and Fontana In San Bernardino County, Ca |
| SB-02621          | 1992        | Alexandrowicz, J. Steven, Anne Q. Duffield-Stoll, Jeanette A. Mckenna, Susan R. Alexandrowicz, Arthur A. Kuhner, and Eric Scott | Cultural and Paleontological Resources Investigations Within the North Fontana Infrastructure Area, City of Fontana, San Bernardino County, California                                     |
| SB-02851          | 1993        | Landis, Daniel G.   | A Cultural Resources Survey for the Chino Basin Groundwater Storage Program, San Bernardino County, California   |
| SB-02919          | 1994        | Alexandrowicz, J. Stephen and Susan R. Alexandrowicz  | Historic Preservation Investigations of Lot 21, Slover Ave Subdivision Number 1, Ne Corner of Cherry and Slover Avenues, County of San Bernardino, California                              |
| SB-03050          | 1995        | Mckenna, Jeanette A.  | A Cultural Resources Reconnaissance Survey of Westgate Property (1000 +/- Acres) In the City of Fontana, San Bernardino County, California   |
| SB-03063          | 1995        | Sturm, Bradley L., Jani Monk, and Ivan H. Strudwick   | Cultural Resources Survey & National Register Assessment of the Kaiser Steel Mill for the California Speedway Project, Fontana, California   |
| SB-03468*         | 1978        | Erickson, Lewis J.  | Barton Flats Salvage Sale  |
| SB-03579          | 1999        | Duke, Curt  | Cultural Resources Inventory for PBMS Facility Cm 359-04, County of San Bernardino, California   |
| SB-03580          | 2000        | Duke, Curt  | Cultural Resource Assessment from PBW Facility Cm 359-07, County of San Bernardino, California   |
| SB-03585          | 1998        | Brechbiel, Brant  | Cultural Resource Records Search and Survey Report for a PBMS Telecommunications Facility: Cm 029-15, Rancho Cucamonga, California   |
| SB-03586*         | 2000        | Love, Bruce   | Ontario To Colton Pipeline, San Bernardino County, California  |
| SB-03587*         | 1998        | Love, Bruce   | Historical/Archaeological Resources Report: Chino Basin Groundwater Recharge Project, Near the City of Rancho Cucamonga, San Bernardino County, California                                 |
| SB-03591*         | 1995        | Owen, Shelley Marie   | Cultural Resource Record Search and Management Plan for the San Sevaire Redevelopment Project Are, San Bernardino County, California   |
| SB-03592*         | 1997        | Mclean, Deborah and Jani Monk   | Cultural Resource Assessment of the Kaiser West End Project, City of Fontana, San Bernardino County, California  |



| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>                  | <b>Title</b>  |
|-------------------|-------------|-----------------------------------|---|
| SB-03595          | 2000        | Duke, Curt                        | Cultural Resources Assessment for PBW Facility Sb 101-01, County of San Bernardino, Ca. 500   |
| SB-03604          | 1997        | Stone, Mitch                      | Historic Resource Evaluation--Wilkins Ranch near Fontana, San Bernardino County, California   |
| SB-03773*         | 2002        | Love, Bruce                       | Historical/Archaeological Resources Survey Report: Etiwanda Early Educations Center, City of Rancho Cucamonga, San Bernardino County, California  |
| SB-03776          | 2001        | Cotterman, Cary                   | Cultural Resources Record Search, Literature Review & Reconnaissance Report for an ATC Telecommunications Facility Bc_775_N1, Hermosa Park in the City of Rancho Cucamonga, San Bernardino County, California |
| SB-03777          | 2001        | Cotterman, Cary                   | Cultural Resource Record Search, Literature Review & Reconnaissance Report for an ATC Telecommunications Facility Bc_368_N1, Victoria Park in the City of Rancho Cucamonga, San Bernardino County, California |
| SB-03967*         | 2003        | Budinger, Fred                    | A Phase I Archaeological Survey of Approximately 28 Acres of the Proposed Carriage Hill Project (Tt 16466), Rancho Cucamonga, San Bernardino County, California   |
| SB-03969          | 2002        | Lewis, Don                        | Cultural Resource Assessment: Sb 183, Etiwanda Creek Park, 5939 East Ave, Rancho Cucamonga, California  |
| SB-04138*         | 2002        | Tang, Bai                         | Identification & Evaluation of Historic Properties: Fourth St Recycled Water Pipeline in and Near the Cities of Ontario & Rancho Cucamonga, San Bernardino County, California                                 |
| SB-04140*         | 2002        | Tang, Bai and Miriam Dahdul       | Identification & Evaluation of Historic Properties: Etiwanda Ave Extension Recycled Water Pipeline in and Near the City of Rancho Cucamonga, San Bernardino County, California                                |
| SB-04141*         | 2002        | Dahdul, Miriam                    | Identification & Evaluation of Historical Properties: Whittram Ave Recycled Water Pipeline in and Near the City of Rancho Cucamonga, San Bernardino County, California  |
| SB-04142          | 2002        | Tang, Bai and Josh Smallwood      | Identification & Evaluation of Historical Properties: Recycled Water Facilities Improvements Project, Regional Plants No. 1 & No. 4, Cities of Ontario & Rancho Cucamonga, San Bernardino County, Ca. 26Pp    |
| SB-04143*         | 2002        | Dahdul, Miriam and Josh Smallwood | Identification & Evaluation of Historical Properties: Wineville Recycled Water Pipeline Project, City of Ontario, San Bernardino County, California   |
| SB-04145*         | 2002        | Mckenna, Jeanette A.              | A Phase I Cultural Resource Investigation of 7179 East Ave, Rancho Cucamonga, San Bernardino County, California   |
| SB-04149          | 2001        | White, Laurie S.                  | Records Search Results for Sprint Pcs Facility Sb40Xc703A (Wimbledon Substation) City of Ontario, San Bernardino County, California   |
| SB-04155          | 2001        | Mckenna, Jeanette A.              | A Phase I Cultural Resource Investigation of Tract 16191, A 10 Acre Parcel in the City of Fontana, San Bernardino County, California  |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>                           | <b>Title</b>  |
|-------------------|-------------|--|---|
| SB-04157          | 2001        | Mason, Roger D.                            | Cultural Resources Records Search & Literature Review for An All American Tower Corporation Telecommunications Facility: Number Bc_368_N4 Winery in the City of Rancho Cucamonga, San Bernardino County, California |
| SB-04159          | 2001        | Duke, Curt                                 | Cultural Resource Assessment: Cingular Wireless Facility No. Sb137-01, San Bernardino County, California  |
| SB-04164          | 2001        | Budinger, Fred E.                          | Verizon Site F045 Etiwanda  |
| SB-04166*         | 1999        | McClean, Deborah                           | I-10 Interchange at Etiwanda Ave.   |
| SB-04206          | 2003        | Hammond, Stephen                           | Inland Empire Traffic Management Center   |
| SB-04216*         | 1997        | Manley, William                            | Historic American Buildings Survey Documentation for the Chaffey/Isle House, 6490 Etiwanda Ave, Rancho Cucamonga, San Bernardino County, California   |
| SB-04217          | 2003        | Pletka, Nicole                             | Cultural Resources Assessment: Nextel Communications Facility No. Ca-7167-A, Rancho Cucamonga, San Bernardino County, California  |
| SB-04245          | 2000        | White, Laurie S.                           | Records Search Results for Sprint Pcs Facility Sb37Xc907B (Tyra Property), Near Fontana, San Bernardino County, California  |
| SB-04264          | 2004        | Mckenna, Jeanette A.                       | Ca-506X, 508X & 509X (Speedway), 9300 Cherry Ave, Fontana, California   |
| SB-04265          | 2002        | Strickland, Jan                            | D131.2-Etiwanda/Jurupa  |
| SB-04367          | 2004        | Steely, James S.                           | Cultural Resources Assessment: "Cement Irrigation Weir" (Domestic Water Cistern), Etiwanda Ave at Arapaho Rd Intersection, Extreme Northeast Part of Tt 16867   |
| SB-04380          | 2004        | Dice, Michael and Christeen Tanaguchi      | Revised Cultural Records Search & Survey Results (With Architectural Significance Evaluation) for the Van Daele-Fritz Property, 3104 Base Line Rd, Rancho Cucamonga, California                                     |
| SB-04381          | 2004        | Thal, Sean                                 | Jasmine/Ca-8520D  |
| SB-04382          | 2004        | Kyle, Carolyn                              | Cultural Resource Assessment for AT&T Wireless Facility 950-003-092 Located at the Intersection of Jurupa St & Etiwanda Ave, City of Ontario, San Bernardino County, California                                     |
| SB-04469          | 2004        | Environmental Data Resources, Inc          | EDR NEPA Check: Cambria 5815 Etiwanda Ave, Rancho Cucamonga, California 97139   |
| SB-04484          | 2005        | Thal, Sean M.                              | Depeche 2/Ca-8384A  |
| SB-04577          | 2004        | Aislin-Kay, Marnie and Christeen Taniguchi | Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate SC-196-02 (Dart Distribution Specialist), 5681 E. Philadelphia Street, Ontario, San Bernardino County, California.         |
| SB-04579          | 2006        | Pollock, Katherine                         | Archaeological Monitoring of Underground Construction Activities of Etiwanda Jr. DSO, Etiwanda, San Bernardino County, California.  |
| SB-04666*         | 2005        | Goodwin, Riordan and Robert E. Reynolds    | Archaeological Monitoring Program: KB Home Tract 16643, Emma Lane, City of Rancho Cucamonga, San Bernardino County, California.   |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>   | <b>Title</b>   |
|-------------------|-------------|--|--|
| SB-04668          | 2004        | Bonner, Wayne H. and Christeen Taniguchi   | Records Search Results and Site Visit for Sprint Telecommunications Facility Candidate Sb60Xc844A (Reeves Trucking) 8615 Pecan Avenue, Rancho Cucamonga, San Bernardino County, California   |
| SB-04679*         | 2006        | Goodwin, Riordan, Hansen, Janet, Judith Marvin, and Laura S. White                     | Historical Resources Evaluation Report and Archaeological Survey Report for the Pacific Electric Inland Empire Trail, Phase I, City of Rancho Cucamonga, San Bernardino County, California   |
| SB-04690          | 2006        | Bonner, Wayne H.   | Cultural Resource Records Search Results and Site Visit for Cingular Telecommunications Facility Candidate Lsanca8023E (Baseline and Foothill Blvd.), Southeast Corner of Foothill Boulevard and Cornwall, Rancho Cucamonga, San Bernardino County, Ca |
| SB-04691*         | 2005        | Bonner, Wayne H.   | Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate Es-0012-02 (Fontana), 13560 Whittram Avenue, Fontana, San Bernardino County, California   |
| SB-04692          | 2006        | Bonner, Wayne H.   | Cultural Resource Records Search Results and Site Visit for T-Mobile Telecommunications Facility Candidate le04921C (SCE M23-T4), 13100 Block of Foothill Boulevard, Rancho Cucamonga, San Bernardino County, California                               |
| SB-04865          | 2005        | Brandman, Michael  | Cultural Resources Records Search and Site Visit Results for Nextel Telecommunications Facility Candidate Ca8529A Corridor, 14570 Washington Drive, Fontana, San Bernadino County, California  |
| SB-04873*         | 2005        | Encarnacion, Deirdre   | Historical/Archaeological Resources Survey Report: San Bernardino Avenue Pipeline and Pump Station in and Near the City of Fontana, San Bernardino County, California.   |
| SB-05057          | 2005        | Pollock, Katherine H., Norris, Stephen, and Lerch, Michael                             | Deteriorated Pole Replacement Project Archaeological Survey of one Pole Location on the Linde-Wimbledon 66Kv and Etiwanda-Declez-Linde Transmission Lines, San Bernardino County, California   |
| SB-05058*         | 2005        | White S, Laura, Robert S. White, and David M. Van Hom                                  | A Cultural Resources Assessment of 2+- Acre Parcel Located at the Northeast Corner of Baseline Road and Etiwanda Avenue, City of Rancho Cucamonga, San Bernardino County   |
| SB-05060*         | 2006        | Brown C, Joan  | Cultural Resources Reconnaissance for the Water of Life Community Church Project, Located in Fontana, San Bernardino County, California  |
| SB-05289*         | 2006        | Goodman, John D II   | Cultural Resource Survey of APN 023615130 for A Fedex Parking Lot, San Bernardino County, California   |
| SB-05420*         | 2006        | Tang, Bai "Tom", Laurie Taylor, and Daniel Ballester                                   | Identification and Evaluation of Historic Properties: Revised Wineville Recycled Water Pipeline in the Cities of Ontario and Fontana, San Bernardino County, California.   |
| SB-05425*         | 2006        | Bai "Tom" Tang, Thomas Melzer, Laura H. Shaker, Dierdre Encarnacion, and Michael Hogan | Identification and Evaluation of Historic Properties: 1158 Zone Pipeline Project, City of Rancho Cucamonga, San Bernardino County, California  |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>  |
|-------------------|-------------|---|---|
| SB-05484          | 2005        | Pollock, Katherine H., Virginia Austerman, and Michael K. Lerch             | Archaeological Survey of a 2.75 Mile Section of the Etiwanda-Archline-Cucamonga-Genamic 66kV Transmission Line to be Rebuilt, San Bernardino County, California.  |
| SB-05485          | 2007        | Schmidt, James J.   | DWO 4505-3127: Rancho Vista New AA Station Project, Etiwanda Area, San Bernardino County, California.   |
| SB-05487*         | 2007        | Encarnacion, Deirdre  | Identification and Evaluation of Historic Properties: Etiwanda 1270 Reservoir and Pipeline, City of Rancho Cucamonga, San Bernardino County, California.  |
| SB-05490          | 2006        | Bonner, Wayne H. and Crawford, Kathleen A.                                  | Direct Ape Historic Architectural Assessment for Cingular Telecommunications Facility Candidate Lsanca8023E (Baseline and Foothill Blvd.), Southeast Corner of Foothill Boulevard and Cornwall, Rancho Cucamonga, San Bernardino County, California |
| SB-05491          | 2005        | Yamakido, Lauren A.   | Rancho Cucamonga-Etiwanda Station.  |
| SB-05498*         | 2003        | Hammond, Christie   | Historical Resources Compliance Report for Relinquishment of State Route 66 (Foothill Boulevard), City of Fontana, San Bernardino County, California.   |
| SB-05498          | 2003        | Christie Hammond  | Historical Resources Evaluation Report for the Relinquishment of State Route 66 (Foothill Boulevard) Between East Avenue/ Ilex Street and Maple Avenue city of Fontana San Bernardino, California   |
| SB-05499*         | 2003        | Hammond, Stephen R. and David Bricker                                       | Historic Resources Compliance Report for the Relinquishment of State Route 66, City of Rancho Cucamonga, San Bernardino County, California.   |
| SB-05703*         | 2005        | Wlodarski, Robert J.  | Records Search Results for the Proposed Nextel Wireless Communications Site (CA-5338B "Jurassic") Located at 16150 Pomona Rincon Road, Chino Hills, California.   |
| SB-05731          | 2005        | Wlodarski, Robert J.  | Records Search Results for the Proposed NEXTEL Wireless Communications Site CA5334A (Yu gi oh) located at 5939 East Ave, Rancho Cucamonga, San Bernardino County, California 91739.   |
| SB-05734*         | 2005        | Budinger, Fred  | Proposed Wireless Device Monopole and Associated Equipment; Arapaho Site, Etiwanda Ave and Highland Ave; Rancho Cucamonga, California   |
| SB-05737          | 2007        | Patterson, Joshua   | Archaeological Survey Report for Southern California Edison Company Metro PCS Cell Site #LA2218A Project, San Bernardino County, California   |
| SB-05813          | 2007        | Bonner, Wayne H. and Marnie Aislin-Kay                                      | Cultural Resource Records Search Results and Site Visit for T-Mobile Facility Candidate IE25346D (Tofasco), 9570 Santa Anita Avenue, Rancho Cucamonga, San Bernardino County, California.   |
| SB-05912          | 2008        | Ahmet, Koral  | Results of a Cultural Resources Assessment for the Southern California Edison Replacement of Deteriorated Pole No. 1504970E located on the Hygen-Linde 66kV Line near Fontana, San Bernardino County, California.                                   |
| SB-05973*         | 2008        | Encarnacion, Deirdre, Harry M. Quinn, Daniel Ballester, and Laura H. Shaker | Identification and Evaluation of Historic Properties: Fontana-3 Pipeline Laterals Recycled Water Pipeline Project, City of Fontana, San Bernardino County, California.  |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>   |
|-------------------|-------------|---|--|
| SB-05974          | 2006        | Austerman, Virginia   | Cultural Resources Assessment: San Sevaine Villas Multiple Family Residential Affordable Housing, City of Rancho Cucamonga, San Bernardino County, California  |
| SB-05986*         | 2001        | Goodwin, Riordan  | Cultural Resource Assessment: Rancho Cucamonga Mall Project, City of Rancho Cucamonga, San Bernardino County, California.  |
| SB-05993          | 2008        | Abeyta, Armando and Joan George   | Phase I Cultural Resources Survey Hope Lutheran Church Project, Rancho Cucamonga, California.  |
| SB-05997          | 2008        | Smallwood, Josh, John J. Eddy, Harry M. Quinn, and Laura Hensley Shaker                                     | Identification and Evaluation of Historic Properties: Monitoring Wells and Lysimeters for Victoria and San Sevaine Flood Control Basins in the Cities of Rancho Cucamonga and Fontana, San Bernardino County, California.                          |
| SB-05998          | 2007        | Encarnacion, Deirdre  | Historical/Archaeological Resources Survey Report: Wilson Avenue Improvement Project, City of Rancho Cucamonga, San Bernardino County, California.   |
| SB-05999*         | 2008        | Tang, Bai "Tom", John J. Eddy, Harry M. Quinn, Terri Jacquemain, Daniel Ballester, and Laura Hensley Shaker | Identification and Evaluation of Historic Properties: Northeast Recycled Water Expansion Projects in and near the Cities of Rancho Cucamonga and Fontana, San Bernardino County, California.   |
| SB-06000*         | 2008        | Tang, Bai "Tom", John J. Eddy, Harry M. Quinn, Terri Jacquemain, Daniel Ballester, and Laura Hensley Shaker | Extended Phase I Historical/Archaeological Resources Study: Northeast Recycled Water Expansion Projects in and near the Cities of Rancho Cucamonga and Fontana, San Bernardino County, California.   |
| SB-06111          | 2009        | Wlodarski, Robert J.  | Proposed Bechtel Wireless Telecommunications Site LA8072 (Starlite Reclamation) located at 11225 Mulberry Avenue, Fontana, California 92337.   |
| SB-06420          | 2008        | Wlodarski, Robert J.  | Record Search Results for the Proposed Bechtel Wireless Telecommunications Site Lsanca8023 (Baseline and Foothill Blvd./ Sce-M23T4 Lugo/Mira Loma) Located on the Southeastern Corner of Foothill and Cornwall, Rancho Cucamonga, California 91739 |
| SB-06516*         | 1999        | Ashkar, Shahira   | Cultural Resource Inventory Report for Williams Communications, Inc., Proposed Fiber Optic System Installation Project, Los Angeles to Riverside, Los Angeles, Riverside and San Bernardino Counties.  |
| SB-06524          | 2010        | Wlodarski, Robert J.  | Record Search and Field Reconnaissance Phase for Proposed AT&T Wireless Telecommunications Site La8023 (Foothill Marketplace) 12879 Foothill Boulevard, Rancho Cucamonga, California 91789   |
| SB-06787*         | 2008        | Tang, Bai "Tom", Deirdre Encarnacion, and Daniel Ballester  | Historical/Archaeological Resources Survey Report: Chino Groundwater Basin Dry-Year Yield Program Expansion, Los Angeles, Riverside and San Bernardino Counties, California.   |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>  | <b>Title</b>  |
|-------------------|-------------|---|---|
| SB-06818          | 2010        | Tang, Bai "Tom", Deirdre Encarnacion, Daniel Ballester, and Laura H. Shaker | Identification and Evaluation of Historic Properties: Chino Desalter Phase 3 Expansion Project, Riverside and San Bernardino Counties, California.  |
| SB-06911*         | 2010        | Bonner, Wayne H. and Arabesque Said   | Cultural Resource Records Search and Site Visit Results for Verizon Wireless Telecommunications Facility Almond, located at 7871 East Avenue, Fontana, San Bernardino County, California.                                   |
| SB-06918          | 2010        | Mason, Roger, Cotterman, Cary, and Hatheway, Roger                          | Archaeological Survey Report for the San Bernardino Avenue Street Improvements Project (T01592) Vicinity of Fontana San Bernardino County, California   |
| SB-06969*         | 2011        | Puckett, Heather  | Reed, 18150 Foothill Boulevard, Fontana, California   |
| SB-06980          | 2011        | Wlodarski, Rob  | AT&T Wireless Telecommunications Site LA8020 (Fontana Relocation) located at 14560 Washington Drive, Fontana, California 92353  |
| SB-07005          | 2011        | Puckett, Heather R.   | Junberry, 12676 Foothill Boulevard, Rancho Cucamonga, California 91739.   |
| SB-07048*         | 2012        | Padon, Beth   | Cultural Resource Assessment Study for Verizon "Hemlock" Site in Rancho Cucamonga, San Bernardino County, California  |
| SB-07084*         | 2010        | Tang, Bai "Tom"   | Preliminary Historical/Archaeological Resources Study, San Bernardino Line Positive Train Control Project, Southern California Regional Rail Authority, Counties of Los Angeles and San Bernardino.                         |
| SB-07088          | 2008        | Puckett, Heather R.   | Southridge, S of Cherry Avenue/E of Banana Avenue, Fontana, California 92336.   |
| SB-07123*         | 2010        | Panich, Lee and John Holson   | Supplemental Archaeological Survey Report, 66kV Transmission Lines Access Roads, Tehachapi Renewable Transmission Project Segments & and 8, Los Angeles and San Bernardino Counties, California.                            |
| SB-07310          | 2011        | Bonner, Wayne, Williams, Sarah, and Crawford, Kathleen                      | Cultural Resources records Search and Site Visit Results for T-Mobile USA Candidate IE243274-A (Etiwanda 210) 6615 Etiwanda Avenue, Rancho Cucamonga, San Bernardino County, California                                     |
| SB-07312          | 2011        | Billat, Lorna   | New Tower Submission Packet, Pepeche II, Project Number, CA2783   |
| SB-07315*         | 2011        | Tibbet, Casey and Goodwin, Riordan  | Cultural Resources Assessment, Victoria Street Subdivision Assessor's Parcel Numbers 1089-081016, 1089-081-17, 1089-081-20, and 1089-081-21, Tentative Tract Map 18819, Rancho Cucamonga, San Bernardino County, California |
| SB-07316*         | 2011        | Tang, Bai Tom   | Historical/Archaeological Resources Survey, Lloyd W Michael Water Treatment Plant Upgrade Project, City of Rancho Cucamonga, San Bernardino County, California. CRM Tech Contract#2567                                      |
| SB-07400          | 2013        | Puckett, Heather R.   | Cultural Resources Summary for the Proposed Verizon Wireless, Inc., Property at the Junberry Site, 12676 Foothill Blvd, Rancho Cucamonga, California 91739.   |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>   | <b>Title</b>   |
|-------------------|-------------|--|--|
| SB-07401          | 2013        | Tang, Bai "Tom", Deirdre Encarnacion, Terri Jacquemain, and Daniel Ballester | Historical/Archaeological Resources Survey Report: Vulcan Conservation and Flood Control Project, in and near the City of Fontana, San Bernardino County, California.                              |
| SB-07422          | 2013        | Bonner, Wayne and Williams, Sara   | Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate IE04358A (CM358 SCE/M-24, T1) 12061 Highland Avenue, Rancho Cucamonga, San Bernardino County, California |
| SB-07423          | 2003        | Dice, Michael, Taniguichi, Christeen, and Kay, Dustin                        | An Archaeological Survey and Significance Assessment for Tract 16072, Located Near Wilson and Etiwanda Avenues, City of Rancho Cucamonga Sphere of Influence, County of San Bernardino, California |
| SB-07485          | 2012        | Wlodarski, Robert J.   | Record Search Results for the Proposed AT&T Wireless Telecommunications Site LA8017 (SCE Fontana) located at 10221 Etiwanda Avenue, Fontana, California 92337.                                     |
| SB-07486          | 2013        | Supernowicz, Dana E.   | Architectural Evaluation Report of the SCE Fontana Project, AT&T Mobility Site No. LA8017, 10221 Etiwanda Avenue, Fontana, San Bernardino County, California 92337.                                |
| SB-07756          | 2014        | Tang, Bai "Tom"  | Update to Historical/Archaeological Resources Survey: Chino Desalter Phase 3 Expansion Project, Riverside and San Bernardino Counties, California.   |
| SB-07906          | 2015        | Pigniola, Andrew R.  | Cultural Resources Survey Report for the TTM19917 Subdivision Project Rancho Cucamonga, California   |
| SB-07907*         | 2015        | Pigniola, Andrew R.  | Cultural Resources Survey Report for the La Mirage on Route 66 Project Rancho Cucamonga, California  |
| SB-07922          | 2016        | McKenna, Jeanette  | A Phase I Cultural Resources Investigation of the Proposed West Fontana Flood Control Channel, Fontana, San Bernardino Co., California   |
| SB-07976          | 2014        | Williams, Sarah A., Carrie D. Wells, and Kathleen A. Crawford                | Cultural Resources Records Search and Site Visit Results for T-Mobile West: LLC Candidate IE24065A (IE065 SCE Declez Channel), 14254 Cherry Avenue, Fontana, San Bernardino County, California     |
| SB-07990*         | 2014        | George, Joan and Josh Smallwood  | Phase I Cultural Resources Assessment for the Etiwanda Pipeline North Relining Project, Cities of Fontana and Rancho Cucamonga, San Bernardino County, California                                  |
| SB-08042          | 2016        | Tang, Bai and Michael Hogan  | Historical/Archaeological Resources Survey Report Single Line Express Project  |
| SB-08061          | 2015        | Brunzell, David  | Cultural Resources Assessment of the Owenwood Project, Fontana, San Bernardino County, California (BCR Consulting Project no. TRF1428)   |
| SB-08102          | 2014        | Brunzell, David  | Cultural Resources Assessment of the Wilcox Project, Fontana, San Bernardino County, California (BCR Consulting Project No. TRF1410)   |
| SB-08152          | 2015        | Etheridge, John and MacKensie Cornelius                                      | Archaeological Survey Report   |

