

# Draft Mitigated Negative Declaration

**Project:** Traver Well 3 1,2,3-Trichloropropane (1,2,3- TCP) Treatment

**Lead Agency:** State Water Resources Control Board

**Project Location:** The Project is located within an unincorporated Community in northeast Tulare County, Traver, south of the Kings River and east of State Route 99. (See **Figure 2-1** and **Figure 2-2**). The Project is located on two parcels, 040-070-001 and 040-070-014, along Jacobs Drive, between Church and Baker Drive. The project location also includes an approximately 400-foot stretch within Jacobs Drive, along the two parcels.

**Project Description:** Del Oro Water Company-Traver District will install a 1,2,3-TCP water treatment system, (See **Figure 2-4**). The system will include two granular activated carbon (GAC) vessels on a concrete pad, a tank for backwash water, 100 square foot chlorination building, and a generator for emergency power. Piping will be installed to connect the components to the rest of the water system. Piping will also be installed within Jacobs Drive to connect they system to a County stormwater basin. The County stormwater basin will be deepened. Fencing, a concrete truck pad, a paved access driveway, a generator, electrical lines, and an entrance gate will also be installed.

**Finding:** An Initial Study (IS) has been prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not have any significant effects on the environment because mitigation measures will be implemented to reduce impacts to a less than significant level. This conclusion is supported by the following findings:

- 1) *The proposed project would not impact Agriculture, Cultural Resources, Tribal Cultural Resources, Mineral Resources, Population and Housing, Recreation, and Wildfire.*
- 2) *The proposed project would have a less than significant impact to Aesthetics, Air Quality, Energy, Geology and Soils, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation, Public Services, and Recreation.*
- 3) *Mitigation has been adopted to reduce potentially significant impacts related to Biological Resources (for Utilities and Service Systems).*

## **Mitigation Measures:**

**Biological-** The following Mitigation measures area proposed to avoid impacts to nesting birds.

**BIO-1a: Avoidance of Nesting Bird Season–** The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) to avoid impacts to nesting birds.

**BIO-1b: Pre-Construction Nesting Bird Survey-** If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for active nests within a week prior to the start of construction. The survey shall include the Area of Potential Effects and surrounding lands within 0.5 mile. If no active nests

are observed, no further mitigation is required. Raptor nests are considered “active” upon the nest-building stage.

**BIO-1c: Establish Nest Buffers** – On discovery of any active nests in the survey area, the biologist shall determine appropriate construction avoidance zones around the nests based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged.

**Statement of No Significant Effect:**

Provost and Prichard, on behalf of the State Water Board and Del Oro Water Company, Traver District, has prepared an Initial Study in support of this Mitigated Negative Declaration. Copies of the Initial Study/Mitigated Negative Declaration (IS/MND) will be provided to the State Clearinghouse and a 30-day public review period will commence.

Pursuant to Section 21082 of the California Environmental Quality Act, the State Water Resources Control Board (SWRCB) has independently reviewed and analyzed the Initial Study /Mitigated Negative Declaration (IS/MND) for the proposed project and finds that the IS/MND reflects the independent judgment of the SWRCB. As the lead agency for the project, the SWRCB further finds that the project mitigation measures will be implemented as stated in the IS/MND. With implementation of these mitigation measures, the proposed project as modified would have no significant effect on the environment.

# Del Oro Water Company- Traver District

## Traver Well No. 3 1,2,3- Trichloropropane (1,2,3-TCP) Treatment

### Initial Study / Mitigated Negative Declaration

October 2019



Prepared for:  
State Water Resources Control Board

Prepared by:  
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# Table of Contents

Acronyms and Abbreviations .....	vi
Chapter 1 Introduction .....	1-1
1.1 Regulatory Information .....	1-1
1.2 Document Format .....	1-1
Chapter 2 Project Description .....	2-1
2.1 Project Background and Objectives .....	2-1
2.1.1 Project Title .....	2-1
2.1.2 Lead Agency Name and Address .....	2-1
2.1.3 Contact Person and Phone Number .....	2-1
2.1.4 Project Location .....	2-1
2.1.5 Latitude and Longitude .....	2-1
2.1.6 Area of Potential Effects .....	2-4
2.1.7 Description of Project .....	2-6
2.1.8 Surrounding Land Uses and Setting .....	2-9
2.1.9 Zoning and General Plan Designation .....	2-9
2.1.10 Other Public Agencies Whose Approval May Be Required .....	2-9
2.1.11 Consultation with California Native American Tribes .....	2-9
Environmental Factors Potentially Affected .....	2-10
Chapter 3 Impact Analysis .....	3-1
3.1 Aesthetics .....	3-1
3.1.1 Environmental Setting .....	3-1
3.1.2 Impact Assessment .....	3-2
3.2 Agriculture and Forestry Resources .....	3-3
3.2.1 Environmental Setting .....	3-3
3.2.2 Impact Assessment .....	3-4
3.3 Air Quality .....	3-9
3.3.1 Environmental Setting .....	3-9
3.3.2 Methodology .....	3-11
3.3.3 Impact Assessment .....	3-13
3.4 Biological Resources .....	3-17
3.4.1 Environmental Setting .....	3-17
3.4.2 Methodology .....	3-18

3.4.3	Impact Assessment .....	3-25
3.5	Cultural Resources .....	3-29
3.5.1	Environmental Setting.....	3-29
3.5.2	Methodology .....	3-29
3.5.3	Impact Assessment .....	3-30
3.6	Energy .....	3-32
3.6.1	Environmental Setting.....	3-32
3.6.2	Impact Assessment .....	3-32
3.7	Geology and Soils.....	3-34
3.7.1	Environmental Setting.....	3-34
3.7.2	Impact Assessment .....	3-36
3.8	Greenhouse Gas Emissions .....	3-39
3.8.1	Environmental Setting.....	3-39
3.8.2	Methodology .....	3-40
3.8.3	Impact Assessment .....	3-42
3.9	Hazards and Hazardous Materials .....	3-45
3.9.1	Environmental Setting.....	3-45
3.9.2	Impact Assessment .....	3-46
3.10	Hydrology and Water Quality .....	3-49
3.10.1	Environmental Setting.....	3-49
3.10.2	Impact Assessment .....	3-51
3.11	Land Use and Planning .....	3-55
3.11.1	Environmental Setting.....	3-55
3.12	Mineral Resources .....	3-58
3.12.1	Environmental Setting.....	3-58
3.13	Noise .....	3-60
3.13.1	Environmental Setting.....	3-60
3.13.2	Impact Assessment .....	3-61
3.14	Population and Housing .....	3-63
3.14.1	Environmental Setting.....	3-63
3.14.2	Impact Assessment .....	3-63
3.15	Public Services .....	3-64
3.15.1	Environmental Setting.....	3-64
3.15.2	Impact Assessment .....	3-65