| <b>Report No.</b> | <b>Year</b> | <b>Author(s)</b>                                  | <b>Title</b>  |
|-------------------|-------------|---|---|
| SB-08182          | 2015        | Hogan, Michael                                    | Archaeological Monitoring Program, Wineville Extension, Segment B of Recycled Water Pipeline, City of Fontana, San Bernardino County, California, CRM TECH Contract No. 2897  |
| SB-08185          | 2015        | Fulton, Phil                                      | Cultural Resource Assessment Class I Inventory, Verizon Wireless Services, Southridge- Cherry Ave. Fontana California Facility, City of Fontana, County of San Bernardino, California                                       |
| SB-08213*         | 2015        | Sanka, Jennifer M. and Irish, Leslie Nay          | Archaeological Resources Assessment for the 6563 East Avenue Project In the City of Rancho Cucamonga, San Bernardino County, California   |
| SB-08231          | 2016        | Hogan, Michael                                    | Report on Archaeological Monitoring of Earth-Moving Activities for West Fontana Logistics Center Project 10918 Cherry Avenue; APN 0236-181-11 City of Fontana, San Bernardino County, California CRM TECH Contract No. 3128 |
| SB-08245          | 2015        | Roland, Jennifer                                  | Phase I Investigation for the Verizon Wireless Mallory Tower Installation Project, Fontana, San Bernardino County, California   |
| SB-08257          | 2016        | Tang, Bai   | Due-Diligence Historical/Archaeological Resources Study Inland Empire Utilities Agency Recharge Basin Maintenance Plan Chino Basin Area, San Bernardino and Riverside Counties, California CRM TECH Contract No. 2989       |
| SB-08269*         | 2017        | Bryne, Stephen, Gary Jones, and Gabrielle Duff    | Archaeological Survey Report Interstate 15 (1-15) Corridor Project  |
| SB-08334*         | 2017        | Evelyn Chandler, Meghan Lamb, and David Schroeder | Archaeological Monitoring Report, Slover Distribution Center Project, Fontana, San Bernardino County, California  |

\*Intersects portions of the APE.



# **Appendix B.**

## **Native American Coordination**

## NATIVE AMERICAN HERITAGE COMMISSION

August 19, 2020

Roberta Thomas  
PaleoWest Archaeology

Via Email to: [rthomas@paleowest.com](mailto:rthomas@paleowest.com)

Re: 20-613 JCSD Northern Pipeline Project, Riverside and San Bernardino Counties

Dear Ms. Thomas:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Gabrieleno Band of Mission Indians – Kizh Nation on the attached list for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: [Andrew.Green@nahc.ca.gov](mailto:Andrew.Green@nahc.ca.gov).

Sincerely,

Andrew Green  
Cultural Resources Analyst

Attachment



CHAIRPERSON  
Laura Miranda  
Luiseño

VICE CHAIRPERSON  
Reginald Pagaling  
Chumash

SECRETARY  
Merri Lopez-Keifer  
Luiseño

PARLIAMENTARIAN  
Russell Attebery  
Karuk

COMMISSIONER  
Marshall McKay  
Wintun

COMMISSIONER  
William Mungary  
Paiute/White Mountain  
Apache

COMMISSIONER  
Julie Tumamait-  
Stenslie  
Chumash

COMMISSIONER  
[Vacant]

COMMISSIONER  
[Vacant]

EXECUTIVE SECRETARY  
Christina Snider  
Pomo

NAHC HEADQUARTERS  
1550 Harbor Boulevard  
Suite 100  
West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)

**Native American Heritage Commission  
Native American Contact List  
San Bernardino, Riverside Counties  
8/19/2020**

**Agua Caliente Band of Cahuilla  
Indians**

Jeff Grubbe, Chairperson  
5401 Dinah Shore Drive  
Palm Springs, CA, 92264  
Phone: (760) 699 - 6800  
Fax: (760) 699-6919  
Cahuilla

**Gabrielino-Tongva Tribe**

Charles Alvarez,  
23454 Vanowen Street  
West Hills, CA, 91307  
Phone: (310) 403 - 6048  
roadkingcharles@aol.com  
Gabrielino

**Agua Caliente Band of Cahuilla  
Indians**

Patricia Garcia-Plotkin, Director  
5401 Dinah Shore Drive  
Palm Springs, CA, 92264  
Phone: (760) 699 - 6907  
Fax: (760) 699-6924  
ACBCI-THPO@aguacaliente.net  
Cahuilla

**Morongo Band of Mission  
Indians**

Denisa Torres, Cultural Resources  
Manager  
12700 Pumarra Road  
Banning, CA, 92220  
Phone: (951) 849 - 8807  
Fax: (951) 922-8146  
dtorres@morongo-nsn.gov  
Cahuilla  
Serrano

**Gabrieleno Band of Mission  
Indians - Kizh Nation**

Andrew Salas, Chairperson  
P.O. Box 393  
Covina, CA, 91723  
Phone: (626) 926 - 4131  
admin@gabrielenoindians.org  
Gabrieleno

**Morongo Band of Mission  
Indians**

Robert Martin, Chairperson  
12700 Pumarra Road  
Banning, CA, 92220  
Phone: (951) 849 - 8807  
Fax: (951) 922-8146  
dtorres@morongo-nsn.gov  
Cahuilla  
Serrano

**Gabrieleno/Tongva San Gabriel  
Band of Mission Indians**

Anthony Morales, Chairperson  
P.O. Box 693  
San Gabriel, CA, 91778  
Phone: (626) 483 - 3564  
Fax: (626) 286-1262  
GTTribalcouncil@aol.com  
Gabrieleno

**Quechan Tribe of the Fort Yuma  
Reservation**

Manfred Scott, Acting Chairman  
Kw'ts'an Cultural Committee  
P.O. Box 1899  
Yuma, AZ, 85366  
Phone: (928) 750 - 2516  
scottmanfred@yahoo.com  
Quechan

**Gabrielino /Tongva Nation**

Sandonne Goad, Chairperson  
106 1/2 Judge John Aiso St.,  
#231  
Los Angeles, CA, 90012  
Phone: (951) 807 - 0479  
sgoad@gabrielino-tongva.com  
Gabrielino

**Quechan Tribe of the Fort Yuma  
Reservation**

Jill McCormick, Historic  
Preservation Officer  
P.O. Box 1899  
Yuma, AZ, 85366  
Phone: (760) 572 - 2423  
historicpreservation@quechantribe.com  
Quechan

**Gabrielino Tongva Indians of  
California Tribal Council**

Robert Dorame, Chairperson  
P.O. Box 490  
Bellflower, CA, 90707  
Phone: (562) 761 - 6417  
Fax: (562) 761-6417  
gtongva@gmail.com  
Gabrielino

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20-613 JCSD Northern Pipeline Project, San Bernardino, Riverside Counties.

**Native American Heritage Commission  
Native American Contact List  
San Bernardino, Riverside Counties  
8/19/2020**

**San Manuel Band of Mission  
Indians**

Jessica Mauck, Director of  
Cultural Resources  
26569 Community Center Drive Serrano  
Highland, CA, 92346  
Phone: (909) 864 - 8933  
jmauck@sanmanuel-nsn.gov

**Soboba Band of Luiseno  
Indians**

Scott Cozart, Chairperson  
P. O. Box 487 Cahuilla  
San Jacinto, CA, 92583 Luiseno  
Phone: (951) 654 - 2765  
Fax: (951) 654-4198  
jontiveros@soboba-nsn.gov

**Santa Rosa Band of Cahuilla  
Indians**

Lovina Redner, Tribal Chair  
P.O. Box 391820 Cahuilla  
Anza, CA, 92539  
Phone: (951) 659 - 2700  
Fax: (951) 659-2228  
lsaul@santarosacahuilla-nsn.gov

**Serrano Nation of Mission  
Indians**

Mark Cochrane, Co-Chairperson  
P. O. Box 343 Serrano  
Patton, CA, 92369  
Phone: (909) 528 - 9032  
serranonation1@gmail.com

**Serrano Nation of Mission  
Indians**

Wayne Walker, Co-Chairperson  
P. O. Box 343 Serrano  
Patton, CA, 92369  
Phone: (253) 370 - 0167  
serranonation1@gmail.com

**Soboba Band of Luiseno  
Indians**

Joseph Ontiveros, Cultural  
Resource Department  
P.O. BOX 487 Cahuilla  
San Jacinto, CA, 92581 Luiseno  
Phone: (951) 663 - 5279  
Fax: (951) 654-4198  
jontiveros@soboba-nsn.gov

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 20-613 JCSD Northern Pipeline Project, San Bernardino, Riverside Counties.



T: 626.408.8006  
info@paleowest.com

LOS ANGELES COUNTY  
517 S. Ivy Avenue  
Monrovia, CA 91016

August 4, 2021

Charles Alvarez  
Gabrielino-Tongva Tribe  
23454 Vanowen Street  
West Hills, CA, 91307

**RE: Cultural Resource Investigation for the JCSD Etiwanda Project in Riverside and San Bernardino Counties, California**

Dear Mr. Alvarez,

On behalf of Albert A. Webb Associates, PaleoWest, LLC (PaleoWest) is conducting a cultural resource investigation in compliance with the California Environmental Quality Act and Section 106 of the National Historic Preservation Act for the Jurupa Community Service District's (JCSD) Etiwanda Pipeline Project (Project) in Riverside and San Bernardino counties, California. The proposed Project consists of the installation of a new pipeline alignment that will connect the Royer-Nesbit Water Treatment Plant and the Lloyd Michael Water Treatment Plant in Rancho Cucamonga with the JCSD Pressure Zone Tanks in Jurupa Valley. The Project area is located on the Cucamonga Peak, CA, and Guasti, CA, 7.5' USGS quadrangle maps, within various sections in T1N/R6W, T1S/R6W, and T2S/R6W (see attached map, Figure 1 Recommended Alignment).

A cultural resource literature review and records search conducted at the appropriate Information Centers indicates that 129 cultural resources have been previously recorded within one mile of the Project area. Of these resources, three archaeological sites (one prehistoric and two historic period archaeological sites) and seven historic period built-environment resources appear to have been mapped within or intersect the Recommended Alignment (Project area). PaleoWest conducted a reconnaissance survey of the Project area and determined that the three archaeological sites are no longer extant within the Project area. Additionally, PaleoWest documented two new historic period built-environment resources within the Project area and updated the resource records for the seven previously recorded built resources during the current field effort.

As part of the cultural resource investigation of the Project area, PaleoWest requested a search of the Native American Heritage Commission's (NAHC's) *Sacred Lands File* on August 14, 2020. The NAHC responded on August 19, 2020 indicating that that there are Native American cultural resources were identified within the Project area. Should your records show that cultural properties exist within or near the Project area (see enclosed map), please contact me at (918) 232-4312 or [rthomas@paleowest.com](mailto:rthomas@paleowest.com). I will follow-up with a phone call or email if I do not hear from you.

Your comments are very important to us, and to the successful completion of this Project. I look forward to hearing from you in the near future. Thank you, in advance, for taking the time to review this request.

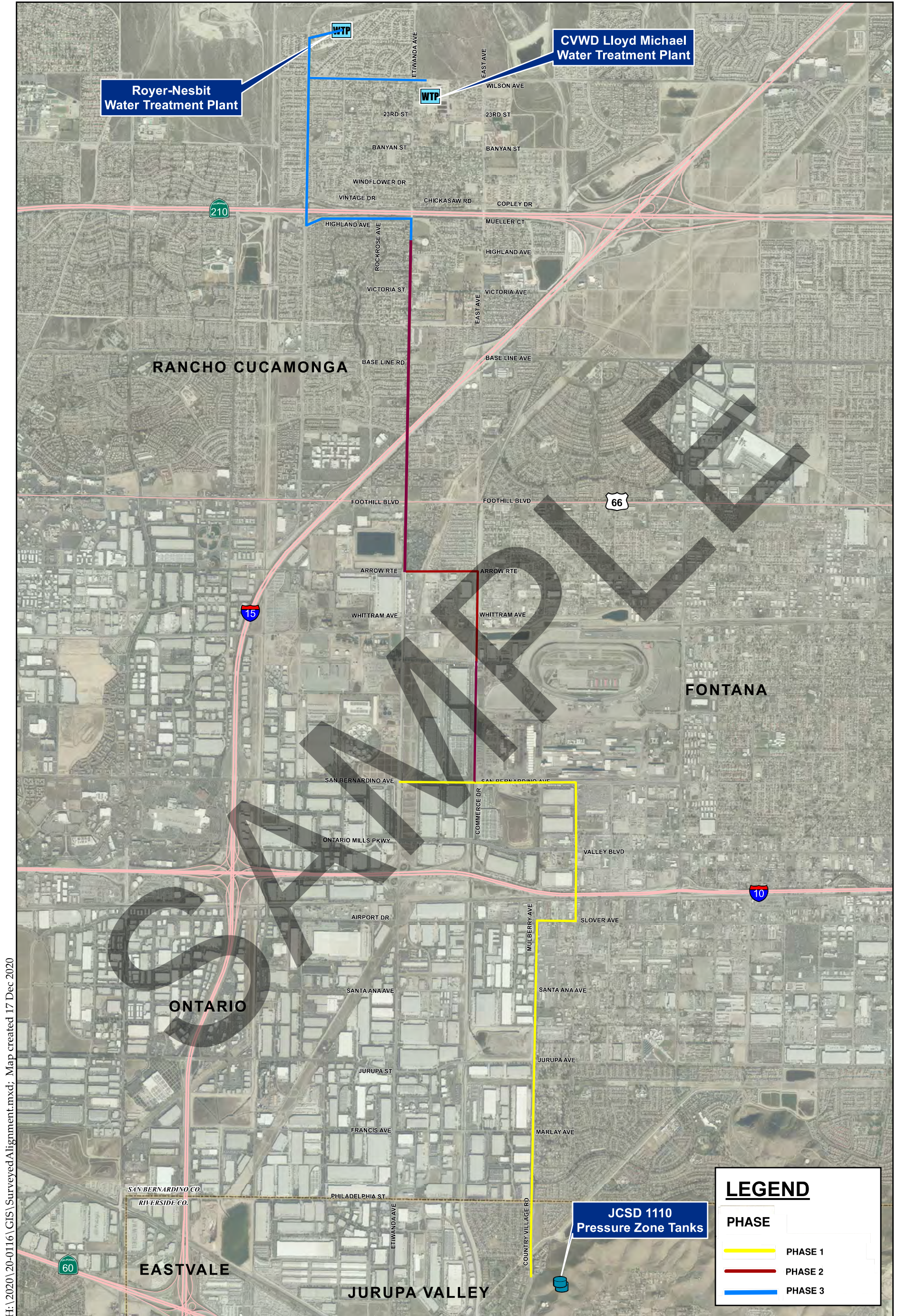
Sincerely,

A handwritten signature in black ink that reads "Roberta Thomas". The signature is written in a cursive style with a loop at the end of the last name.

Roberta Thomas, M.A., RPA  
Senior Archaeologist  
PaleoWest

SAMPLE

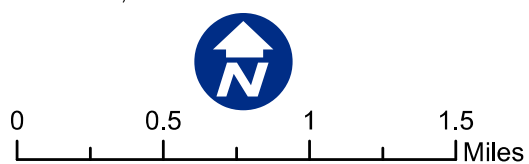




H:\2020\20-0116\GIS\SurveyedAlignment.mxd; Map created 17 Dec 2020

Sources: Riverside Co. GIS, 2020; USDA NAIP, 2016.

**Figure 1 - Recommended Alignment**  
JCSD Etiwanda Pipeline Alternative Evaluation



**Native American Contact/Response Matrix**

| Recommended Contacts (Name and Tribal Affiliation)                                 | Initial Contact                   | Follow up Attempts     | Comments/Notes   |
|--|-----------------------------------|------------------------|--|
| Charles Alvarez, Gabrielino-Tongva Tribe   | Letter/email dated August 4, 2021 | Called August 20, 2021 | Spoke with Mr. Alvarez and he would like to be resent the letter via email as his email address has changed to chavez1956metro@gmail.com. The letter was resent to the new email address on August 23, 2021.   |
| Mark Cochrane and Wayne Walker, Co-Chairmen, Serrano Nation of Mission Indians     | Letter/email dated August 4, 2021 | Called August 20, 2021 | Spoke with Mr. Cochrane, he and Mr. Walker would like to be notified if any inadvertent discoveries are made during the Project.   |
| Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council | Letter/email dated August 4, 2021 | Called August 20, 2021 | Spoke with Mr. Dorame and he expressed concern for the project and that the Gabrielino Tongva Indians of California Tribal Council would like to be notified of any cultural resources and prehistoric resources identified during ground disturbance activities. Additionally, the Gabrielino Tongva Indians of California Tribal Council would like to be notified of any discoveries of human remains regardless of the MLD assignment from the NAHC. |
| Patricia Garcia-Plotkin, THPO Director, Agua Caliente Band of Cahuilla Indians     | Letter/email dated August 4, 2021 |                        | Email from Ms. Lacy Padilla of the Agua Caliente Band of Cahuilla Indians on August 5, 2021 states that a records check of the Tribal Historic perservation office's cultural registry revealed that this Project is not located within the Tribe's Traditional Use Area. Therefore, the Tribe defers to the other tribes in the area and the email concludes their consultation efforts.  |
| Sandonne Goad, Chairperson, Gabrielino/Tongva Nation                               | Letter/email dated August 4, 2021 | Called August 20, 2021 | Left a message.  |
| Jessica Mauck, Director of Cultural Resources, San Manuel Band of Mission Indians  | Letter/email dated August 4, 2021 |                        | Email from Mr. Ryan Nordness, Cultural Resource Analyst for the San Manuel Band of Mission Indians, on August 10, 2021 stating that the Project not located near any known SLFs or tribal cultural resources.  |



**Native American Contact/Response Matrix**

| Recommended Contacts (Name and Tribal Affiliation)  | Initial Contact                   | Follow up Attempts     | Comments/Notes  |
|---|-----------------------------------|------------------------|---|
| Jill McCormick, Historic Preservation Officer, Quechan Tribe of the Fort Yuma Reservation | Letter/email dated August 4, 2021 |                        | Email from Quechan Historic Preservation Officer on August 5, 2021 stating that the Tribe has not comments on the Project and that they defer to more local tribes and support their decisions on the Project.  |
| Anthony Morales, Chairperson, Gabrieleno/Tongva San Gabriel Band of Mission Indians       | Letter/email dated August 4, 2021 | Called August 20, 2021 | Spoke with Mr. Morales and he expressed that the Project area is within an area of cultural sensitivity and recommends archaeological monitoring and a tribal monitor from the Gabrieleno/Tongva San Gabriel Band of Mission Indians be present during ground disturbing activities |
| Joseph Ontiveros, Cultural Resources Department, Soboba Band of Luiseño Indians           | Letter/email dated August 4, 2021 | Called August 20, 2021 | Spoke with Mr. Ontiveros and he stated that the Project falls within the Tribe's Cultural Use Areas and that specific culturally sensitive information will be shared with the lead agency.   |
| Lovina Redner, Tribal Chair, Santa Rosa Band of Cahuilla Indians                          | Letter/email dated August 4, 2021 | Called August 20, 2021 | Left a message with Tribal Office staff.  |
| Andrew Salas, Chairperson, Gabrieleno Band of Mission Indians - Kizh Nation               | Letter/email dated August 4, 2021 | Called August 20, 2021 | Left a message. The tribal admin specialist emailed to request contact information for the lead agency. A contact at JCSD and at Webb Associates was provided to the Tribe on 08/27/2021  |
| Denisa Torres, Cultural Resources Manager, Morongo Band of Mission Indians                | Letter/email dated August 4, 2021 | Called August 20, 2021 | Unable to leave message.  |

## Roberta Thomas

---

**From:** THPO Consulting <ACBCI-THPO@aguacaliente.net>  
**Sent:** Thursday, August 5, 2021 7:48 AM  
**To:** Roberta Thomas  
**Subject:** RE: Etiwanda Pipeline Project (20-613)

Greetings,

A records check of the Tribal Historic preservation office's cultural registry revealed that this project is not located within the Tribe's Traditional Use Area. Therefore, we defer to the other tribes in the area. This letter shall conclude our consultation efforts.

Thank you,

**Lacy Padilla**

Archaeologist  
Agua Caliente Band of Cahuilla Indians  
5401 Dinah Shore Drive Palm Springs, CA 92264  
D: 760-699-6956 | C: 760-333-5222

---

**From:** Roberta Thomas <rthomas@paleowest.com>  
**Sent:** Wednesday, August 4, 2021 5:05 PM  
**To:** THPO Consulting <ACBCI-THPO@aguacaliente.net>  
**Subject:** Etiwanda Pipeline Project (20-613)

Please find the attached letter and accompanying map for the Etiwanda Pipeline Project in Riverside and San Bernardino counties. A hard copy is also be sent via certified mail.

Best,  
Robbie



**Roberta Thomas** | Senior Archaeologist  
PaleoWest  
[rthomas@paleowest.com](mailto:rthomas@paleowest.com)  
918.232.4312  
[www.paleowest.com](http://www.paleowest.com)

**Los Angeles County Office**  
517 S. Ivy Avenue  
Monrovia, CA, 91016



## Roberta Thomas

---

**From:** Quechan Historic Preservation Officer <historicpreservation@quechantribe.com>  
**Sent:** Thursday, August 5, 2021 7:21 AM  
**To:** Roberta Thomas  
**Subject:** RE: Etiwanda Pipeline Project (20-613)

This email is to inform you that we have no comments on this project. We defer to the more local Tribes and support their decisions on the projects.

---

**From:** Roberta Thomas [mailto:rthomas@paleowest.com]  
**Sent:** Wednesday, August 04, 2021 5:06 PM  
**To:** historicpreservation@quechantribe.com  
**Subject:** Etiwanda Pipeline Project (20-613)

Please find the attached letter and accompanying map for the Etiwanda Pipeline Project in Riverside and San Bernardino counties. A hard copy is also be sent via certified mail.

Best,  
Robbie



**Roberta Thomas** | Senior Archaeologist  
PaleoWest  
[rthomas@paleowest.com](mailto:rthomas@paleowest.com)  
918.232.4312  
[www.paleowest.com](http://www.paleowest.com)

**Los Angeles County Office**  
517 S. Ivy Avenue  
Monrovia, CA, 91016



Virus-free. [www.avast.com](http://www.avast.com)

## Roberta Thomas

---

**From:** Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>  
**Sent:** Tuesday, August 10, 2021 12:46 PM  
**To:** Roberta Thomas  
**Subject:** Info request for the Etiwanda Project in Riverside and San Bernardino counties, CA



**IRONSCALES finds this email suspicious! We know Ryan Nordness by name, but the email was sent from an unfamiliar address [Ryan.Nordness@sanmanuel-nsn.gov](mailto:Ryan.Nordness@sanmanuel-nsn.gov) | [Know this sender?](#)**

Hey Roberta,

Thank you for reaching out to the San Manuel Band of Mission Indians concerning the proposed project area. SMBMI appreciates the opportunity to review the project documentation received by the Cultural Resources Management Department on August, 4<sup>th</sup> 2021. The proposed project is not located near any known SLFs or tribal cultural resources. Thank you again for your correspondence, if you have any additional questions or comments please reach out to me at your earliest convenience.

Respectfully,  
Ryan Nordness

### Ryan Nordness

CULTURAL RESOURCE ANALYST

Email: [Ryan.Nordness@sanmanuel-nsn.gov](mailto:Ryan.Nordness@sanmanuel-nsn.gov)

O: (909) 864-8933 Ext 50-2022

Internal: 50-2022

M: (909) 838-4053

26569 Community Center Dr Highland California 92346

**SAN MANUEL**  
BAND OF MISSION INDIANS

THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination or copying of this communication is strictly prohibited. If you have received this electronic transmission in error, please delete it from your system without copying it and notify the sender by reply e-mail so that the email address record can be corrected. Thank You

## Roberta Thomas

---

**From:** Gabrieleno Administration <admin@gabrielenoindians.org>  
**Sent:** Friday, August 27, 2021 2:43 PM  
**To:** Roberta Thomas  
**Cc:** Administration KNRM; Kara Grant  
**Subject:** Re: Etiwanda Pipeline Project (20-613)

Thanks

On Fri, Aug 27, 2021 at 2:26 PM Roberta Thomas <[rthomas@paleowest.com](mailto:rthomas@paleowest.com)> wrote:

I have provided Cheryl DeGano's contact information below. She is the Project Manager at WEBB. She also forwarded me the original notice that was sent along with confirmation of email delivery.

**Cheryl DeGano** - Principal Environmental Analyst  
Albert A. Webb Associates  
[3788 McCray Street, Riverside, CA 92506](https://www.paleowest.com/3788-McCray-Street-Riverside-CA-92506)  
t: 951.320.6052  
e: [cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)

Best,

Robbie

**Roberta Thomas** | Senior Archaeologist

PaleoWest

918.232.4312

---

**From:** Gabrieleno Administration <[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)>  
**Sent:** Friday, August 27, 2021 1:26 PM  
**To:** Roberta Thomas <[rthomas@paleowest.com](mailto:rthomas@paleowest.com)>  
**Cc:** Administration KNRM <[admin@knrm-nsn.us](mailto:admin@knrm-nsn.us)>; Kara Grant <[kara@grant-law.net](mailto:kara@grant-law.net)>  
**Subject:** Re: Etiwanda Pipeline Project (20-613)

Hello Roberta,

Do you have CONTACT INFO FOR WEBB

. We check our emails and we did not receive any information from WEBB .

On Fri, Aug 27, 2021 at 12:57 PM Roberta Thomas <[rthomas@paleowest.com](mailto:rthomas@paleowest.com)> wrote:

Apologies for my delayed response but I had to request a contact at the lead agency (JCSD) as PaleoWest does not have direct contact with JCSD. I have provided contact information below for Keith Backus at JCSD. Additionally, I was informed that a notice was sent out on JCSD's behalf from WEBB in February 2021 to interested parties. The Gabrieleno Band of Mission Indians - Kizh Nation was included on this notice (sent to [andysalas07@yahoo.com](mailto:andysalas07@yahoo.com) and [admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)) and WEBB did not receive a response.

CONTACT PERSON: Keith Backus, JCSD Engineering Department

Email: [kbackus@jcsd.us](mailto:kbackus@jcsd.us)

Phone: (951) 685-7434 ext. 135

Best,

Robbie

**Roberta Thomas** | Senior Archaeologist

PaleoWest

918.232.4312

---

**From:** Gabrieleno Administration <[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)>

**Sent:** Friday, August 20, 2021 11:41 AM

**To:** Roberta Thomas <[rthomas@paleowest.com](mailto:rthomas@paleowest.com)>

**Cc:** Administration KNRM <[admin@knrm-nsn.us](mailto:admin@knrm-nsn.us)>

**Subject:** Re: Etiwanda Pipeline Project (20-613)

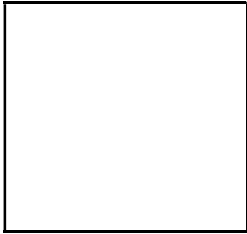
Hello Roberta,

Thank you for your email. Could you please provide us with the lead agency's contact information?

Admin Specialist  
Gabrieleno Band of Mission Indians - Kizh Nation  
PO Box 393  
Covina, CA 91723

Office: 844-390-0787

website: [www.gabrielenoindians.org](http://www.gabrielenoindians.org)



*The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. “The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area “. “That’s a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived.”*

On Wed, Aug 4, 2021 at 5:08 PM Roberta Thomas <[rthomas@paleowest.com](mailto:rthomas@paleowest.com)> wrote:

Please find the attached letter and accompanying map for the Etiwanda Pipeline Project in Riverside and San Bernardino counties. A hard copy is also be sent via certified mail.

Best,

Robbie

**Error! Filename not specified.**

**Roberta Thomas** | Senior Archaeologist

PaleoWest  
[rthomas@paleowest.com](mailto:rthomas@paleowest.com)

918.232.4312

[www.paleowest.com](http://www.paleowest.com)

**Los Angeles County Office**

[517 S. Ivy Avenue](#)

[Monrovia, CA, 91016](#)

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Admin Specialist  
Gabrieleno Band of Mission Indians - Kizh Nation  
PO Box 393  
Covina, CA 91723

Office: 844-390-0787

website: [www.gabrielenoindians.org](http://www.gabrielenoindians.org)



*The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. "The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area ". "That's a contribution that Los Angeles has not recognized--the fact that in its early decades, without the Gabrieleño, the community simply would not have survived."*

----- Forwarded message -----

From: Cheryl DeGano <[cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)>

To: "[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)" <[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)>, "[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)"



<[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)>

Cc: "Keith D. Backus" <[kbackus@jcsd.us](mailto:kbackus@jcsd.us)>

Bcc:

Date: Mon, 22 Feb 2021 22:23:43 +0000

Subject: Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1

Dear Mr. Salas:

This Notice of Consultation Opportunity is being sent to you on behalf of the Jurupa Community Services District. If you are interesting in consulting on this project, please reply via email or telephone to Keith Backus, JCSD Engineering Department. Mr. Backus is copied on this email and his contact information is at the end of this notice.

In accordance with Assembly Bill 52, Jurupa Community Services District (JCSD) is sending this notice to inform California Native American tribes that have requested such notice of a project within a geographic area with which the tribe is traditionally and culturally affiliated. California Native American tribes have 30 days from the date of this notice to request consultation with the JCSD regarding this project.

DATE OF NOTICE: February 22, 2021

PROJECT TITLE: Etiwanda Intervalley Water Quality and Water Resiliency Project

PROJECT DESCRIPTION: The Etiwanda Intervalley Water Quality and Water Resiliency Project (Resiliency Project) is a joint effort between the Jurupa Community Services District (JCSD) and the Cucamonga Valley Water District (CVWD). The purpose of the Resiliency Project is to improve drinking water quality within JCSD's and CVWD's service area by constructing facilities to replace current groundwater supplies with imported water from the Metropolitan Water District of Southern California (Metropolitan). The Resiliency Project will ultimately include a storage reservoir, new water wells, upgrades to either the Royer-Nesbit Water Treatment Plant (RNWTP) or the Lloyd W. Michael Water Treatment Plant (LMWTP), and the Etiwanda Pipeline. The CEQA document being prepared for the project will evaluate the Resiliency Project at a program level and evaluate the Etiwanda Pipeline and upgrades to the RNWTP or LMWTP at a project-specific level..

The Etiwanda Pipeline will include construction and operation of 36-inch diameter welded steel water transmission pipeline from an existing JCSD 30-inch diameter water pipeline in Country Village Road to either the RNWTP or the LMWTP. Depending on the selected alignment, the pipeline will be between approximately 58,000-liner feet (LF) to 68,000 LF in length. The pipeline will be constructed in three phases as shown on **Figure 1 – Recommended Alignment**.

PROJECT LOCATION: The Etiwanda Pipeline will be constructed within the cities of Jurupa Valley, Fontana, and Rancho Cucamonga. Phase 1 of the Etiwanda Pipeline will be constructed within or along the following roadways: Country Village Road, Mulberry Avenue, Slover Avenue, Calabash Street, and San Bernardino Avenue. Phase 2 will connect to the Phase 1 pipeline at the intersection of San Bernardino Avenue/Commerce Drive and be constructed within or along Commerce Drive, Arrow Route, Etiwanda Avenue to CVWD's Reservoir 2C. Phase 3 will connect to the Phase 2 pipeline in Etiwanda Avenue and be constructed within or along the following roadways: Etiwanda Avenue, Highland Avenue, Day Creek Boulevard, and Wilson Avenue. If the Phase 3 pipeline goes to the RNWTP, it will continue north in Day Creek Boulevard to Coyote Drive to the RNWTP. If the Phase 3 pipeline goes to the LMWTP, the pipeline will continue east in Wilson Avenue (which becomes 24th Street) to the LMWTP site. Refer to **Figure 1 – Recommend Alignment**.

The CEQA document will also evaluate Alternative Alignments as shown on **Figure 2 – Alternative Alignments**.

Upgrades to the RNWTP will take place at the treatment plant site, which is located on Coyote Drive. **(Refer to Figure 1.)**

Upgrades to the LMWTP will take place at that treatment plant site, which is located at 5815 Etiwanda Avenue, Rancho Cucamonga.

PROJECT INVOLVES GROUND DISTURBANCE: Yes. Trenching and backfilling will be required for the Etiwanda pipeline and some ground disturbance and site preparation will be required at the RNWTP or LMWTP.

LOCAL GOVERNMENT/LEAD AGENCY: Jurupa Community Services District is the lead agency and Cucamonga Valley Water District is a responsible agency for CEQA purposes.