3.16	Recreation.....	3-67
3.16.1	Environmental Setting.....	3-67
3.16.2	Impact Assessment .....	3-67
3.17	Transportation .....	3-68
3.17.1	Environmental Setting.....	3-68
3.17.2	Impact Assessment .....	3-69
3.18	Tribal Cultural Resources.....	3-71
3.18.1	Environmental Setting.....	3-71
3.18.2	Impact Assessment .....	3-72
3.19	Utilities and Service Systems .....	3-73
3.19.1	Environmental Setting.....	3-73
3.19.2	Impact Assessment .....	3-74
3.20	Wildfire .....	3-76
3.20.1	Environmental Setting.....	3-76
3.20.2	Impact Assessment .....	3-76
3.21	CEQA Mandatory Findings of Significance .....	3-79
3.21.1	Impact Assessment .....	3-79
Chapter 4 References .....		4-1
Chapter 5 List of Preparers .....		5-1
Appendix A.....		A-1
Air Quality and Greenhouse Gas Emissions Evaluation Report .....		A-1
Appendix B.....		B-1
Biological Evaluation Report.....		B-1
Appendix C.....		C-1
Cultural and Historical Resources Evaluation Report.....		C-1
Appendix D .....		D-1
NRCS Soil Resource Report.....		D-1

## List of Figures

Figure 2-1. Regional Location.....	2-2
Figure 2-2. Topographic Quadrangle Map .....	2-3
Figure 2-3. Area of Potential Effect .....	2-5
Figure 2-4. Well Site (Green) Site Plan.....	2-8
Figure 3-1. Farmland Designation Map .....	3-7
Figure 3-2. Williamson Act Map .....	3-8
Figure 3-3. FEMA Flood Map.....	3-54
Figure 3-4. Zoning Map.....	3-57
Figure 3-5. Fire Hazard Severity Zone Map.....	3-78

## List of Tables

Table 3-1. Aesthetics Impacts.....	3-1
Table 3-2. Agriculture and Forestry Resources Impacts .....	3-3
Table 3-3. Air Quality Impacts .....	3-9
Table 3-4. Summary of Ambient Air Quality Standards and Attainment Designation.....	3-10
Table 3-5. SJVAPD Thresholds of Significance .....	3-11
Table 3-6. Unmitigated Short-Term Construction-Generated Emissions of Criteria Air Pollutants .....	3-14
Table 3-7. Unmitigated Long-Term Operational Emissions.....	3-14
Table 3-8. Biological Resources Impacts .....	3-17
Table 3-9. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity.....	3-19
Table 3-10. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity .....	3-23
Table 3-11. Cultural Resources Impacts .....	3-29
Table 3-12. Energy Impacts .....	3-32
Table 3-13. Geology and Soils Impacts.....	3-34
Table 3-14. Greenhouse Gas Emissions Impacts .....	3-39
Table 3-15. Short-Term Construction-Generated GHG Emissions.....	3-42
Table 3-16. Long-Term Operational GHG Emissions .....	3-43
Table 3-17. Hazards and Hazardous Materials Impacts.....	3-45
Table 3-18. Hydrology and Water Quality Impacts .....	3-49
Table 3-19. Land Use and Planning Impacts .....	3-55
Table 3-20. Mineral Resources Impacts .....	3-58



Table 3-21. Noise Impacts .....	3-60
Table 3-22. Population and Housing Impacts .....	3-63
Table 3-23. Public Services Impacts .....	3-64
Table 3-24. Recreation Impacts.....	3-67
Table 3-25. Transportation/Traffic Impacts.....	3-68
Table 3-26. Tribal Cultural Resources Impacts.....	3-71
Table 3-27. Utilities and Service Systems Impacts .....	3-73
Table 3-28. Wildfire Impacts .....	3-76
Table 3-29. Mandatory Findings of Significance Impacts.....	3-79

# Acronyms and Abbreviations

AB	Assembly Bill
APN	Assessor's Parcel Number
BPS	Best Performance Standards
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	U.S. Code of Federal Regulations
CNDDB	California Department of Fish and Wildlife Natural Diversity Database
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
DOC	California Department of Conservation
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substance Control
DWR	Department of Water Resources
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GC	Government Code
GHG	Greenhouse Gas
GIS	Geographic Information System
IPaC	U.S. Fish and Wildlife Service's Information for Planning and Consultation system
IS	Initial Study

Del Oro Water Company  
Traver Well No. 3 1,2,3-TCP Project

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IS/MND.....	Initial Study/Mitigated Negative Declaration
MCL .....	Maximum Contaminant Level
MMRP .....	Mitigation Monitoring & Reporting Program
MND.....	Mitigated Negative Declaration
MRZ.....	Mineral Resource Zones
MT CO <sub>2e</sub> .....	Metric Tons of Carbon Dioxide Equivalent
NAAQS .....	National Ambient Air Quality Standards
ND .....	Negative Declaration
NO <sub>2</sub> .....	Nitrogen Dioxide
NOX .....	Nitrogen Oxide
NPDES.....	National Pollutant Discharge Elimination System
NRCS.....	Natural Resources Conservation Service
O <sub>3</sub> .....	Ozone
Pb .....	Lead
PC .....	Production-Consumption
PM <sub>10</sub> .....	Particulate Matter less than 10 microns in diameter
PM <sub>2.5</sub> .....	Particulate Matter less than 2.5 microns in diameter
Project.....	Del Oro Water Company- Traver District, Traver Well No. 3 1,2,3-Trichloropropane Treatment
R-1 .....	Single Family Residential
R-2 .....	Two -Family Residential
RWQCB .....	Regional Water Quality Control Board
SJVAB.....	San Joaquin Valley Air Basin
SJVAPCD.....	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub> .....	Sulfur Dioxide
SR .....	State Route
SWRCB.....	State Water Resources Control Board
SWPPP.....	Storm Water Pollution Prevention Plan
TAC .....	Toxic Air Contaminants
TCP .....	1,2,3-trichloropropane
TPY .....	Tons Per Year
USACE.....	U. S. Army Corps of Engineers
USDA .....	U. S. Department of Agriculture
USFWS .....	U. S. Fish and Wildlife Service
USGS .....	U. S. Geological Survey

# Chapter 1 Introduction

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of the State Water Resources Control Board and Del Oro Water Company-Traver District to address the potential environmental effects of the Traver Well No. 3 1,2,3-Trichloropropane (1,2,3-TCP) Treatment Project (Project or proposed Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000 *et seq.* The State Water Resources Control Board (SWRCB) is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in the **Chapter 2 Project Description**.

## 1.1 Regulatory Information

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. In accordance with California Code of Regulations Title 14 (Chapter 3, Section 15000, *et seq.*)-- also known as the CEQA Guidelines-- Section 15064 (a)(1) states that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration (ND) may be prepared if the lead agency finds that there is no substantial evidence in light of the whole record that the project may have a significant effect on the environment. An ND is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a ND or mitigated ND shall be prepared for a project subject to CEQA when either:

- a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or
- b. The IS identifies potentially significant effects, but:
  1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed MND and IS is 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 proposed Project as revised may have a significant effect on the environment.

## 1.2 Document Format

This IS/MND contains five chapters and four appendices. **Chapter 1 Introduction**, provides an overview of the proposed Project and the CEQA process. **Chapter 2 Project Description**, provides a detailed description of proposed Project components and objectives. **Chapter 3 Impact Analysis**, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion



provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. **Chapter 4** References and **Chapter 5** List of Preparers.

The CalEEMod Output Files, Biological Evaluation Report, Cultural Resources Survey, and NRCS Soil Resource Report are provided as technical **Appendix A**, **Appendix B**, **Appendix C** and **Appendix D**, respectively, at the end of this document.

The analyses of environmental impacts in **Chapter 3** are separated into the following categories:

**Potentially Significant Impact.** This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.

**Less than Significant with Mitigation Incorporated.** This category applies where the incorporation of mitigation measures would reduce an effect from a “Potentially Significant Impact” to a “Less Than Significant Impact.” The mitigation measure(s) must be described, and a brief explanation given on how impacts would be reduced to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

**Less Than Significant Impact.** This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

**No Impact.** This category applies when a project would not create an impact in the specific environmental issue area. “No Impact” answers do not require a detailed explanation if they are adequately supported by the information sources cited, which show that the impact does not apply to the specific project (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).

# Chapter 2 Project Description

## 2.1 Project Background and Objectives

### 2.1.1 Project Title

Del Oro Water Company- Traver District, Traver Well No. 3 1,2,3- Trichloropropane Treatment

### 2.1.2 Lead Agency Name and Address

State Water Resources Control Board  
1001 I Street, 16<sup>th</sup> Floor  
Sacramento, CA 95814

### 2.1.3 Contact Person and Phone Number

#### Lead Agency Contact

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#### CEQA Consultant

Provost & Pritchard Consulting Group  
Briza Sholars, Environmental Project Manager  
(559) 449-2700

### 2.1.4 Project Location

Traver, an unincorporated Community in Tulare County, is located in the northwest portion of the County south of the Kings River and adjacent to State Route (SR) 99. The majority of the developed area in Traver is located east of SR 99, which runs west of and parallel to the Union Pacific Railroad (U.P.R.R.) tracks. (See **Figure 2-1** and **Figure 2-2**. Merritt Drive provides access and egress to and from SR 99 while the Sixth Street off-ramp provides an exit point from northbound SR 99 into Traver. A local railroad crossing is located on Merritt Drive between Sixth Street and Burke Drive. The project site is located at APN. Nos 040-070-001 and 040-070-014 and at the northeast corner of Church and Jacobs Drive. The Project location also includes from the Well No. 3 treatment system along the road right-of-way of Jacobs Drive for a distance of approximately 250-feet, ending at an existing off-site County basin.

### 2.1.5 Latitude and Longitude

The approximate centroid of the Project area, including the pipeline alignment, is 36.456186, -119.485733