CONTACT PERSON: Keith Backus, JCSD Engineering Department

Email: [kbackus@jcsd.us](mailto:kbackus@jcsd.us)

PHONE: (951) 685-7434 ext. 135

**Cheryl DeGano** - Principal Environmental Analyst  
Albert A. Webb Associates  
3788 McCray Street, Riverside, CA 92506  
t: 951.320.6052  
e: [cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com) w: [www.webbassociates.com](http://www.webbassociates.com)  
[LinkedIn](#) | [Twitter](#) | [Facebook](#) | [YouTube](#)

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<[MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@webbassociates.onmicrosoft.com](mailto:MicrosoftExchange329e71ec88ae4615bbc36ab6ce41109e@webbassociates.onmicrosoft.com)>

To: Cheryl DeGano <[cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)>

Cc:

Bcc:

Date: Mon, 22 Feb 2021 22:24:30 +0000

Subject: Relayed: Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1

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From: Cheryl DeGano <[cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)>  
To: "[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)" <[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)>, "[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)" <[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)>  
Cc: "Keith D. Backus" <[kbackus@jcsd.us](mailto:kbackus@jcsd.us)>  
Bcc:  
Date: Mon, 22 Feb 2021 22:23:43 +0000  
Subject: Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1

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To: Cheryl DeGano <[cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)>  
Cc:  
Bcc:  
Date: Mon, 22 Feb 2021 22:23:53 +0000  
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[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com) ([andysalas07@yahoo.com](mailto:andysalas07@yahoo.com))

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From: Cheryl DeGano <[cheryl.degano@webbassociates.com](mailto:cheryl.degano@webbassociates.com)>  
To: "[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)" <[andysalas07@yahoo.com](mailto:andysalas07@yahoo.com)>, "[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)" <[admin@gabrielenoindians.org](mailto:admin@gabrielenoindians.org)>  
Cc: "Keith D. Backus" <[kbackus@jcsd.us](mailto:kbackus@jcsd.us)>  
Bcc:  
Date: Mon, 22 Feb 2021 22:23:43 +0000  
Subject: Notification of Consultation Opportunity, pursuant to Public Resources Code §21080.3.1

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Admin Specialist  
Gabrieleno Band of Mission Indians - Kizh Nation  
PO Box 393  
Covina, CA 91723  
Office: 844-390-0787  
website: [www.gabrielenoindians.org](http://www.gabrielenoindians.org)



*The region where Gabrieleño culture thrived for more than eight centuries encompassed most of Los Angeles County, more than half of Orange County and portions of Riverside and San Bernardino counties. It was the labor of the Gabrieleño who built the missions, ranchos and the pueblos of Los Angeles. They were trained in the trades, and they did the construction and maintenance, as well as the farming and managing of herds of livestock. “The Gabrieleño are the ones who did all this work, and they really are the foundation of the early economy of the Los Angeles area “. “That’s a contribution that Los Angeles has not recognized—the fact that in its early decades, without the Gabrieleño, the community simply would not have survived.”*

# **Appendix C.**

## **DPR Forms**

**P3a. Description:** During a cultural resource survey on July 27, 2021, a PaleoWest archaeologist attempted to relocate and update the resource. During the survey, the mapped location of the resource was revisited and the previously recorded site boundaries were transected. No evidence of the historic period refuse scatter. The resource is mapped in the vicinity of the Interstate 210 Freeway eastbound offramp. It is likely that the resource was destroyed during the construction and maintenance of the freeway construction and is no longer extant within the Project APE.



Photo: Overview of previously noted resource location from NW corner of Day Creek Blvd. and the 210 westbound onramp, facing SE

**B12. References:**

Thomas, Roberta, Garret Root, Gena Granger, Heather Miller, and Tiffany Clark (2021). Cultural Resource Investigation in Support of the Jurupa Community Service District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California. PaleoWest, LLC, Monrovia, California.

**P3a. Description:** During a cultural resource survey on July 27, 2021, a PaleoWest archaeologist updated a segment of Base Line Road that intersects with Etiwanda Avenue. It consists of an in-use six-lane road with two turn lanes. A hardscaped center divider bisects the opposing lanes. This segment of the resource is approximately 90-ft-wide and is paved. Although some cracks and ruts are noted in the roadway, the resource appears to be well maintained with modern materials and construction.

This section of road was previously recorded by Applied EarthWorks in 2014, it appears in the same condition.



Photo: Overview of segment of Baseline Road that intersects the Project and Etiwanda Avenue from the SW corner of the intersection, facing NE

**B10. Significance:** This segment of Base Line Road does not appear to meet any criterion for listing in the NRHP or CRHR. The road is historically associated with the Southern California Baseline of 1853. However, the survey line itself is an imaginary map line, with no physical manifestation of it or the survey markers located within the area. Furthermore, archival research found no indication that it is associated with significant persons in history. Thus, it does not appear eligible for listing on the NRHP Criterion A/CRHR Criterion 1 and NRHP Criterion B/CRHR Criterion 2. Although first constructed as a simple dirt road, it has been expanded over time into a six-lane asphalt-concrete roadway. Today, the roadway is completely modern in its appearance, design, construction, and materials and does not exhibit any architectural or engineering merits that would set it apart from the many similar roads in the region. Therefore, this segment of Base Line Road does not appear eligible for the NRHP Criterion C/CRHR Criterion 3. Finally, it does not have the potential to yield any information important to the study of our local, state, or national history and is therefore not eligible under NRHP Criterion D/CRHR Criterion 4.

**B12. References:**

Thomas, Roberta, Garret Root, Gena Granger, Heather Miller, and Tiffany Clark (2021). Cultural Resource Investigation in Support of the Jurupa Community Service District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California. PaleoWest, LLC, Monrovia, California.

**Pb3. Description:** During a cultural resource survey on July 27, 2021, a PaleoWest archaeologist attempted to relocate and update the resource. The previous recordation noted that the feature was removed from its original context and placed near the Etiwanda School. Other granitic boulders in the vicinity of the school front were examined but none of them appear to be culturally modified. A previous attempt to locate the resource in 1987 was also unsuccessful. It is possible that the resource has been destroyed by the placement of utility boxes and vaults located at the same corner. Based on these findings, the resource is no longer extant at the reported location.



Photo: Overview of previously recorded resource location but resource appears to be no longer extant; facing N

**B12. References:**

Thomas, Roberta, Garret Root, Gena Granger, Heather Miller, and Tiffany Clark (2021). Cultural Resource Investigation in Support of the Jurupa Community Service District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California. PaleoWest, LLC, Monrovia, California.



State of California - The Resources Agency  
DEPARTMENT OF PARKS AND RECREATION  
**PRIMARY RECORD**

Primary #  
HRI #  
Trinomial  
NRHP Status Code 6Z

Other Listings \_\_\_\_\_  
Review Code \_\_\_\_\_ Reviewer \_\_\_\_\_ Date \_\_\_\_\_

Page 1 of 13

\*Resource Name or #: San Sevaine Channel

P1. Other Identifier: \_\_\_\_\_

\*P2. Location:  Not for Publication  Unrestricted \*a. County: San Bernardino

\*b. USGS 7.5' Quad Guasti T 1S; R 6W; \_\_\_ ¼ of \_\_\_ ¼ of Sec 9, 16, 21; M.D. B.M.

c. Address \_\_\_\_\_ City Fontana Zip 92335, 92337

d. Address \_\_\_\_\_ City Rancho Cucamonga Zip 91739

e. UTM: (Give more than one for large and/or linear resources) North end of recorded segment, Zone 11N; 452544.94 mE / 377404.91 mN ; South end of recorded segment, Zone 11N; 452463.04 mE / 3769192.57 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This form records a three-mile segment of the 11-mile-long San Sevaine Channel. The segment passes through sections of the cities of Fontana and Rancho Cucamonga. The northern most recorded point commences at Foothill Boulevard and extends south to Slover Avenue. Points are recorded north to south numbered 1 through 4 (see **Location Map**). The San Sevaine Channel carries water from East Etiwanda and San Sevaine creeks. The north end of the San Sevaine Channel is fed through a wash at the base of foothills of the San Gabriel Mountain, north of Wilson Avenue in Rancho Cucamonga in San Bernardino County. The wash feeds into five San Sevaine basins with an outfall into the East Etiwanda Channel just north of Highway 210 that continues south as the San Sevaine Channel. The north end the East Etiwanda Channel commences at the Etiwanda Dam and Debris Basin just north of Wilson Avenue to the outfall from San Sevaine Basin. (SEE CONTINUATION SHEET)

\*P3b. Resource Attributes: (List attributes and codes) HP 20-Canal/ditches

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5a. Photo or Drawing



P5b. Description of Photo: (view, date, accession #) **Photograph 1. Overview of San Sevaine Channel at intersection of Arrow Route and Hickory Avenue (Point 1), facing north. February 5, 2021.**

\*P6. Date Constructed/Age and Source:  
 Historic  Prehistoric  Both  
1942; 1948-1952; 1952-1959; 1996-2009 see B6.

\*P7. Owner and Address:  
San Bernardino County Flood Control Dist.  
825 E. Third Street  
San Bernardino, CA 92415

\*P8. Recorded by: (Name, affiliation, address)  
Gena Granger, PaleoWest  
517 S. Ivy Avenue  
Monrovia, CA 9

\*P9. Date Recorded: July 26, 2021

\*P10. Survey Type: Intensive

\*P11. Report Citation: Thomas, Roberta, Garret Root, Gena Granger, Heather Miller, and Tiffany Clark (2021), "Cultural Resource Investigation in Support of the Jurupa Community Service District's Etiwanda Pipeline Project, Riverside and Bernardino Counties, California," ) PaleoWest, LLC.

\*Attachments:  NONE  Location Map  Continuation Sheet  Building, Structure, and Object Record  Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  Artifact Record  Photograph Record  Other (List):

**BUILDING, STRUCTURE, AND OBJECT RECORD**

Page 2 of 13

\*Resource Name or # (Assigned by recorder) San Sevaine Channel

B1. Historic Name: East Etiwanda Creek; San Sevaine Creek

B2. Common Name: San Sevaine Channel

B3. Original Use: Creek / ditch

B4. Present Use: Flood control

\*B5. Architectural Style: n/a

\*B6. Construction History: (Construction date, alterations, and date of alterations)

| Name                      | Date Constructed              | Date of Alterations   |
|---------------------------|-------------------------------|---|
| Northern one-mile section | 1948-1952 as underground pipe | Daylighted 1989-1994; upgraded to current size, shape and materials 1996-2002 |
| Center one-mile section   | Rerouted in 1942              | Upgraded to current size, shape and materials 1996-2002                       |
| Southern one-mile section | 1952-1959 as open channel     | Upgraded to current size, shape and materials 2007-2009                       |

\*B7. Moved?  No   Yes   Unknown  Date: \_\_\_\_\_ Original Location: \_\_\_\_\_

\*B8. Related Features: none

B9a. Architect: unknown b. Builder: unknown

\*B10. Significance: Theme Flood Control Area San Bernardino and Riverside counties  
Period of Significance none Property Type Flood control channel Applicable Criteria none

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The San Sevaine Channel, including the segment recorded and evaluated on this form, does not meet the criteria for listing in the National Register of Historic Places (NRHP) or California Register of Historical Resources and therefore does not constitute as a historic property under Section 106 of the NHPA or a historical resource for the purpose of the California Environmental Quality Act (CEQA).

B11. Additional Resource Attributes: (List attributes and codes) \_\_\_\_\_

\*B12. References: SEE CONTINUATION SHEET

B13. Remarks:

\*B14. Evaluator: Heather Miller, M.A., PaleoWest

\*Date of Evaluation: August 2021

(Sketch Map with north arrow required.)

See Location Map on CONTINUATION SHEET

(This space reserved for official comments.)

Page 3 of 13

\* Resource Name or # San Sevaine Channel

Recorded by: Gena Granger

\*Date: July 26, 2021

Continuation  Update

**\*P3a. Description (continued):**

The combined creeks of the San Sevaine Channel travel approximately 0.8-miles south along the former Pacific Electric Railroad alignment continuing in a southwestern alignment for approximately 1.4 miles to the intersection of East Avenue and E. Foothill Boulevard. The channel travels directly south for 5 miles into Riverside County, then continues in a southeasterly path for approximately 2.15-miles with the final 2 miles south to the Santa Ana River. The rectangular concrete open channel ranges from 30- to 50-feet wide, is approximately 15-feet deep, and the walls are lined with 6-foot-tall chainlink fences (**Photograph 1**)

Water flows into the channel through wall outfalls (see **Photographs 1, 3, and 5**) as well as from outlet structures from five basins located along the channel alignment: Etiwanda Debris, San Sevaine Numbers. 1 through 5, Victoria, Hickory (**Photograph 3**), and Jurupa. Reinforced concrete overcrossings carry vehicular and railroad traffic over the channel.



**Photograph 2.** Overview of San Sevaine Channel at intersection of Hickory and Whittram avenues (Point 2) with BNSF Railroad overcrossing in background, facing south, July 26, 2021.



**Photograph 3.** Overview of San Sevaine Channel at intersection with Napa Street (Point 3) showing Hickory Basin outlet at in background, facing north, July 26, 2021.



**Photograph 4.** Overview of San Sevaine Channel at intersection of Commerce Drive and San Bernardino Avenue (Point 4) with Valley Boulevard overcrossing in background, facing south, July 26, 2021.

**B10. Significance (continued):**

**HISTORIC CONTEXT**

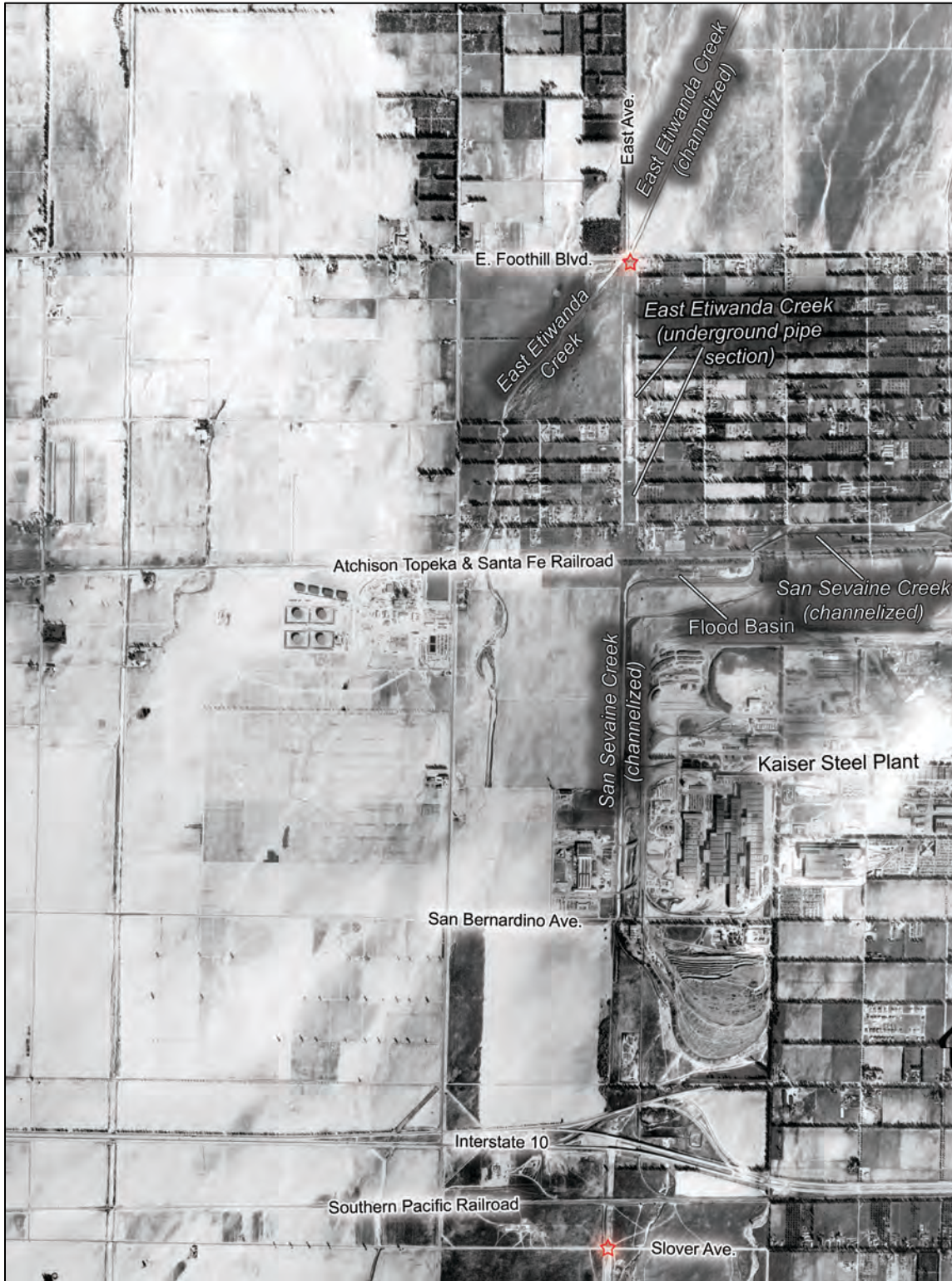
This three-mile section of concrete channelized waterway contains waters from East Etiwanda and San Sevaine creeks. The northern mile is a realignment and channelization of a portion of East Etiwanda Creek and the southern two-miles are a realignment and channelization of a portion of San Sevaine Creek.

Channelization of the creeks began with San Sevaine Creek. By 1938, the section of the creek south of Foothill Boulevard was straightened and channelized approximately 2.9-miles south to the Atchison, Topeka and Santa Fe (now BNSF) Railroad tracks where it then traveled in a southwesterly direction for approximately 0.7-miles, and then south again for approximately 1.45-miles (NETROnline1938). The section of channelized creek south of the railroad tracks was realigned for stormwater protection in 1942 after approval of the Kaiser steel plant. The channelized creek was rerouted westerly, paralleling and crossing the railroad tracks along the western boundary of the Kaiser property terminating at San Bernardino Avenue (see **Plate 1**). The last mile of the recorded section of channelized creek was constructed between 1952 and 1959 and continued south along the western boundary of the Kaiser plant to Slover Avenue (*San Bernardino County Sun* 1942 Apr 14; *San Bernardino County Sun* 1942 Dec 4; NETROnline 1938, 1948, 1959; UCSB 1952).

Early channelization efforts of East Etiwanda Creek began between 1938 and 1948. During this time a section of the creek was straightened and channelized from the intersection of modern-day East Avenue and Foothill Boulevard northeast to the Pacific Electric Railroad alignment, north of the project area (NETROnline 1938, 1948) (see **Plate 1**). Between 1948 and 1952, the one-mile section of East Etiwanda Creek between Foothill Boulevard and the Atchison, Topeka and Santa Fe (now BNSF) Railroad tracks was diverted through an underground pipe that ran parallel to Ilex Avenue (NETROnline 1948; UCSB 1952).

Flooding occurred north of the Kaiser plant along San Sevaine Creek in 1969 and 1978 resulting in an outcry from local for improved storm drainage. Rapid residential and industrial growth in western Fontana in the late 1970s created more paved areas, but the local waterways were not adequate to handle current or increased water drainage needs. In March 1983 the San Bernardino County Flood Control District devised a plan to enhance the Etiwanda and San Sevaine Creek watersheds to the Riverside County border, with a cohesive concrete channel system, including combining the two creeks into a single channel south of E. Foothill Boulevard. The following month Riverside County prepared a supplemental report that proposed to extend the concrete lined channel through Riverside County to the Santa Ana River. Both reports described disjointed channelized creek systems with sections of concrete lining and rip rap, natural creek banks, rock-lined, wire and rail revetted channels, earthen lined flood basins, and open flood plains. The two flood control districts worked in conjunction during the planning stages but were individually responsible for funding and construction of their respective areas (see **Plates 2 and 3**). San Bernardino County Flood Control District secured special one-time fees on new construction to fund project construction and incentivized large developers to build sections of the channelization project if it passed through proposed developments (Edwards 1983: 1, 3; City of Fontana et al 1989: 1; *San Bernardino County Sun* 1989 Sep 11).

This ambitious project, later called San Sevaine Creek Water Project, was expanded, and revised with construction officially beginning in 1996. The cohesive, channelized creek sections started on the north end in the foothills of the San Gabriel Mountains, south through the cities of Fontana and Rancho Cucamonga, and then continued south to the Santa Ana River, including the three-mile section between Foothill Boulevard and Slover Avenue. In 2009, 13 years after initial construction, the 11-mile, \$150 million project was completed and provides flood portion to more than 100,000 properties in San Bernardino and Riverside counties (see **Plate 4**) (*San Bernardino County* 2009 Apr 9).