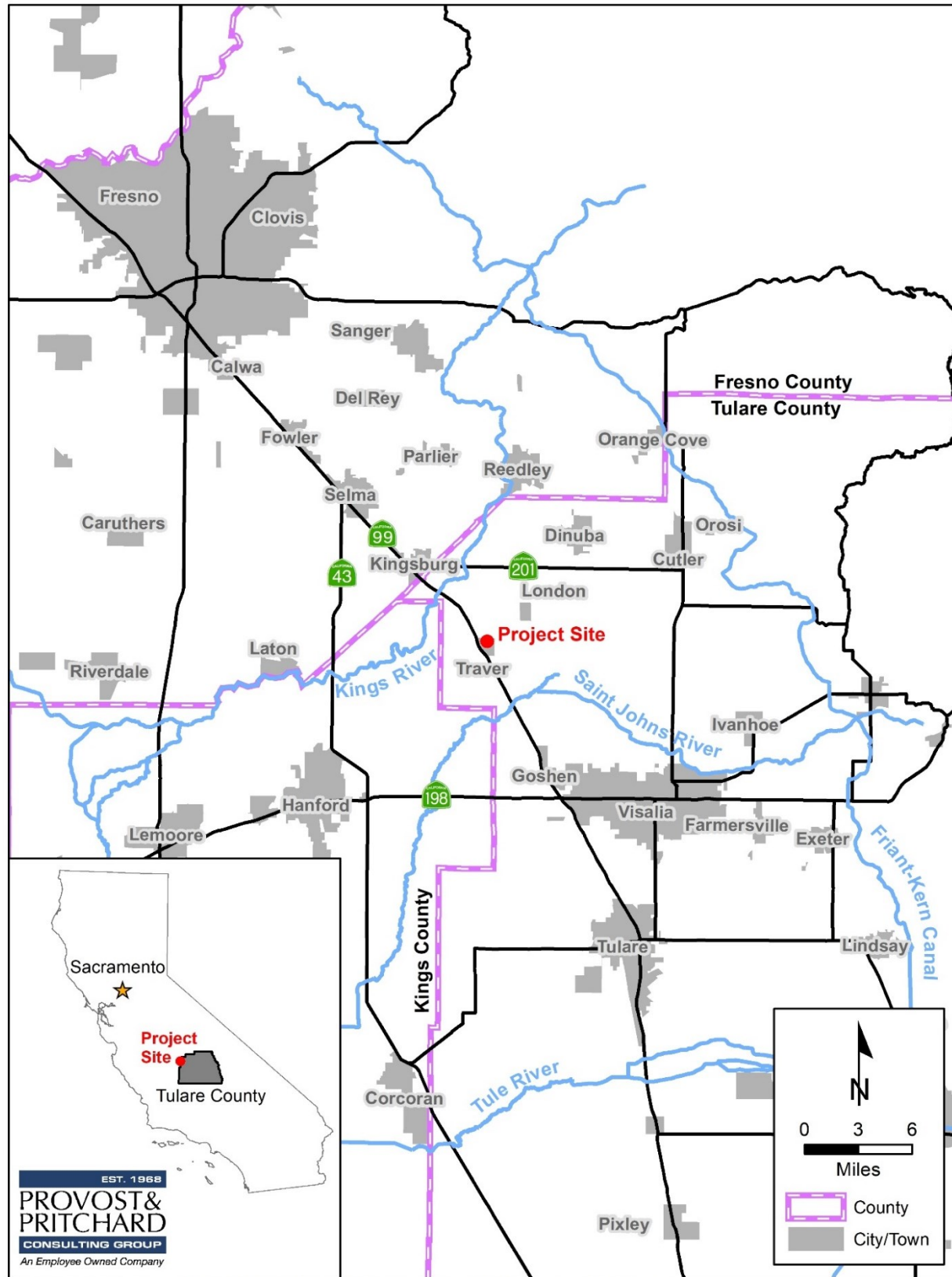
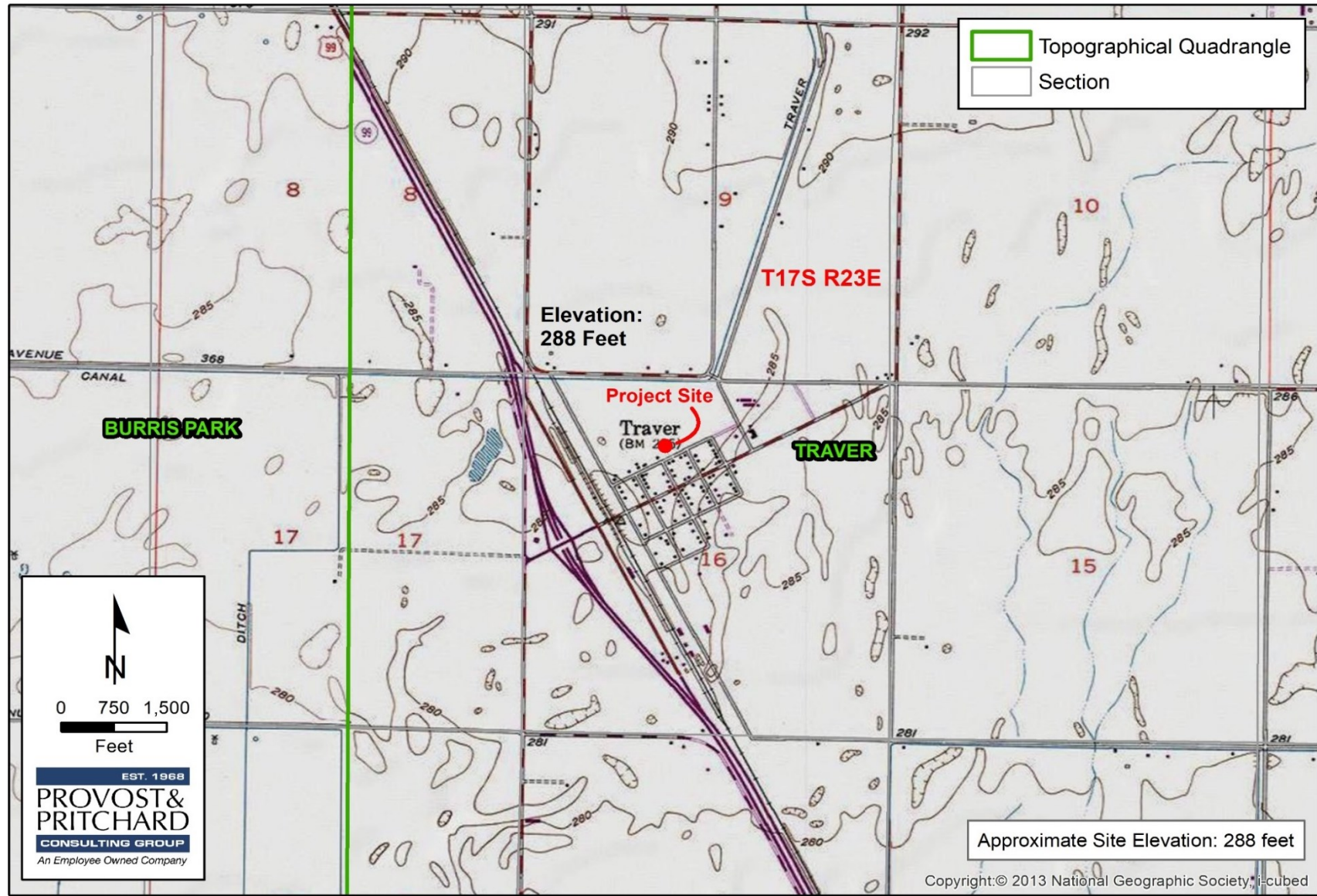


Figure 2-1. Regional Location



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Figure 2-2. Topographic Quadrangle Map



### 2.1.6 Area of Potential Effects

The Area of Potential Effects (APE) for the project is 1.53 acres and includes APN: 040-070-001 and 040-070-014. (See **Figure 2-3.**) The APE consists of existing Well Site 3 (green, 11,250-ft<sup>2</sup>), 18-inch piping area within an existing roadway (red, 4,500-feet<sup>2</sup>), and an existing stormwater basin site owned by the County (blue, 7,200-feet<sup>2</sup>).