**Plate 1:** 1952 aerial photograph showing channelizations and underground pipe locations of East Etiwanda and San Sevaine creeks. Stars denoted south and north ends of project section. Notes added by PaleoWest (Source: UCSB 1952a, 1952b)

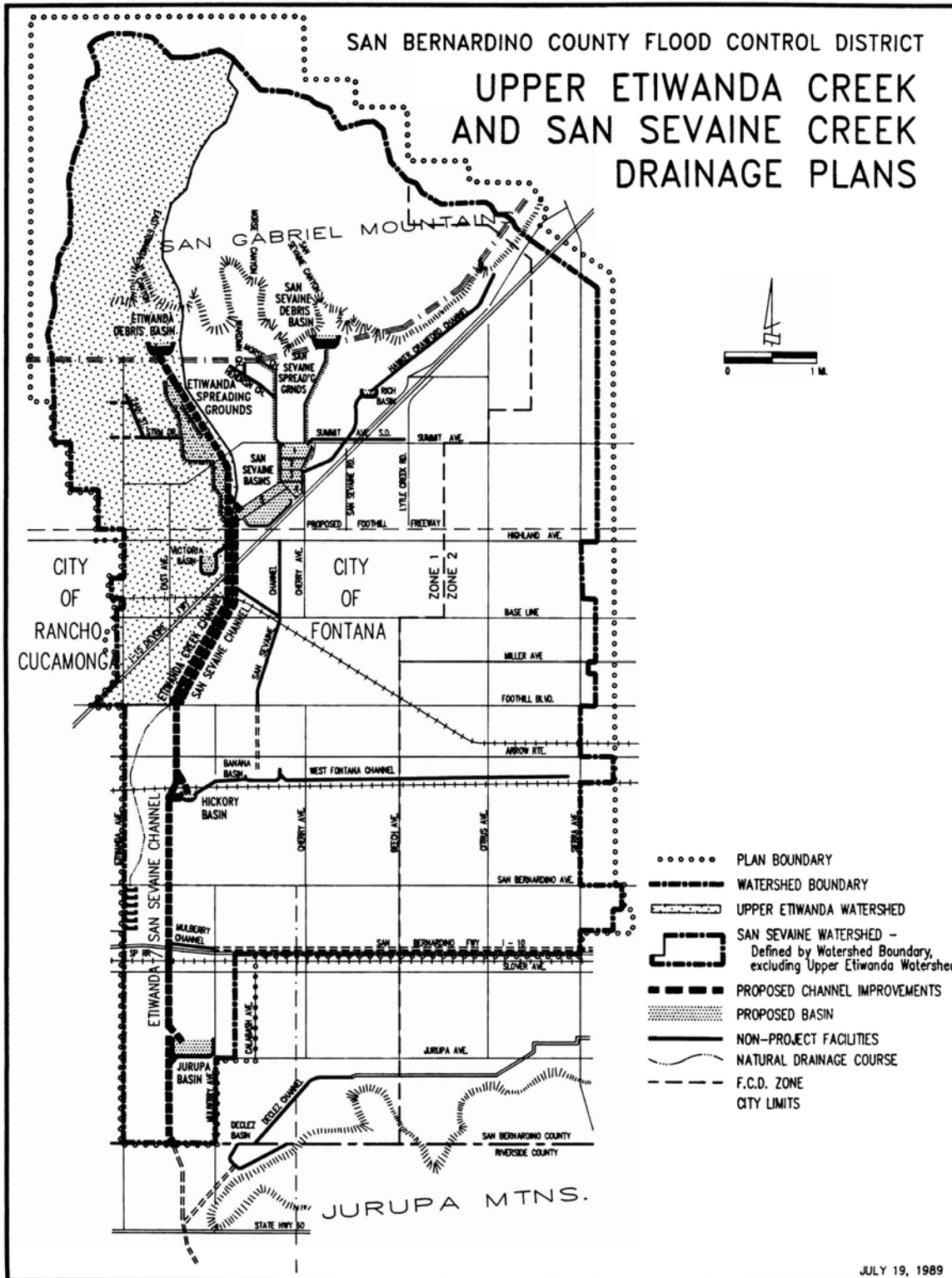
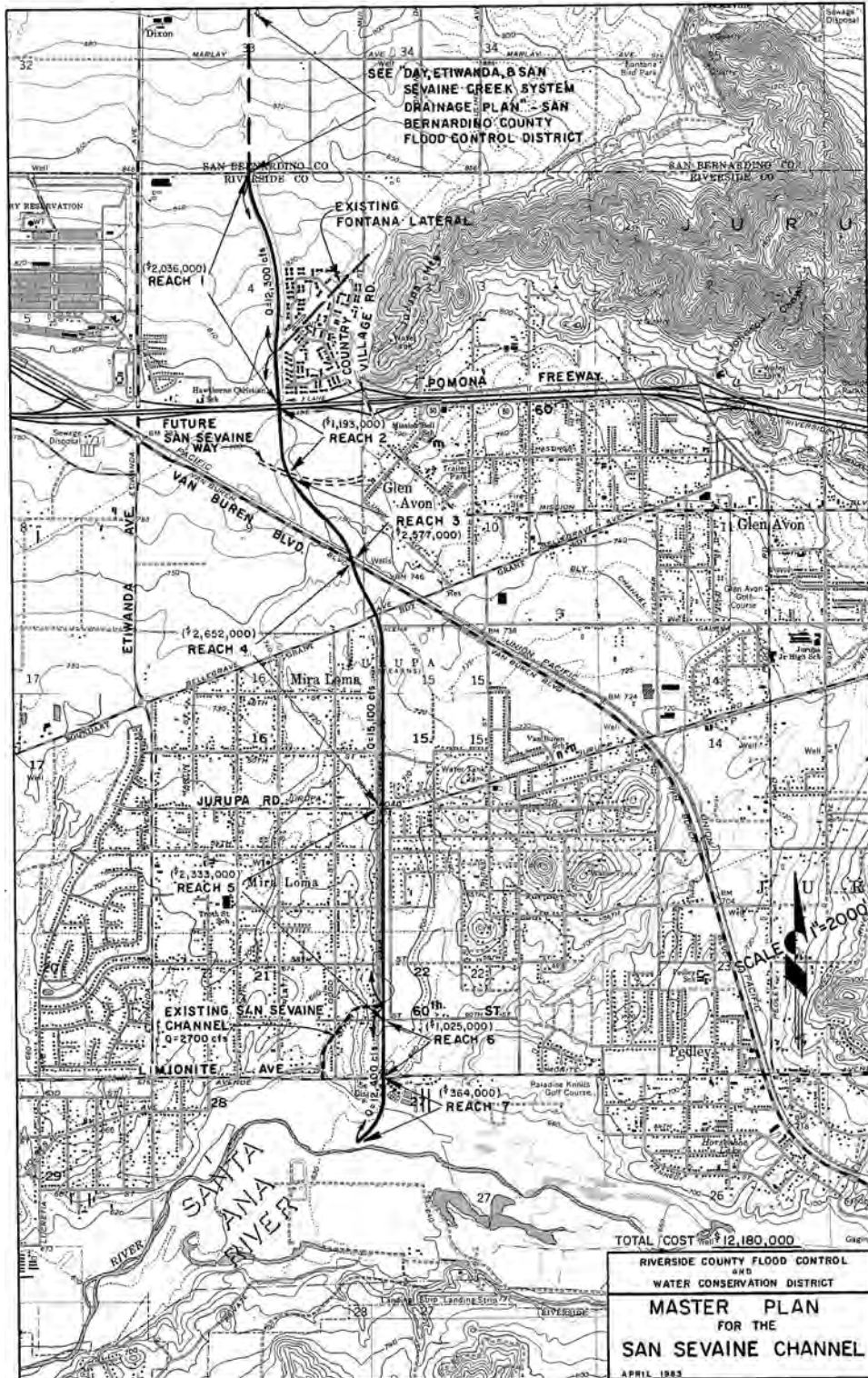
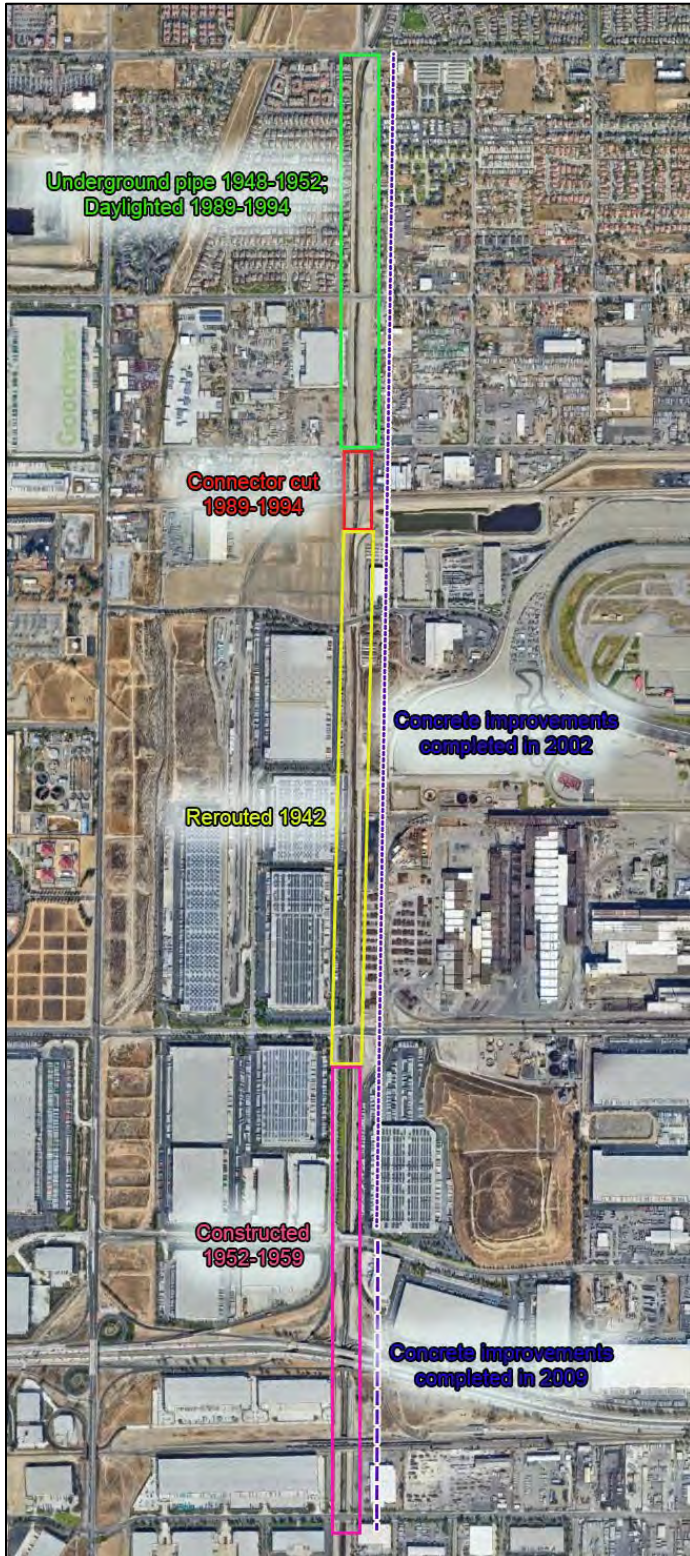


Plate 2: Map showing San Bernardino County Flood Control portion of the San Sevaine Channel (Source: City of Fontana et al 1989)



**Plate 3:** Map showing Riverside County Flood Control portion of the San Sevaine Channel (Source: Edwards 1983)





**Plate 4:** Color coded aerial photograph showing construction dates along three-mile section of San Sevaine Channel. Notes added by PaleoWest (Source: Google Earth Pro 2020 Apr)

**EVALUATION**

Water conveyance systems are often complex and assessing a canal or ditch eligibility is dependent on several factors. In 2000, JRP Historical Consulting (JRP) established guidelines for inventory and evaluation of water conveyance features in California (JRP 2000: 93-96). The study concluded that ditches are most likely to be found eligible for the NRHP under Criterion A or CRHR 1 (events) or Criterion a C or CRHR 3 (type or style of construction). Ditches are less likely to be eligible under NRHP Criterion B/CRHR Criteria 2 (people) or NRHP Criterion D/CRHR 4 (information potential). The report suggests a ditch would most likely be determined eligible under NRHP Criterion A/CRHR Criterion 1, for their important association in community development. This applies to irrigation and reclamation in farming communities, hydroelectric development, mining, and municipal water. However, it must be associated with specific, significant events such as 1910s agriculture, only if the farm was significant in its own right or yielded large amounts of crops. Water conveyance segments with no such known association or significance would not be considered eligible (JRP 2000: 90-93).

For a water conveyance resource to be determined eligible under NRHP Criterion C/CRHR Criterion 3, they must be an example of different types, periods, or methods of construction, as properties with high artistic merit, as the work of a master, and as properties that contribute to a historic district. For a ditch to be found eligible as a good example of a type, period, or method of construction, it must exhibit "distinctive characteristics" or the common features of the specific type, period or method of construction. These include patterns that are common to the class of resources, evolution of that class of resources, or individuality in features within the class. To be a good example of a ditch type, period, or method of construction, it must also be compared to similar ditches and their representative features. Ditches can be eligible for NRHP/CRHR designation as the work of a master or as the work of someone unknown that is unique for its style and quality. Ditches can be eligible for high artistic value, but they must have an aesthetic ideal and address the design concept more fully than other ditches of the same type. Ditches that are a part of large water systems can be evaluated as a historic district but must have a significant link to resources that were historically united or planned as part of a development movement (JRP 2000: 93-96).

The three-mile segment of San Sevaine Channel recorded on this form is constructed of two channelized creek segments that were constructed at different times. These sections, and the entire San Sevaine Channel, were constructed using different techniques and materials and were maintained in a piece-meal fashion. The entire San Sevaine Channel was improved into new, cohesive rectangular concrete open channel between 1996 and 2009 through the efforts of the San Bernardino County Flood Control District and the Riverside County Flood Control District. The channel is upgraded existing facilities to improve flood control to the existing built environment and to permit future development. The San Sevaine Channel, including the segment recorded and evaluated on this form, is representative of thousands constructed across California. Using the guidance established by JRP, it would have to have specific and known associations with notable events, nothing in the historic record suggests known historical significance. Therefore, San Sevaine Channel is recommended ineligible for the NRHP under Criterion A and CRHR Criterion 1.

Research into the history of the channelization efforts of the East Etiwanda and San Sevaine creeks did not result in the identification of any association with noteworthy people in the past. Even if such a person was identified, this channelized creek system would unlikely be the locus of their importance. As there is no evidence the channel has an important association with any person or persons who made significant contributions to history at the local, state, or national level, PaleoWest recommends the ditch is as ineligible under for listing on the NRHP under Criterion B and CRHR Criterion 2.

The San Sevaine Channel is recommended ineligible for the NRHP under Criterion C and CRHR Criterion 3 as it does not exemplify a type, period, or methods of construction, does not poses high artistic merit, or the work of a master. Early channelization efforts employed techniques and materials common to their time of construction (pre-1938, 1940s, and 1950s). The improved San Sevaine Channel is a rectangular concrete open channel that is a common engineering type implemented across California and the United States and research has not indicated if it was engineered by any person of note. It is therefore recommended ineligible under NRHP Criterion C and CRHR Criterion 3.

The San Sevaine Channel is recommended ineligible as a source, or likely source, of important information regarding history, building materials, construction techniques, or advancements in floodwater control or engineering. Such structures are well documented in the historic record and use common construction materials and techniques that would not be deemed significant under NRHP Criterion D and CRHR Criterion 4.

In addition to lacking significance, San Sevaine Channel lacks integrity. The seven aspects of integrity are location, setting, design, materials, workmanship, association and feeling. A property's essential physical features, important elements that were present during the historic period, must be present and visible. San Sevaine Channel has not moved and still serves as a floodwater system and therefore retains integrity of location and association. The work implemented by the San Sevaine Creek Water Project between 1996 and 1996 removed all of the historic-era materials and different channel designs and created a cohesive rectangular concrete open channel that ranges from 30- to 50-feet wide, is approximately 15-feet deep, and the walls are lined with 6 foot tall chainlink fences which has affected the original design, materials, workmanship, and feeling of pre-1930s through 1950s channelized creek.

In conclusion San Sevaine Channel, including the segment recorded and evaluated on this form lack significance and integrity and does not meet eligibility criteria for listing in the NRHP or CRHR and therefore does not warrant consideration as a historic property under Section 106 of the NHPA or a historical resource for CEQA.

**\*B12. References (continued):**

City of Fontana, et al.

1989 *Upper Etiwanda Creek and San Sevaine Creek Area Drainage Plans*. September.

Edwards, Kenneth L.

1983 *Master Plan for the San Sevaine Channel, Riverside County Flood Control and Water Conservation District, Riverside, California*. April.

Google Earth Pro

2020 Fontana, CA. Aerial imagery. April.

NETROnline

1938 Fontana, CA. Historical aerial imagery. Available at: <https://www.historicaerials.com/viewer>. (Accessed August 2021).

1948 Fontana, CA. Historical aerial imagery. Available at: <https://www.historicaerials.com/viewer>. (Accessed August 2021).

1959 Fontana, CA. Historical aerial imagery. Available at: <https://www.historicaerials.com/viewer>. (Accessed August 2021)

JRP Historical Consulting Services (JRP)

2000 *Water Conveyance Systems in California: Historic Context Development and Evaluation Procedures*. Environmental Program/Cultural Studies Office, California Department of Transportation.

San Bernardino County

2009 "County Marks Completion of Major Flood Control Project." Available at:

<http://www.sbcounty.gov/uploads/CAO/pressreleases/content/sansevainededicationrelease4-9-09.pdf> (Accessed August 2021). April 9.

*San Bernardino County Sun*

1942 "County Takes Over Acreage Near Fontana." April 14: 10.

1942 "County Forces Rushing Flood Control Work." December 4: 7.

1989 "County Weighs Flood Project in West End." September 11: B1-B2.

UCSB (University of Santa Barbara) Library

1952a Flight ID AXL-1953b, Frame 35k-111. Historic aerial photography.

1952b Flight ID AXL-1953b, Frame 35k-109. Historic aerial photography.

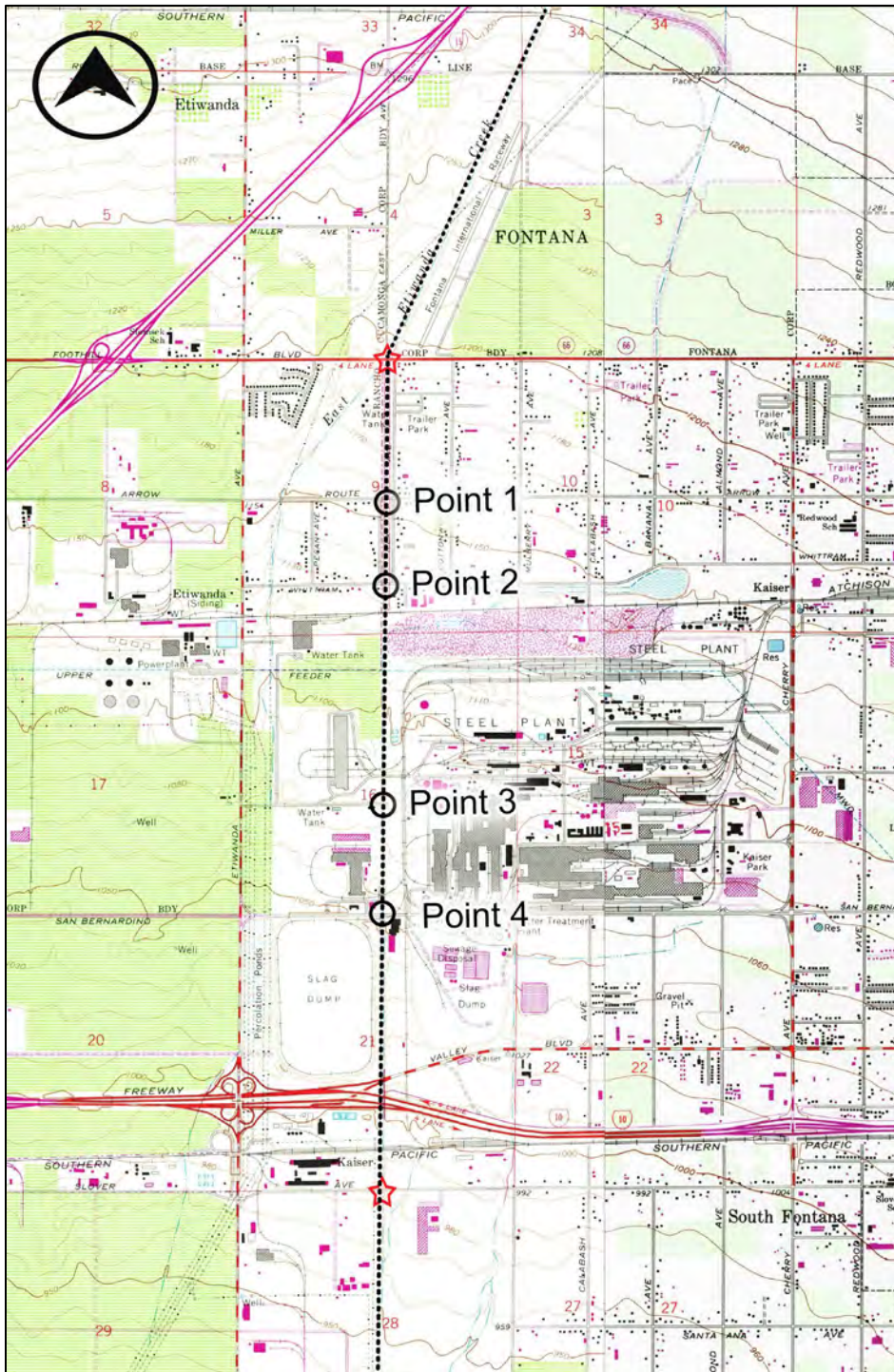
USGS (United States Geological Survey)