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Figure 2-3. Area of Potential Effect

## 2.1.7 Description of Project

### 2.1.7.1 Project Background and Purpose

The Del Oro Water Company - Traver District serves drinking water to approximately 500 people through 180 residential service connections. The water system consists of two active groundwater wells (Wells 2 and 3) and one inactive well (Well 1). The carcinogenic synthetic organic contaminant 1,2,3 –TCP has been detected at levels higher than the maximum contaminant level (MCL) at all three wells.

Well 1 is located approximately 100-feet to the southwest of Well 3 on the same parcel. It is located within a chain-link fence enclosure of approximately 200-square-feet. Well 1 is equipped with a 40-hp submersible pump that produces approximately 550-gpm. Well 1 is configured to pump into the Well 3 hydropneumatic tank; however, it is currently disconnected from the system.

Wells 2 and 3 are currently the only active water sources supplying the community. Well 3 is situated on an undeveloped 1-acre lot at the northwestern border of the District's service area – at the opposite end of town from Well 2. It is located within a 2,500 square-foot chain-link fence enclosure. The well is equipped with a 50 hp submersible pump with a capacity of 550gpm and a 5,000-gallon hydropneumatics pressure tank. Wells 2 and 3 meet all drinking water standards except for TCP. Wells 2 and 3 are currently the only active sources of supply for the water system and therefore, both wells are needed to provide the necessary redundancy when one well has to be taken off-line for maintenance. Both wells are also needed to supply fire hydrants in the event of a fire.

1,2,3, TCP is an exclusively man-made synthetic organic chemical and a carcinogen. TCP was used as a component in agricultural soil fumigants applied over large areas of the Central Valley, including Tulare County. TCP is heavier than water, very slow to biodegrade naturally, and is sparingly volatile – all characteristics that make it persistent in the groundwater and difficult to treat. The project will help remediate TCP for Well 3 to ensure compliance with the MCL for drinking water consumption.

### 2.1.7.2 Project Description

Del Oro Water Company- Traver Water District proposes a water treatment system for the remediation of 1,2,3-TCP. (See **Figure 2-4**).

This system will include one pair of 12-foot granular activated carbon (GAC) vessels, a large supply tank for backwash water, chlorination building, and a generator for emergency power.

GAC treatment will consist of two approximately twelve-foot diameter, 15-foot tall vessels installed on a 578-foot<sup>2</sup> concrete pad. The GAC treatment vessels will be operated as a series-vessel pair. When pumping at 550 gpm the two vessels will provide an empty bed contact time of 19.4 minutes and a hydraulic loading rate of 4.9 gpm/ft<sup>2</sup>.

Well 3 cannot produce a high enough flow rate to backwash the GAC vessels. In order to provide an adequate water supply for backwashing, a 22-foot diameter, 19-foot tall backwash supply storage tank and backwash pump station will be installed at the site. The backwash pump station will consist of a 1,500 gallon per minute backwash supply pump on a 20 square foot concrete pad.

Approximately 674-feet of 4 to 18-inch diameter piping will be installed to connect the various components within the system. Approximately 50-feet of 18-diameter piping will also be installed from the well site to the Jacobs Drive road right-of-way and approximately 250-feet of 18 inch piping will be installed within the Jacobs Drive road right-of-way to move the waste backwash, by gravity flow, to a County stormwater basin at a nearby parcel. The stormwater basin will be expanded to be 1-foot deeper.

A 7-9.5-foot tall chlorination building will be installed within a 100-foot<sup>2</sup> area. The chlorination building will be fenced and include a sidewalk, eye wash shower, hose bibb, and hose rack. Inside the chlorination building a chlorination system for disinfection of the treated water, and a nitrate analyzer to detect potential nitrate sloughing will be installed.

A 1,125-foot<sup>2</sup> concrete truck pad will be constructed for carbon and chlorine deliveries, and general access for pump and treatment system maintenance.

An approximately 80-foot<sup>2</sup> generator pad, generator, and electrical lines will also be installed on the property.

Additionally, general site improvements including an approximately 905-foot<sup>2</sup> paved access driveway and approximately 420-foot perimeter fence around the entire parcel, with a 30-foot double access gate, that will be installed as part of the project.





**Figure 2-4. Well Site (Green) Site Plan**

### 2.1.7.3 Construction/ Operation and Maintenance

Construction of the Project is anticipated to be completed within eight months, which will include grading, construction of the water treatment system and connection to the stormwater drainage basin. Construction will likely take place Fall of 2019 to Spring of 2020. Construction equipment will likely include an excavator, backhoe/loader, concrete truck, and concrete pumper. Construction will require one super, one foreman, two operators, and four laborers/carpenters/masons.

Generally, construction will occur between the hours of 7:00 am and 7:00pm, Monday through Friday, excluding holidays. Post-construction activities will include system testing, commissioning, and site clean-up. Construction will require temporary staging and storage of materials and equipment. Staging areas will be located onsite.

Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products.

Operation and maintenance of the system components at the Well No. 3 site will continue to be performed by Del Oro Water Company- Traver District existing maintenance staff.

### 2.1.8 Surrounding Land Uses and Setting

The community of Traver lies in the midst of one of the most productive agricultural regions in the world, and is surrounded by row crops, orchards and vineyards. State Route 99, one of the busiest north-south arterial routes in California, passes through the westerly portion of the community. The Union Pacific Railroad maintains a line parallel to (east of) SR 99 and through the western edge of the community (Traver Community Plan).

The Project area is surrounded by agricultural lands to the north and residential development to the south, east and west. Directly east of the well site is a church and then to the east of that is the existing basin that is proposed. The well site is an existing operational well site for two wells. Well No. 1 is offline and Well No. 3 has high levels of TCP that require treatment. The well site is zoned R-2 (Two-Family Residential), (See [Figure 3-4](#)).

### 2.1.9 Zoning and General Plan Designation

The zoning designation for the property is R-2 (Two family residential) under the Tulare County General Plan. See [Figure 3-4](#).

### 2.1.10 Other Public Agencies Whose Approval May Be Required

- County of Tulare – Road/Basin Encroachment Permit
- State Water Resources Control Board – NPDES Construction General Permit
- State Water Resources Control Board- Individual or General Waste Discharge Permit
- San Joaquin Valley Air Pollution Control District – back-up generator permit & rules and regulations (Regulation VIII, Rule 9510; Regulation IV, Rule 4702)

### 2.1.11 Consultation with California Native American Tribes

No tribes have requested consultation.

## Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Aesthetics                           | <input type="checkbox"/> Agriculture Resources    | <input type="checkbox"/> Air Quality                        |
| <input checked="" type="checkbox"/> Biological Resources      | <input type="checkbox"/> Cultural Resources       | <input type="checkbox"/> Energy                             |
| <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/Traffic   | <input type="checkbox"/> Tribal Cultural Resources          |
| <input checked="" type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire                 | <input type="checkbox"/> Mandatory Findings of significance |

### 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 revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

# Chapter 3 Impact Analysis

## 3.1 Aesthetics

**Table 3-1. Aesthetics Impacts**

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

### 3.1.1 Environmental Setting

The Project is located in the northwestern part of Tulare County in the Central San Joaquin Valley. Lands in the vicinity consist of relatively flat irrigated farmland and the rural residential community of Traver. Agricultural practices in the vicinity consist of row crop and orchard cultivation. In Tulare County, a portion of State Route 180 (SR 180) has been officially identified by Caltrans as a “designated State Scenic Highway;” however, that segment is approximately 24 miles north of the Project. Traver is located approximately 20 miles west of the foothills of the Sierra Nevada and approximately 50 miles east of the foothills of the Coastal Range. Neither of these foothills or mountain ranges are visible from the vantage point of the Project site. The Project site is currently home to two wells and associated infrastructure. The proposed Project is consistent with the aesthetics of the area.

#### 3.1.1.1 Local

**Traver Community Plan<sup>1</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect the aesthetic character of the community of Traver:

- *LU-7.4 The County shall ensure that streetscape elements (e.g., street signs, trees, and furniture) maintain visual continuity and follow a common image for each community.*

<sup>1</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

### 3.1.2 Impact Assessment

#### **I-a) Have a substantial adverse effect on a scenic vista?**

**a) No impact.** The proposed project is not located within a scenic vista or public viewshed of any sensitive aesthetic resources. Scenic features in the vicinity include the vast expanse of agricultural uses and the Sierra Nevada Mountains to the East. The Project site is not within the viewshed of any scenic vistas nor would the views of the Sierra Nevada Mountains be obstructed by the proposed Project. There would be no impact.

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

**b) No Impact.** The Scenic Highway Program was created to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. A highway may be officially designated “scenic” depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

There are no trees, rock outcroppings, or historical buildings near a designated state scenic highway that would be substantially damaged by the Project. An approximate 24-mile segment of SR 180 located in southeastern Fresno County and north-central Tulare County is designated as a State Scenic Highway. A 4.5-mile portion of that segment crosses into Tulare County, and is the only Officially Designated State Scenic Highway in Tulare County. Project activities would occur approximately 33 miles south and therefore would not adversely affect the scenic qualities of the designated scenic highway.

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

**c) Less Than Significant Impact.** The Project site is surrounded by agricultural and residential uses. The Project is located on a flat parcel which is currently occupied by two well sites. The proposed water treatment system would be located adjacent to Well No. 3, which is towards the rear of the parcel. This may partially obstruct the viewing of the adjacent agricultural field; however, the water treatment system will blend in with the existing well and be consistent with the development of the site and area, minimizing any potential visual impacts. The proposed 18-inch diameter pipeline will be located within Jacobs Drive right-of-way, adjacent to residentially zoned uses. This pipeline, once installed, would be buried and not visible from the residences or passing vehicles. The increase in depth of the stormwater basin, once constructed, would also not be visible to residences or passing vehicles. During construction there may be some temporary impacts to the residential street with equipment, but they will be short term and less than significant. Additionally, the Project does not conflict with the R-2 zoning onsite. Impacts would be less than significant.

#### **I-d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

**d) Less Than Significant Impact.** The Project site is surrounded by agriculture and residential uses. Lighting is not proposed for the operation of the project nor will be used during construction. Additional vehicular traffic after construction will be limited to maintenance and monitoring on an as-needed basis which will be performed during daylight hours, except in an unforeseen emergency situation. None of the proposed project materials for the water treatment infrastructure will cause glare. Therefore, the Project will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area or be inconsistent with existing conditions.

## 3.2 Agriculture and Forestry Resources

**Table 3-2. Agriculture and Forestry Resources Impacts**

Agriculture and Forest Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

### 3.2.1 Environmental Setting

The Project is located in the California's Central San Joaquin Valley in Tulare County and more specifically within the unincorporated community of Traver. Tulare County is located within California's agricultural heartland. For crop year 2016-2017, Tulare County ranked second for the top agricultural counties in the State in the estimated value of agricultural production, which is 7.04 billion dollars.<sup>2</sup>

A wide range of commodities are grown in the county, with major production of milk, poultry, livestock, and other animal commodities, row crops, nuts and fruit tree crops, and vegetables. Rich soil, irrigation water, Mediterranean climate and steady access to local, national and global markets make this possible.