1966 Guasti, Calif. 7.5-minute (1:24,000 scale) topographic quadrangle.

1973 Guasti, Calif. 7.5-minute (1:24,000 scale) topographic quadrangle.

1980 Fontana, Calif. 7.5-minute (1:24,000 scale) topographic quadrangle.

1982 Guasti, Calif. 7.5-minute (1:24,000 scale) topographic quadrangle.

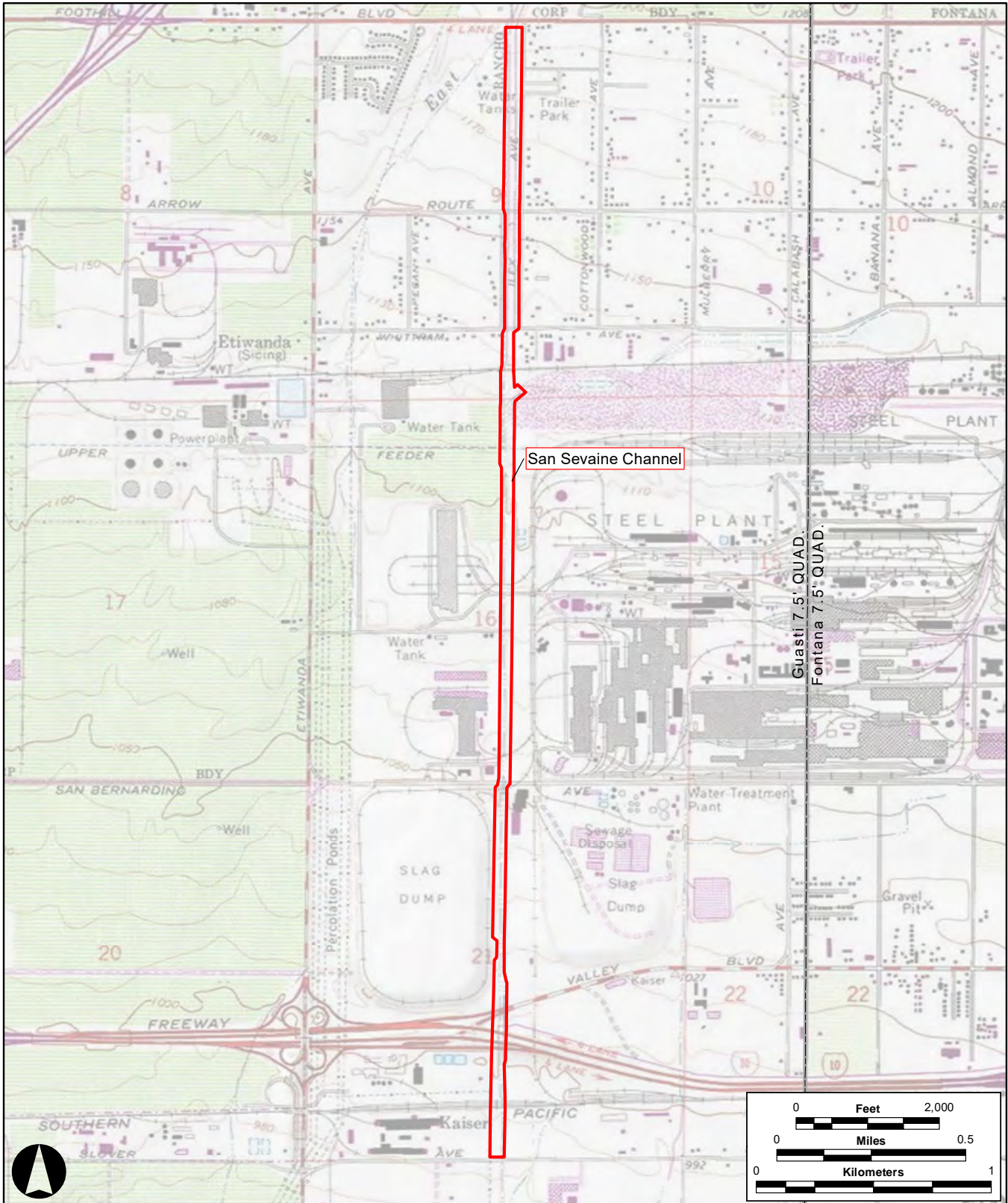


Dotted line is alignment of San Sevaine Channel and stars denoted south and north ends of project section.

Point 1: Arrow Route and Hickory Avenue; Point 2: Whittram and Hickory Avenues

Point 3: Napa Street; Point 1: San Bernardino Avenue

Notes added by PaleoWest (Source: USGS 1980, 1982)



**P3a. Description:** During a cultural resource windshield survey on July 26, 2021, a PaleoWest archaeologist recorded the segment of Foothill Blvd/U.S. Highway 66 at the intersection with Etiwanda Avenue. The road serves as a main throughway for the city of Rancho Cucamonga. It consists of any approximately 105-ft-long segment of asphalt-paved roadway with two center turn lanes. The road at this location consists of six lanes and is 84-ft wide. The pavement is fairly even but shows evidence of having been cut and repaired for utilities trenching. This segment of road is flanked by vacant lots to the northeast, southeast, and northwest; a shopping complex exists to the southwest.



Photo: Overview of segment of Foothill Boulevard/Route 66 at intersection with Etiwanda Avenue, facing SE

**B10. Significance:** Segments of U.S. Highway 66 have been studied and documented on DPR 523 forms multiple times throughout the state. Sections of U.S. Highway 66 in San Bernardino County have recorded 28 times between 1977 and 2009 with varying levels of recordation and evaluations and have been assigned Office of Historic Preservation Primary Number P-36-002910.

U.S. Highway 66 is listed on the NRHP and is considered significant under criteria A and C. In 2011, Mead & Hunt, Inc. submitted a NRHP Multiple Property Documentation (MPD) Form for U.S. Highway 66 in California that was certified by the State Historic Preservation Office and the Keeper of the National Register (Roland et al. 2011). The MPD form identified character-defining features (CDFs) of highway segments (still in use and abandoned) which included original surface material associated with its period of significance (1926-1974) (sections of gravel, bituminous/asphalt, concrete, etc.) and the presence of road-related structures (culverts; retaining walls; spillways; and guardrails). Additional CDFs were identified in relationship to their original construction setting (urban and desert/rural). When the section of Foothill Boulevard/U.S. Highway 66 recorded by PaleoWest was originally constructed, it was located in rural agricultural lands that connected the communities of Cucamonga, Rialto, and San Bernardino. The CDFs for desert/rural segments include graded portions of road shoulder; banked curves; side slopes; and roadbed raised from surrounding landscape (Roland et al. 2011: F88-F89).

Per the integrity guidance provided in the National Register Nomination,

“To meet the requirements for National Register listing under Criterion A, highway and road-related structures should retain integrity of location, association, feeling, and setting as these are important to establish the properties’ relationship to the transportation development of U.S. Highway 66. Integrity of design, materials, and

workmanship are also needed but are less important to establishing the relationship with U.S. Highway 66. Slight realignment from the original alignment is not enough to make an otherwise eligible road segment not eligible. Realignment that was completed during the period of significance can be eligible as it tells a story of the evolution of the route. A road segment and/or road-related structures retain integrity of setting and feeling if a sense of the automobile travel experience on U.S. Highway 66 during the period of significance can be understood. The length of road segment and the retention of landscape and built environment features from the period of significance with limited non-historic age intrusions are determinants in measuring these areas of integrity. Sections must be long enough to convey the sense of a continuous road across the California desert or through the urban environs of the Los Angeles basin" (Roland et al. of Mead & Hunt, Inc. 2011: F89).

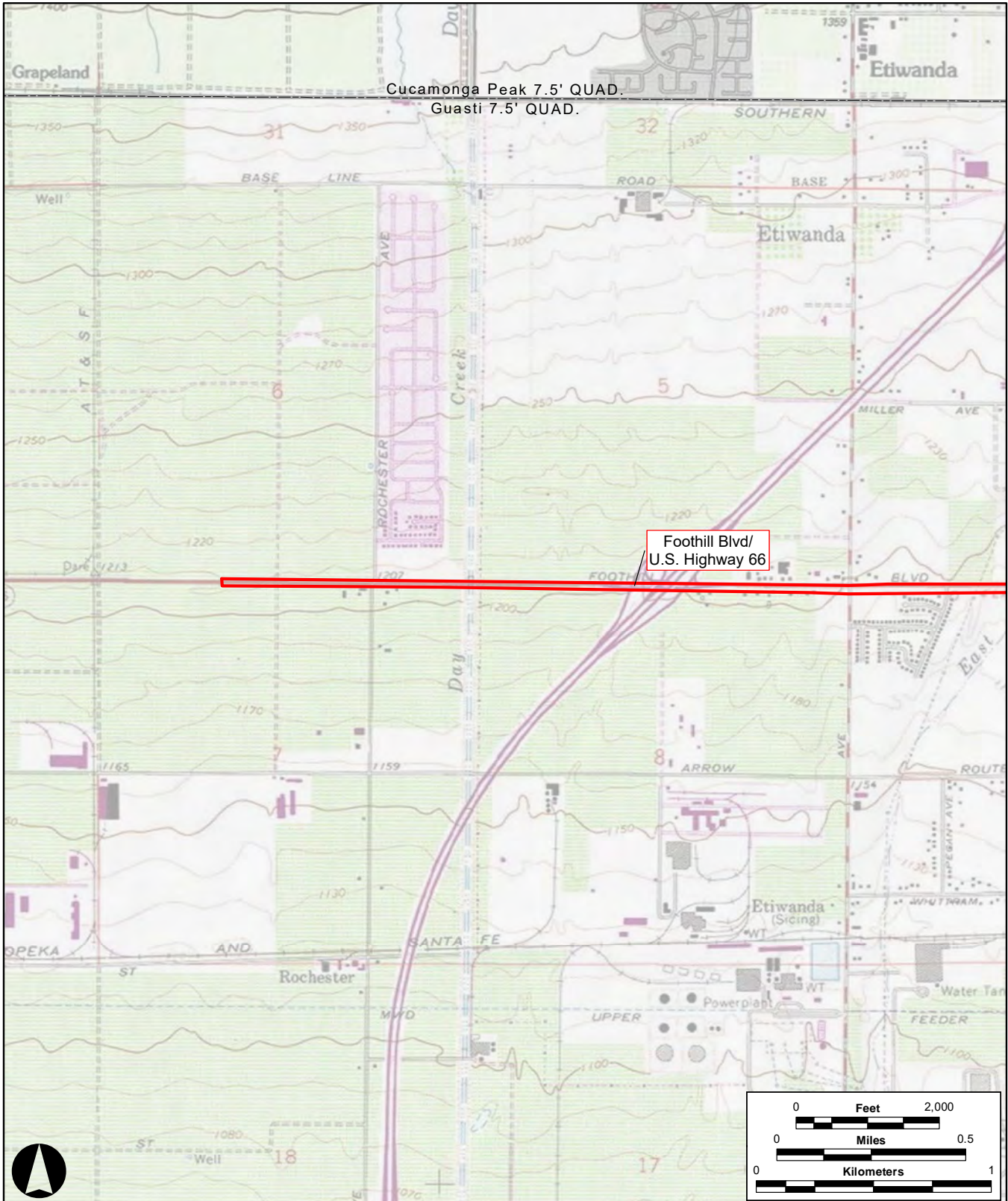
### Evaluation

Using these integrity parameters on the segment of Foothill Boulevard/U.S. Highway 66 at the intersection with Etiwanda Avenue, the road retains integrity of location because it has not been realigned and its continued use as a primary roadway means it retains integrity of association with U.S. Highway 66. The expansion of the rural four-lane road at this location into a six-lane road with added turn lanes with medians, modern curbs, sidewalks, lighting, and traffic signals has affected the design, workmanship, and materials of the original rural four-lane highway. The setting of U.S. Highway 66 at this location has changed from open rural land with small farms and orchards that lined the highway to dense urban residential and commercial development. The change in setting and the change in design, workmanship, and materials of the original rural four-lane highway has resulted in a total loss of feeling as a rural stretch of U.S. Highway 66 through this community. Because this portion of Foothill Boulevard/U.S. Highway 66 has been altered over time and because the visual integrity of the surrounding area has been fundamentally compromised, this road segment does not contribute to the overall significance of the historic property.

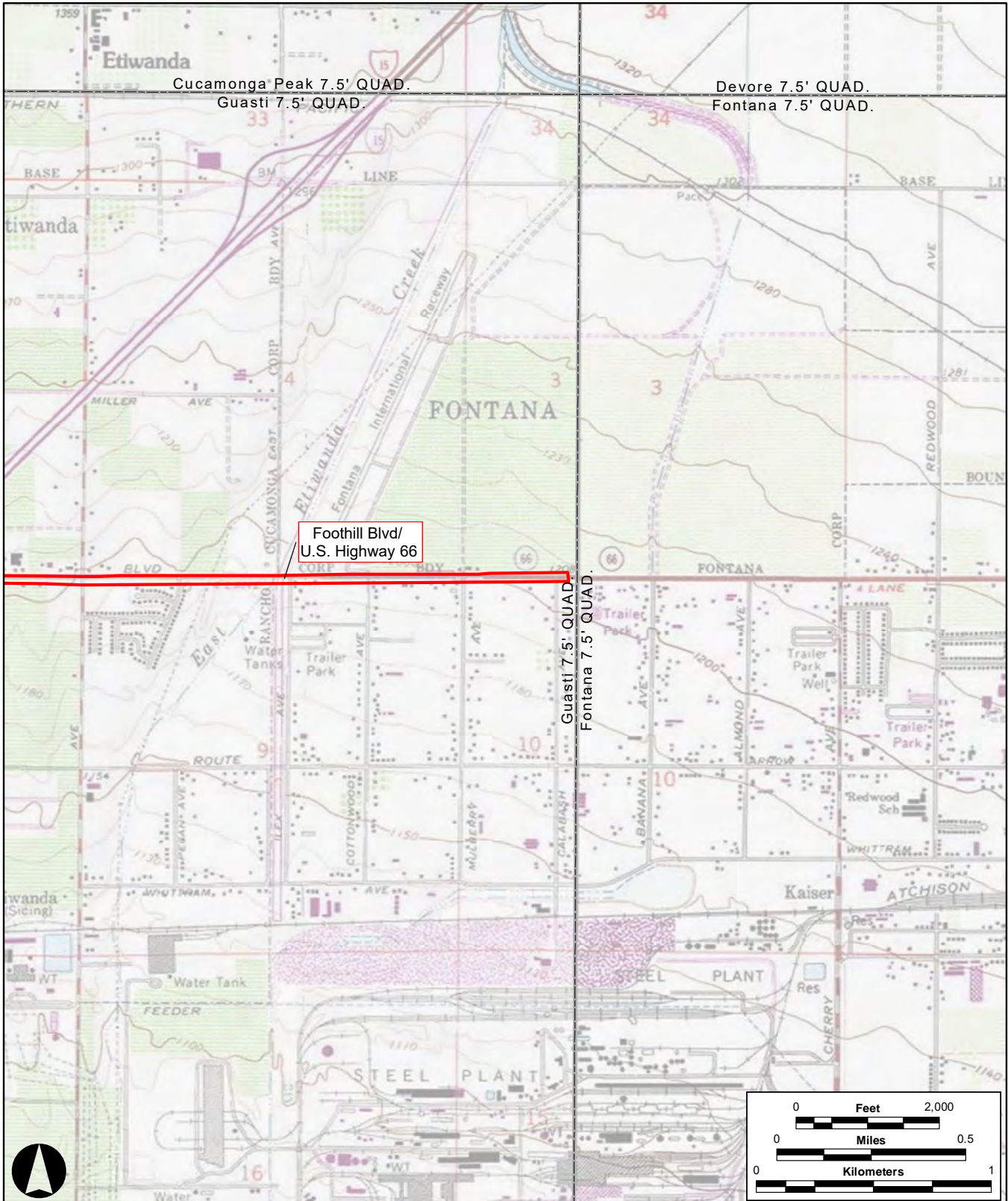
### **B12. References:**

Roland, Carol, Heather Goodson, Chad Moffett, and Christina Slattery of Mead & Hunt, Inc. *National Register of Historic Places Multiple Property Documentation (MPD) Form for U.S. Highway 66 in California*. Submitted Sept. 28, 2011, Signed by NRHP Keeper January 3, 2012.

Thomas, Roberta, Garret Root, Gena Granger, Heather Miller, and Tiffany Clark (2021). Cultural Resource Investigation in Support of the Jurupa Community Service District's Etiwanda Pipeline Project, Riverside and San Bernardino Counties, California. PaleoWest, LLC, Monrovia, California.







**APPENDIX C.2**  
**Paleontological Resource Assessment**



T: 626.408.8006  
info@paleowest.com

LOS ANGELES COUNTY  
517 S. Ivy Avenue  
Monrovia, CA 91016

August 30, 2021

Ms. Cheryl DeGano  
Albert A. Webb Associates  
3788 McCray St.  
Riverside, CA 92506  
Transmitted via email to Cheryl.degano@webbassociates.com

**RE: Paleontological Resource Assessment for the Jurupa Community Services District Etiwanda Pipeline Project, San Bernardino and Riverside Counties, California**

Dear Ms. DeGano,

At the request of Albert A. Webb Associates, PaleoWest LLC (PaleoWest) conducted a paleontological resource assessment for the Jurupa Community Services District (JCSD) Etiwanda Pipeline Project (the Project), San Bernardino and Riverside Counties, California. The goal of the assessment is to identify the geologic units that may be impacted by development of the Project, determine the paleontological sensitivity of geologic units within the Project area, assess potential for impacts to paleontological resources from development of the Project, and recommend mitigation measures to avoid or mitigate impacts to scientifically significant paleontological resources, as necessary.

This paleontological resource assessment included a fossil locality records search conducted by the Western Science Center (WSC). The records search was supplemented by a review of existing geologic maps and primary literature regarding fossiliferous geologic units within the Project vicinity and region. This technical memorandum, which was written in accordance with the guidelines set forth by the Society of Vertebrate Paleontology (SVP) (2010), has been prepared following the California State Water Resources Control Board's California Environmental Quality Act-Plus (CEQA-Plus) guidelines.

## PROJECT DESCRIPTION

The estimated length of the Etiwanda Pipeline will either be 70,420 or 68,600 linear feet (LF), depending on the final alignment and the selected treatment plant (LMWTP or RNWTP). The Etiwanda Pipeline alignment traverses through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga (Figure 1). The Project APE is situated within Sections 20, 28, 29, 32, and 33, Township 1 North, Range 6 West; Sections 4, 5, 8, 9, 15-17, 20-22, 27, 28, 33, and 34, Township 1 South, Range 6 West; and Sections 3 and 4, Township 2 South, Range 6 West, San Bernardino Baseline and Meridian (SBBM), as depicted on the Cucamonga Peak and Guasti, CA 7.5' U.S. Geological Survey (USGS) topographic quadrangles (Figure 1).

The Etiwanda Pipeline will be a 36-inch diameter welded steel transmission pipeline, except for the 20-inch diameter segment to Point of Connection (POC) No. 1. The Etiwanda Pipeline is proposed to be constructed in three phases from south to north.

Phase I will be approximately 32,000 LF in length commencing at an existing JCSD 30-inch diameter pipeline approximately 1,000 LF south of the access road to JCSD's 1110 and 980 PZ tanks located in the Jurupa Hills. The Phase I Pipeline will connect to an existing Cucamonga Valley Water District (CVWD) water pipeline in Fourth Street approximately 2,450 feet (ft) west of the intersection of Fourth Street/San Bernardino Avenue/Etiwanda Avenue in the city of Rancho Cucamonga (referred to as Point of Connection or POC #1). Phase I of the Etiwanda Pipeline will be located within or along Country Village Road, Mulberry Avenue, Slover Avenue, Calabash Avenue, San Bernardino Avenue, and Fourth Street traversing through the cities of Jurupa Valley, Fontana, and Rancho Cucamonga. Phase I construction will require crossings at: the Riverside County Flood Control and Water Conservation District Declerz Channel at Country Village Road; Interstate 10 and the Union Pacific Railroad (UPRR) at Calabash Avenue; and the San Sevaine Channel at Etiwanda Avenue. Construction at these crossings is proposed to be via jack-and-bore.

Etiwanda Pipeline Phase II will be approximately 23,320 LF and will connect to the Phase I Pipeline at the intersection of Fourth Street/San Bernardino Avenue/Etiwanda Avenue and continue north along the San Sevaine Channel (within San Bernardino County Flood Control right-of-way [ROW]), west in Arrow Route, north in Etiwanda Avenue to CVWD's Reservoir 2C (POC No. 2) in the city of Rancho Cucamonga. POC No. 2 is located approximately 950 ft south of Interstate 215. Phase II construction will require crossing Interstate 15. Crossing Interstate 15 is proposed to be via jack-and-bore.

Etiwanda Pipeline Phase III will be approximately 15,100 LF, assuming connection to the LMWTP. The pipeline will traverse north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, northwest in Coyote Drive to the LMWTP. If the Etiwanda Pipeline connects to the RNWTP, Phase III will be approximately 13,240 LF, with the pipeline continuing north in Etiwanda Avenue from POC No. 2, west in Highland Avenue, north in Day Creek Boulevard, and west in Wilson Avenue to the RNWTP. All of Phase III is within the city of Rancho Cucamonga. Regardless of which of the two water treatment plants (LMWTP or RNWTP) is the ultimate POC for the Etiwanda Pipeline, construction will entail crossing State Route (SR)-210 at Day Creek Boulevard. Crossing SR-210 will be either via jack-and-bore or open cut.

All phases of the Etiwanda Pipeline will include appurtenances and appurtenant structures such as manholes.

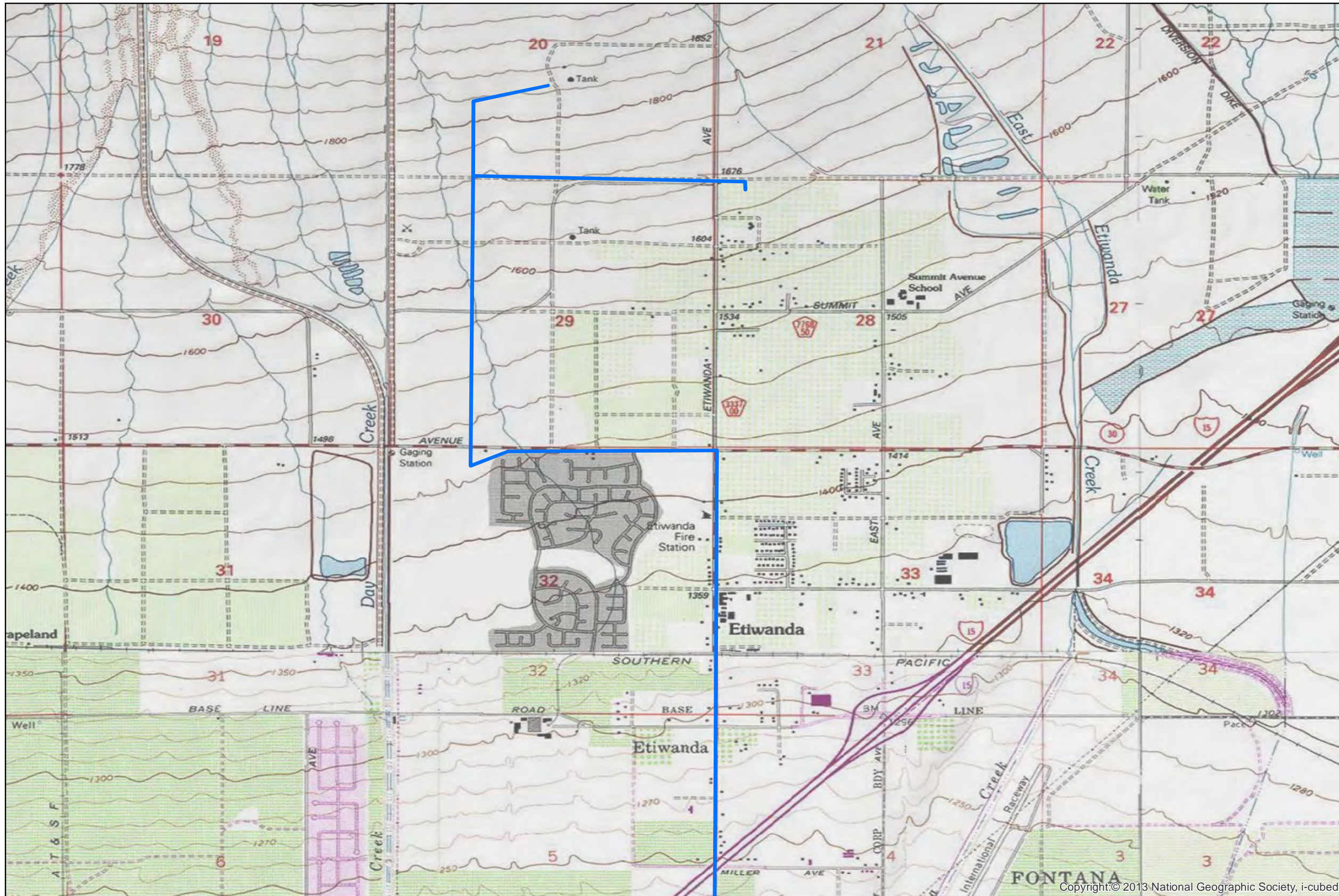
## REGULATORY CONTEXT

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws and regulations. Laws pertinent to this Project are discussed below.

### FEDERAL

Paleontological resources (i.e., fossils) are the prehistoric remains of once-living organisms and are considered to be nonrenewable scientific resources. As such, paleontological resources are afforded protection under the various federal laws and regulations including the Antiquities Act of 1906, the Federal-Aid Highway Act of 1935, the National Environmental Policy Act (NEPA) of



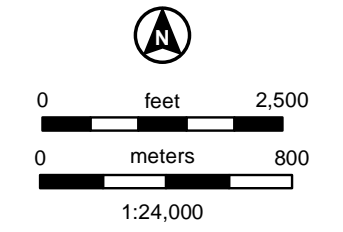


**Etiwanda Pipeline Project  
Project Location**  
Figure 2

**USGS 7.5' Quadrangle(s):  
Cucamonga Peak, CA  
(1980) & Guasti, CA (1982)  
T1N R6W, Secs 20,  
28-29, & 32-33;  
T1S R6W, Secs 4-5 SBBM  
UTM Zone 11 NAD 83**

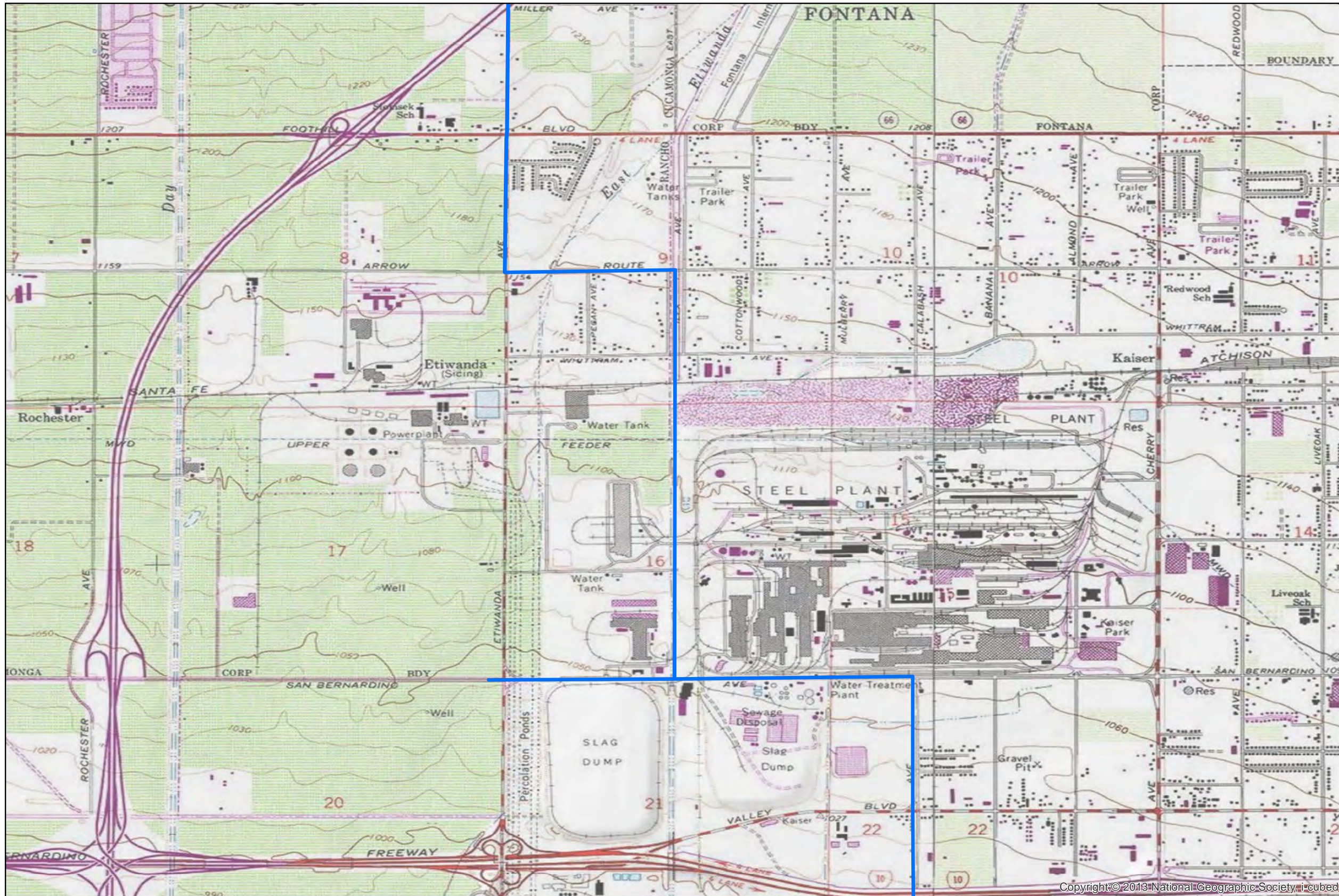
 Project Area

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Public Disclosure of Archaeological  
Site Locations is Prohibited  
(54 USC 307103)



**Map Location**



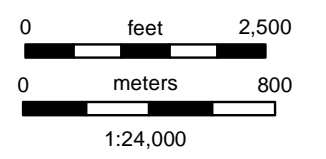


**Etiwanda Pipeline Project  
Project Location  
Figure 2**

**USGS 7.5' Quadrangle(s):  
Guasti, CA (1982) T1S  
R6W, Secs 4-5, 8-9,  
15-17, & 20-22  
SBBM UTM Zone 11 NAD  
83**

 Project Area

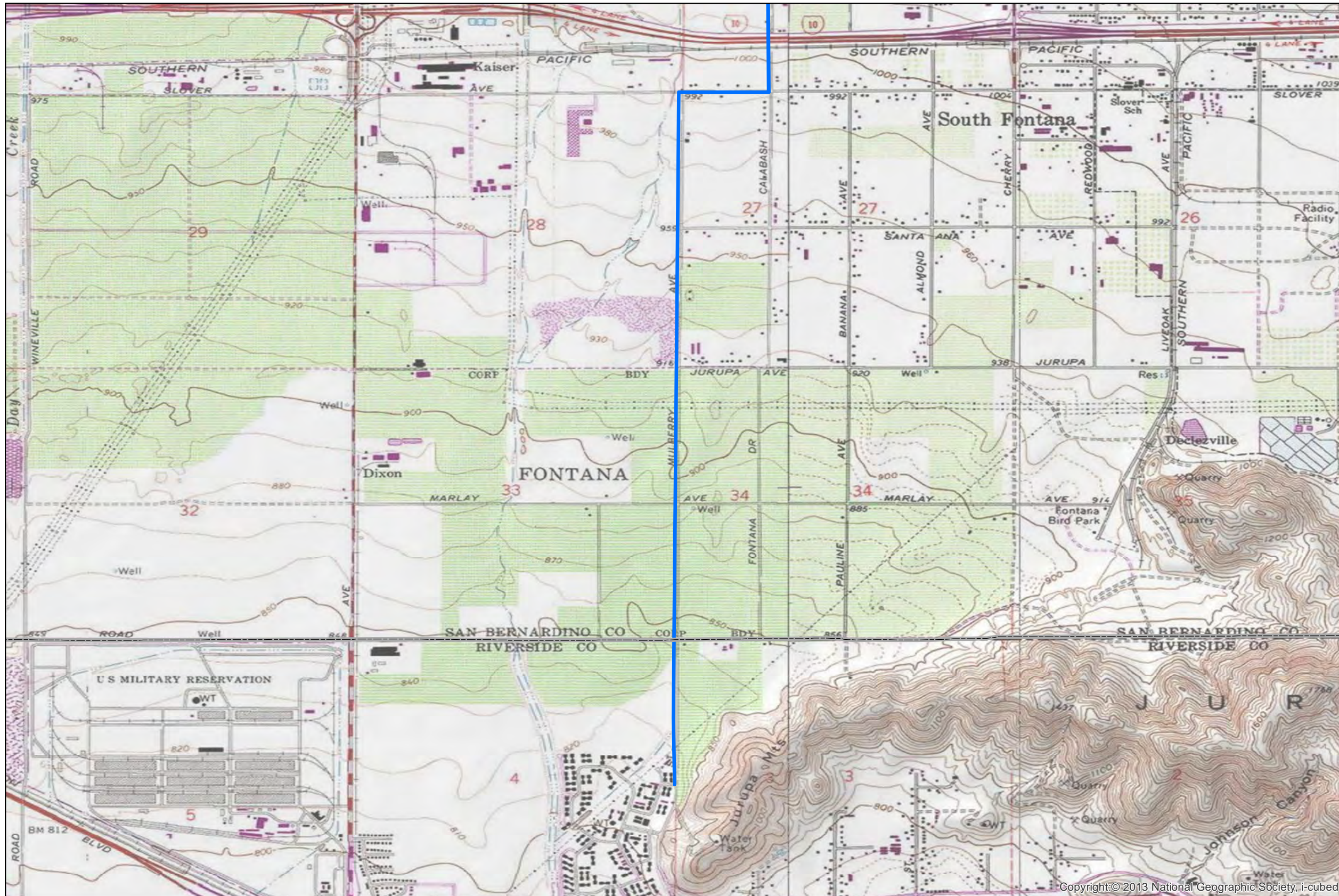
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**Map Location**



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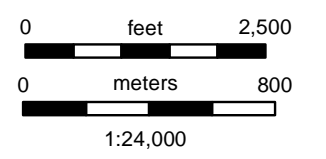


**Etiwanda Pipeline Project  
Project Location  
Figure 2**

**USGS 7.5' Quadrangle(s):  
Guasti, CA (1982) T1S  
R6W, Secs 22, 27-28 &  
33-34; T2S R6W, Secs 3 &  
4 SBBM UTM Zone 11  
NAD 83**

- Project Area
- County Boundary

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Public Disclosure of Archaeological  
Site Locations is Prohibited  
(54 USC 307103)**



**Map Location**



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1969, the Federal Land Policy and Management Act of 1976, and Title 43 of the Code of Federal Regulations, among others. Additionally, the Paleontological Resources Protection Act (PRPA) was recently enacted as a result of the passage of the Omnibus Public Lands Management Act of 2009. The PRPA requires federal land management agencies to manage and protect paleontological resources and affirms the authority of existing policies already in place. Federal laws and regulations apply when projects are located on federal lands or federally managed lands, or when they are federally funded.

## STATE LAWS AND REGULATIONS

### California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their Projects on any object or site of significance to the scientific annals of California (Division I, California Public Resources Code [PRC] Section 5020.1 [b]). Appendix G in Section 15023 provides an Environmental Checklist of questions (PRC 15023, Appendix G, Section VII, Part f) that includes the following: “Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?”

CEQA does not define “a unique paleontological resource or site.” However, the Society of Vertebrate Paleontology (SVP) has provided guidance specifically designed to support state and Federal environmental review. The SVP broadly defines significant paleontological resources as follows (SVP 2010, page 11):

“Fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).”

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiometric dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

### California Public Resources Code

Section 5097.5 of the Public Resources Code (PRC) states:

“No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands,

except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.”

As used in this PRC section, “public lands” means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions (e.g., encroachment permits) undertaken by others.

## LOCAL

### Riverside County General Plan (2015)

Paleontological resources are addressed under the Multipurpose Open Space Element of the Riverside County General Plan (2015), policies OS 19.9, which states the following:

**OS 19.6** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.

**OS 19.7** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

**OS 19.8** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

**OS 19.9** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

### San Bernardino County General Plan (2007)

The San Bernardino County General Plan (2007) directly addresses the preservation of its more than 3,000 fossil localities, catalogued in the Regional Paleontologic Locality Inventory maintained by the San Bernardino County Museum, in Chapter 5-Conservation Element.

**Goal CO 3.** The County will preserve and promote its historic and prehistoric cultural heritage.

**Policy CO 3.4, Program 4.** In areas of potential but unknown sensitivity, field surveys prior to grading will be required to establish the need for paleontologic monitoring.

**Policy CO 3.4, Program 5.** Projects requiring grading plans that are located in areas of known fossil occurrences, or demonstrated in a field survey to have fossils present, will

have all rough grading (cuts greater than 3 feet) monitored by trained paleontologic crews working under the direction of a qualified professional, so that fossils exposed during grading can be recovered and preserved. Fossils include large and small vertebrate fossils, the latter recovered by screen washing of bulk samples.

**Policy CO 3.4, Program 6.** A report of findings with an itemized accession inventory will be prepared as evidence that monitoring has been successfully completed. A preliminary report will be submitted and approved prior to granting of building permits, and a final report will be submitted and approved prior to granting of occupying permits. The adequacy of paleontologic reports will be determined in consultation with the Curator of Earth Science, San Bernardino County Museum.

**Goal M/CO 4.** Protect cultural and paleontological resources within the Mountain Region.

**Goal D/CO 6.** Protect cultural and paleontological resources within the Desert Region.

## PALEONTOLOGICAL RESOURCE POTENTIAL

Absent specific agency guidelines, most professional paleontologists in California adhere to the guidelines set forth by SVP (2010) to determine the course of paleontological mitigation for a given project. These guidelines establish protocols for the assessment of the paleontological resource potential of underlying geologic units and outline measures to mitigate adverse impacts that could result from project development. Using baseline information gathered during a paleontological resource assessment, the paleontological resource potential of the geologic unit(s) (or members thereof) underlying a Project area can be assigned to one of four categories defined by SVP (2010). These categories include high, undetermined, low and no paleontological resource potential (see Table 1 below):

**Table 1  
Paleontological Sensitivity Categories**

| Resource Potential*                 | Criteria   | Mitigation Recommendations  |
|-------------------------------------|--|---|
| <b>High Potential (sensitivity)</b> | Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered | Typically, a field survey (dependent on field conditions) as well as onsite construction monitoring will be required. Any significant specimens discovered will need to be prepared, identified, and curated into a museum. A final report documenting the significance of the finds will also be required. |

|   |   |  |
|---|---|--|
|   | evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas which may contain new vertebrate deposits, traces, or trackways are also classified as significant.  |  |
| <b>Low Potential (sensitivity)</b>          | Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic, phylogenetic species and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. However, as excavation for construction gets underway it is possible that significant and unanticipated paleontological resources might be encountered and require a change of classification from Low to High Potential and, thus, require monitoring and mitigation if the resources are found to be significant. | Mitigation is not typically required.  |
| <b>Undetermined Potential (sensitivity)</b> | Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.   | A field survey is required to further assess the unit's paleontological potential. |
| <b>No Potential</b>                         | Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources.  | No mitigation required.  |

\*Adapted from SVP (2010)

## METHODS

In order to assess whether or not a particular area has the potential to contain significant fossil resources at the subsurface, it is necessary to review published geologic mapping to determine

the geology and stratigraphy of the area. Geologic units are considered to be “sensitive” for paleontological resources if they are known to contain significant fossils anywhere in their extent. Therefore, a search of pertinent local and regional museum repositories for paleontological localities within and nearby the project area is necessary to determine whether or not fossil localities have been previously discovered within a particular rock unit. For this Project, a formal museum records search was conducted at the WSC, and an informal on-line records search was conducted of the University of California Museum of Paleontology (UCMP) at Berkeley, California.