<sup>2</sup> USDA. California County Agricultural Commissioners' Reports 2016-2017.  
[https://www.nass.usda.gov/Statistics\\_by\\_State/California/Publications/AgComm/2017/2017croptyearcactb00.pdf](https://www.nass.usda.gov/Statistics_by_State/California/Publications/AgComm/2017/2017croptyearcactb00.pdf) Accessed March 13, 2019.



### 3.2.1.1 Local

**Traver Community Plan<sup>3</sup>:** The Tulare County General Plan sets forth goals and policies that Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect the agricultural resources of the community of Traver:

- *AG-1.10 The County shall oppose extension of urban services, such as sewer lines, water lines, or other urban infrastructure, into areas designated for agriculture use unless necessary to resolve a public health situation. Where necessary to address a public health issue, services should be located in public rights-of-way in order to prevent interference with agricultural operations and to provide ease of access for operation and maintenance. Service capacity and length of lines should be designed to prevent the conversion of agricultural lands into urban/suburban uses.*

## 3.2.2 Impact Assessment

### **II-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?**

**a) No Impact.** The Farmland Mapping and Monitoring Program (FMMP) produces maps and statistical data use for analyzing impacts to California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The Important Farmland maps identify eight land use categories, five of which are agriculture related: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. The ones onsite or adjacent to the Project site are summarized below<sup>4</sup>:

- *FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.*
- *URBAN AND BUILT-UP LAND (D): Land occupied by structures with a building density of at least 1 unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.*

As demonstrated in **Figure 3-1**, the FMMP for Tulare County designates the site of Well No. 3 and the proposed 18-inch diameter pipeline as Urban Built-Up Land. The existing County basin is within a portion of Farmland of State Local importance designated land and the remainder in Urban and Built-Up Land. The area of the existing stormwater basin overlaying the land designated as Farmland of Statewide Importance will not increase but will remain the same. Implementation of the Project will not result in the conversion of farmland to a non-agricultural use. There will be no impact.

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

#### **b) No Impact.**

The California Department of Conservation allows for compatible uses under Williamson Act. These compatible uses are set by the Counties.

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<sup>3</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>4</sup> California Department of Conservation. FMMP – Report and Statistics.

[ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/tul16\\_no.pdf](ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2016/tul16_no.pdf). Accessed March 13, 2019.



Compatible uses on Williamson Act lands are defined in Gov. Code §51201(e). Additionally, each participating local government is required to adopt rules consistent with the principles of compatibility found in Gov. Code §§ 51231, 51238 and 51238.1.

Under government code Section 51201 compatible uses are “any use determined by the county or city administering the preserve pursuant to Section 51231, 51238, or 51238.1 or by this act to be compatible with the agricultural, recreational, or open-space use of land within the preserve and subject to contract. “Compatible use” includes agricultural use, recreational use or open-space use, unless the board or council finds after notice and hearing that the use is not compatible with the agricultural, recreational or open-space use to which the land is restricted by contract pursuant to this chapter.”

Under government code Section 51238, “Notwithstanding any determination of compatible uses by the county or city pursuant to this article, unless the board or council after notice and hearing makes a finding to the contrary, the erection, construction, alteration, or maintenance of gas, electric, water, communication, or agricultural laborer housing facilities are hereby determined to be compatible uses within any agricultural preserve.” And “No land occupied by gas, electric, water, communication, or agricultural laborer housing facilities shall be excluded from an agricultural preserve by reason of that use.”

In 1989, under Resolution 89-1275, Tulare County set forth criteria for Public and Private utility structures located on agricultural zoned lands having Williamson Act contracts. Under the resolution, “the erection, construction, alteration or maintenance of gas, electric, water and community utility facilities are also determined to be compatible uses in the Preserve, provided that insofar as such facilities require a Special Use Permit under the provisions of Ordinance 352 as presently in effect and as said provisions may be amended from time to time, and may be carried on when such Special Use Permit has been secured.”

In 1999 the County passed Resolution 99-0620, establishing rules for farmland security zones, which reiterated that under 10 g. water facilities were a compatible use insofar as such facilities require a Special Use permit. In July 2010 the County passed Resolution 2010-0591 that accepted a two-tier process for review for public and private utilities on agricultural zoned lands and in August of 2010 the County adopted criteria for public and private utility structures proposed on agricultural zoned lands under Williamson Act contracts.

The parcel that the water treatment system will be installed on is under Williamson Act Contract 4329, See **Figure 3-2**. The contract has been in effect since 1971. In April of 1973 The Traver Mutual Water Company was issued a Special Use permit for the establishment of a public utility structure on the property. Along the way, the Traver Mutual Water Company was sold and became California Water Service. In 2015 the system was sold once more to the current owners and was named the Del Oro Water Company.

Under Resolution 89-1275, the County’s Uniform Rules for Agricultural Preserves also lays out rules and restrictions for the division and sale of the property once under Williamson Act contract. To split the property, the property must follow the guidelines of County Ordinance No. 352 to be considered a compatible use. The land, although split over the years does not require splitting for this project and so would not conflict with this compatible use requirement.

A compatible use does not conflict with a Williamson Act Contract. The water system meets the definition of a compatible use under Tulare County’s compatible use requirements and under government code, and so does not conflict with a Williamson Act Contract.

Neither of the parcels that the Project is located on are zoned for agriculture in the Tulare County General Plan. The proposed Project site is now zoned R-2 (Medium Density Residential) and designated in the Tulare County 2030 General Plan Update (Traver Community Plan Update) as “Medium Density Residential”. This Project currently will have a no impact on any Agricultural Zoning or other agricultural within the vicinity of this property because the footprint of the proposed Project is entirely within the Traver Urban Development

Boundary. Areas immediately north of the Property site are also zoned R-2 and designated as Medium Density Residential are also entirely within the Traver Urban Development Boundary. The addition of the treatment system to an already existing water system site does not conflict with agricultural zoning.

The Project involves development of a water treatment system, proposed 18-inch diameter pipeline, and rehabilitation of the existing County basin. Implementation of the Project will not result in a conflict with existing zoning for residential use, any zoning for agricultural use, or conflict with the Williamson Act contract on site. There will be no impact.