## RESOURCE CONTEXT

### GEOLOGIC SETTING

The Project area is located south of the foothills of the San Gabriel Mountains, which are part of the Transverse Ranges geomorphic province of Southern California. The San Gabriel Mountains extend approximately 60 miles west to the Verdugo Hills, San Fernando Valley, and Soledad Basin. Active uplift and erosion in the San Gabriel Mountains have produced steep canyons, rugged topography, numerous landslides, and extensive alluvium and alluvial fan sedimentation (Morton and Miller 2006). Late Cenozoic uplift of the San Gabriel Mountains is largely due to vertical slip along a number of regional faults, including the Sierra Madre Fault Zone just south of the Project area. The highest peak in the San Gabriel Mountains is Mount San Antonio (Old Baldy), at 10,080 feet, and much of the range displays large relief with deep narrow canyons and peaks above 7,000 feet (Norris and Webb 1976). The San Gabriel Mountains are predominantly crystalline and consists of Proterozoic to Mesozoic intrusive igneous (plutonic) and metamorphic rocks as well as Cenozoic volcanic, marine, and terrestrial sedimentary deposits, including extensive alluvial fan and terrace deposits. The Project area is underlain by Quaternary alluvium derived as broad alluvial fan and alluvium deposits from the San Gabriel Mountains (Morton and Miller 2006).

### SITE SPECIFIC GEOLOGY AND PALEONTOLOGY

According to published geologic maps, the Project area is immediately underlain by Holocene and Pleistocene age surficial sediments (Qf, Qya, Qyf<sub>1</sub>, Qyf<sub>2</sub>, Qyf<sub>5</sub>, Qya) that locally consist of unconsolidated and undissected sand, gravel, and boulders from alluvial fan deposits and modern ephemeral fluvial deposits (Morton and Miller 2006) (Figure 3). The alluvial fan deposits (Qf, Qyf, Qof, and Qvof) are derived from the south flanks of the San Gabriel and San Bernardino Mountains and reflect their uplift and dissection. Holocene-age alluvial deposits (Qf), particularly those younger than 5,000 years old, are generally too young to contain fossilized material and are considered to have a low paleontological resource potential in accordance with SVP guidelines (2010). Holocene and Pleistocene alluvium (Qyf<sub>1</sub>, Qyf<sub>2</sub>, Qyf<sub>5</sub>) is mapped extensively within the Project alignment and vicinity. Pleistocene age alluvial sediments in the vicinity and elsewhere in California have preserved Ice Age vertebrate fauna of large land mammals, including specimens of deer, Columbian mammoth, Pacific mastodon, camel, horse, bison, badger, mole, rabbit, gray fox, and coyote (Jefferson 1991a, 1991b; Miller 1971; Radford 2020).

## RECORDS SEARCH RESULTS

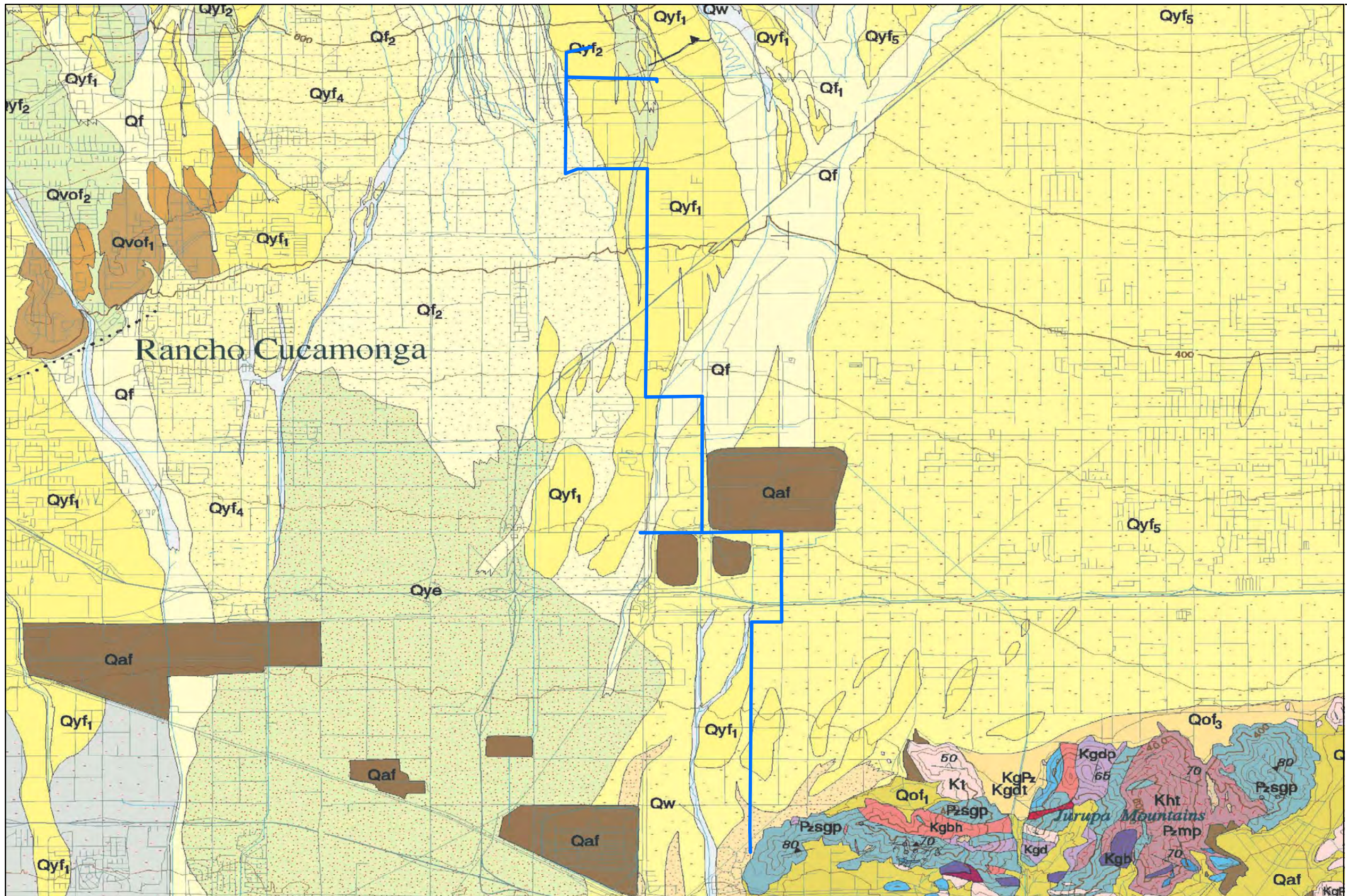
The WSC does not have any paleontological localities within the Project boundaries or within a one-mile radius (Radford 2020). The WSC does note the paleontological significance of Quaternary alluvial deposits in the region and has numerous localities within similarly mapped alluvial sediments throughout the region. Similar deposits are well documented and known to contain abundant fossil resources including those associated with *Mammuthus columbi* (Columbian mammoth), *Mammut pacificus* (Pacific mastodon), *Smilodon fatalis* (Sabertooth cat), *Equus sp* (Ancient horse) and many other Pleistocene megafauna (Radford 2020).

A supplemental review of online museum collections records maintained by the UCMP returned no previously recorded vertebrate localities in the vicinity of the Project (UCMP 2021). However, the UCMP database maintains records for at least five vertebrate fossil locality records identified within unnamed Pleistocene deposits elsewhere in San Bernardino County. Recovered specimens include *Equus* (horse), *Lepus* (hare), *Hesperotestudo* (Western turtle), *Ovis canadensis* (bighorn sheep), *Camelops* and *Camelus* (camels), *Tanupolama stevensi* (llama), and *Canis dirus* (dog) (UCMP 2021). An online search of the UCMP database revealed 17 Pleistocene age vertebrate fossil localities in Riverside County, of which five are from unnamed Pleistocene age deposits. UCMP RV8601 yielded 10 fossil specimens of unspecified Mammalia (mammal), *Neotoma* sp. (packrat), and *Microtus* sp. (vole). UCMP V7006 yielded a single specimen of *Gopherus* sp. (tortoise) and UCMP V65248 yielded a specimen belonging to *Mammuthus* sp. (mammoth). The remaining two localities reported did not contain specimen data (UCMP database). Table 2 summarizes the compiled information on known vertebrate localities from Pleistocene alluvial deposits in Riverside and San Bernardino County.

**Table 2**  
**Vertebrate Localities Reported from within Pleistocene Alluvial Deposits, San Bernardino and Riverside Counties**

| Locality No. | Geologic Unit             | Age         | Taxa  |
|--------------|---------------------------|-------------|---|
| UCMP RV8601  | Unknown Formation         | Pleistocene | Mammalia (mammal), <i>Neotoma</i> sp. (packrat), and <i>Microtus</i> sp. (vole)   |
| UCMP V7006   | Unknown Formation         | Pleistocene | <i>Gopherus</i> sp. (tortoise)  |
| UCMP V65248  | Unknown Formation         | Pleistocene | <i>Mammuthus</i> sp. (mammoth)  |
| UCMP RV6954  | Quaternary older alluvium | Pleistocene | <i>Ovis canadensis</i> (bighorn sheep), <i>Camelops</i> and <i>Camelus</i> (camels), <i>Tanupolama stevensi</i> (llama), <i>Canis dirus</i> (dog) |
| UCMP V3625   | Quaternary older alluvium | Pleistocene | <i>Equus</i> (horse)  |
| UCMP V5930   | Quaternary older alluvium | Pleistocene | <i>Lepus</i> (hare)   |
| UCMP V92103  | Quaternary older alluvium | Pleistocene | <i>Equus</i> (horse)  |
| UCMP V99366  | Quaternary older alluvium | Pleistocene | <i>Hesperotestudo</i> (Western turtle)  |

Source: UCMP 2021



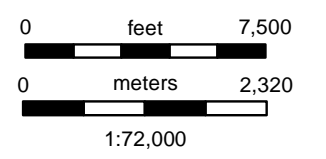
JCSD Etiwanda Pipeline  
Geology Map  
Figure 3

USGS 7.5' Quadrangles:  
Guasti, Ca (1982),  
Fontana, CA (1980),  
Cucamonga Peak, CA  
(1980) & Devore, CA  
(1981)  
T1N R6W, Secs 20-22 &  
27-34.:T1S R6W, Secs 3-5,  
8-10, 14-17, 20-23, 26-29 &  
32-35: T2S R6W, Secs 2-5  
& 8-11

SBBM UTM Zone 11 NAD  
83

 Project Area

For Official Use Only.  
Public Disclosure of Archaeological  
Site Locations is Prohibited  
(54 USC 307103)



Map Location



## FINDINGS

Shallow excavations in the Project area (approximately three feet in depth or less) are unlikely to yield any significant paleontological resources because younger Quaternary deposits are void of fossils and near-surface alluvium is usually too young to contain fossils, and therefore possesses low sensitivity. As a result, no effects to paleontological resources would occur from earth-moving activities at shallow depths along the Project alignment. However, deeper excavations (estimated to be approximately 3 feet in depth) that may extend down into older Quaternary (Pleistocene) alluvial deposits are more likely to unearth fossil vertebrate remains. Older Quaternary deposits underlying the Project area are considered to have a high paleontological sensitivity because they have proven to yield significant paleontological resources (i.e., identifiable vertebrate fossils). Generally, ground-disturbing activities exceeding depths beyond Holocene soils and younger Quaternary alluvium would encounter older Quaternary alluvium and, consequently, should be monitored by a qualified paleontological monitor to identify and effectively salvage any recovered resources while minimizing discovery-related delays.

## RECOMMENDATIONS

In general, the potential for a given project to result in negative impacts to paleontological resources is directly proportional to the amount of ground disturbance associated with the project; thus, the higher the amount of ground disturbances within geological deposits with a known paleontological sensitivity, the greater the potential for negative impacts to paleontological resources. Since this Project entails excavations for a pipeline, new ground disturbances are anticipated. Sediments in the Project area have a low-to-high paleontological sensitivity, being too young at the surface to preserve fossil resources but increasing in age and sensitivity with depth. Ground disturbing activities in previously undisturbed portions of the Project that exceed 3 feet in depth may result in significant impacts under CEQA to paleontological resources, such as destruction, damage, or loss of scientifically important paleontological resources. Therefore, if Project excavations exceed 3 feet in depth, then a qualified paleontologist should be retained to develop and implement the measures recommended below. These measures have been developed in accordance with SVP guidelines; if implemented, these measures will satisfy the requirements of CEQA.

### WORKER'S ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

Prior to the start of the proposed Project activities, all field personnel will receive a worker's environmental awareness training on paleontological resources. The training will provide a description of the laws and ordinances protecting fossil resources, the types of fossil resources that may be encountered in the Project area, the role of the paleontological monitor, outline steps to follow in the event that a fossil discovery is made, and provide contact information for the Project Paleontologist. The training will be developed by the Project Paleontologist and can be delivered concurrent with other training including cultural, biological, safety, etc.



## PALEONTOLOGICAL MITIGATION MONITORING

Prior to the commencement of ground-disturbing activities, a professional paleontologist will be retained to prepare and implement a PRMMP for the proposed Project. The PRMMP will describe the monitoring required during excavations that extend into older Quaternary (Pleistocene) age sediments, and the location of areas deemed to have a high paleontological resource potential. Monitoring will entail the visual inspection of excavated or graded areas and trench sidewalls. If the Project Paleontologist determines full-time monitoring is no longer warranted, based on the geologic conditions at depth, he or she may recommend that monitoring be reduced or cease entirely.

## FOSSIL DISCOVERIES

In the event that a paleontological resource is discovered, the monitor will have the authority to temporarily divert the construction equipment around the find until it is assessed for scientific significance and, if appropriate, collected. If the resource is determined to be of scientific significance, the Project Paleontologist shall complete the following:

1. Salvage of Fossils. If fossils are discovered, all work in the immediate vicinity should be halted to allow the paleontological monitor, and/or Project Paleontologist to evaluate the discovery and determine if the fossil may be considered significant. If the fossils are determined to be potentially significant, the Project Paleontologist (or paleontological monitor) should recover them following standard field procedures for collecting paleontological as outlined in the PRMMP prepared for the project. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
2. Fossil Preparation and Curation. The PRMMP will identify the museum that has agreed to accept fossils that may be discovered during project-related excavations. Upon completion of fieldwork, all significant fossils collected will be prepared in a properly equipped laboratory to a point ready for curation. Preparation may include the removal of excess matrix from fossil materials and stabilizing or repairing specimens. During preparation and inventory, the fossils specimens will be identified to the lowest taxonomic level practical prior to curation at an accredited museum. The fossil specimens must be delivered to the accredited museum or repository no later than 90 days after all fieldwork is completed. The cost of curation will be assessed by the repository and will be the responsibility of the client.

## FINAL PALEONTOLOGICAL MITIGATION REPORT

Upon completion of ground disturbing activity (and curation of fossils if necessary) the Project Paleontologist should prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report should include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

It has been a pleasure working with you on this Project. If you have any questions, please do not hesitate to contact us.

Sincerely,

PALEOWEST

A handwritten signature in black ink that reads "Jess DeBusk". The signature is written in a cursive, flowing style.

**Jessica DeBusk, B.S., M.B.A.**  
Principal Paleontologist

## REFERENCES

- County of Riverside, 2015 (revised), County of Riverside General Plan, Updated 2008, General Plan Amendment No. 960, Revised December 2015 <https://planning.rctlma.org/General-Plan-Zoning/General-Plan> (accessed August 2021)
- County of San Bernardino, 2014 (amended), County of San Bernardino 2007 General Plan, Amended 2014, <http://www.sbcounty.gov/Uploads/lus/GeneralPlan/FINALGP.pdf> (accessed August 2021)
- Jefferson, G.T. 1991a. A catalogue of Late Quaternary Vertebrates from California: Part One, nonmarine lower vertebrate and avian taxa. Natural History Museum of Los Angeles County Technical Reports No. 5.
- Jefferson, G.T. 1991b. A catalogue of Late Quaternary Vertebrates from California: Part Two, Mammals. Natural History Museum of Los Angeles County Technical Reports No. 7.
- Miller, W. E. 1971. Pleistocene Vertebrates of the Los Angeles Basin and Vicinity: exclusive of Rancho La Brea. Los Angeles County Museum of Natural History, No. 10.
- Morton, D.M., and Miller, F.K., 2006, Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California: U.S. Geological Survey, Open-File Report OF-2006-1217, scale 1:100,000.
- Norris R. M., and R. W. Webb, 1976, Geology of California. John Wiley & Sons, New York, 378 p.
- Radford, D., 2020. Unpublished museum collections records. Western Science Center.
- Society of Vertebrate Paleontology (SVP), 2010, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* Society of Vertebrate Paleontology. Impact Mitigation Guidelines Revision Committee. Pages 1–11. Bethesda, MD.

**APPENDIX D**  
**Energy Calculations**

**Table 1 – Total Construction-Related Fuel Consumption**

**Etiwanda Pipeline**

| <b>Fuel</b>                                  | <b>Consumption</b> |                |
|--|--------------------|----------------|
| <b>Diesel</b>                                |                    |                |
| On-Road Construction Trips <sup>1</sup>      | 19,863             | Gallons        |
| Off-Road Construction Equipment <sup>2</sup> | 239,672            | Gallons        |
| <b>Diesel Total</b>                          | <b>259,535</b>     | <b>Gallons</b> |
| <b>Gasoline</b>                              |                    |                |
| On-Road Construction Trips <sup>1</sup>      | 14,659             | Gallons        |
| Off-Road Construction Equipment <sup>3</sup> | -                  | Gallons        |
| <b>Gasoline Total</b>                        | <b>14,659</b>      | <b>Gallons</b> |

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod for construction in 2022 and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for South Coast Air Basin. See Table 2 for calculation details.
2. Off-road mobile source fuel usage based on a fuel usage rate of 0.05 gallons of diesel per horsepower (HP)-hour, based on SCAQMD CEQA Air Quality Handbook, Table A9-3E.
3. All emissions from off-road construction equipment were assumed to be diesel.

**Table 2 – On-Road Construction Trip Estimates**

**Etiwanda Pipeline**

| Trip Type             | Trips   | Trip length | Vehicle Miles Traveled (VMT) | Fuel Efficiency | Annual Fuel Usage <sup>1</sup> |          |
|-----------------------|---------|-------------|------------------------------|-----------------|--------------------------------|----------|
|                       | (trips) | (miles)     | (miles)                      | (mpg)           | (Fuel)                         | (gallon) |
| Worker <sup>2,3</sup> | 27,864  | 14.7        | 409,601                      | 27.3            | Gasoline                       | 14,659   |
| Vendor <sup>4</sup>   | 5,184   | 6.9         | 35,770                       | 8.7             | Diesel                         | 4,342    |
| Hauling <sup>5</sup>  | 5,192   | 20          | 103,840                      | 6.7             | Diesel                         | 15,521   |

Notes:

1. On-road mobile source fuel use based on vehicle miles traveled (VMT) from CalEEMod output for construction and fleet-average fuel consumption in gallons per mile from EMFAC2017 web based data for 2022 in South Coast Air Basin.
2. Worker trips were assumed to be 100% gasoline powered vehicles.
3. Per CalEEMod, worker Trips were assumed to be 50% LDA, 25% LDT1, and 25% LDT2.
4. Vendor trips were assumed to be 50% MHDT and 50% HHDT, split evenly between the MHDT and HHDT construction categories.
5. Per CalEEMod, hauling trips were assumed to be 100% HHDT.