**II-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))?**

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

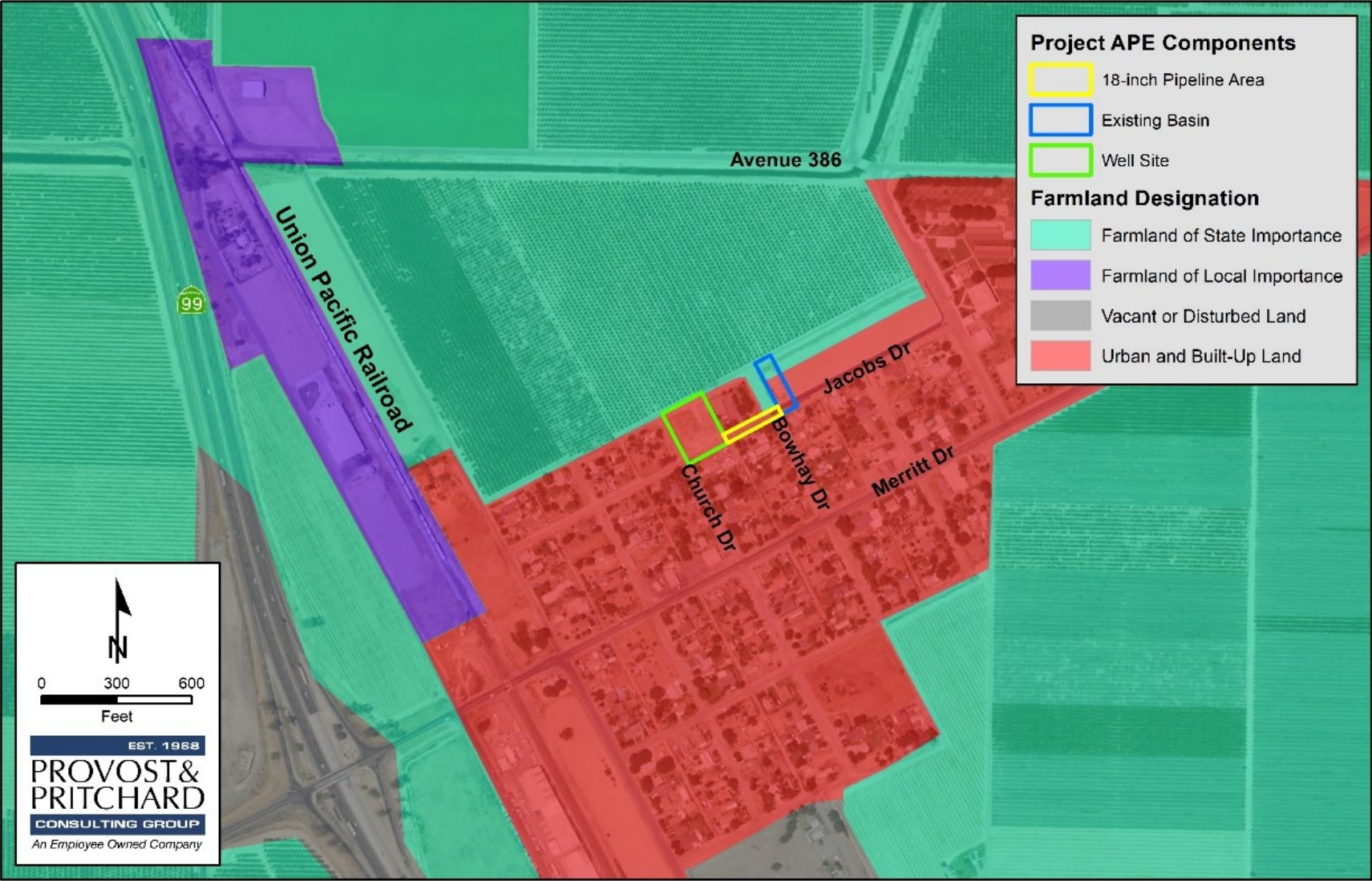
**c and d) No Impact.** The project site is zoned residential, with existing water system facilities and roadway occupying most of the site. Given these restrictions the land could not allow for the management of one or more forest resources or be capable of growing a crop of trees of a commercial species to produce lumber and other forest products. “Forest land” as defined by Public Resources Code Section 12220(g) is “...land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” “Timberland” means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.<sup>5</sup> As a result, there are no forest lands or timberlands within the Project site. There will be no impact.

**II-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?**

**e) No Impact.** As discussed above in Impact Assessments II a-d, the Project involves the development of a water treatment system and proposed 18-inch diameter pipeline on non-agricultural land and non-forest land. The project also includes additional excavation of the existing County stormwater basin within a footprint of already converted Williamson Act land and no forestland. The Project changes to the parcels will not be much different than the existing parcels uses. As these changes are similar to existing uses, the Project will not cause other changes in the existing environment that due to the location or nature could cause conversion of farmland or forest land within or outside the property, either directly or indirectly. There will be no impact.

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<sup>5</sup> <https://codes.findlaw.com/ca/public-resources-code/prc-sect-4526.html>



3/8/2019 : G:\Del Oro Traver District-2704\270418001-TCP Design Services\GIS\Map\Farmland.mxd

Figure 3-1. Farmland Designation Map





7/9/2019 : G:\Del Oro Traver District-2704\270418001-TCP Design Services\GIS\Map\WilliamsonAct.mxd

Figure 3-2. Williamson Act Map

## 3.3 Air Quality

**Table 3-3. Air Quality Impacts**

Air Quality				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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"/>

### 3.3.1 Environmental Setting

The Project lies within the eight-county San Joaquin Valley Air Basin (SJVAB), which is managed by the San Joaquin Valley Air Pollution Control District (SJVAPCD). Air quality in the SJVAB is influenced by a variety of factors, including topography, local and regional meteorology. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and lead (Pb). The CAAQS also set standards for sulfates (SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), vinyl chloride (C<sub>2</sub>H<sub>3</sub>Cl) and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all State and Federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either “attainment”, “nonattainment”, or “extreme nonattainment” areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The San Joaquin Valley is designated as a State and Federal nonattainment area for O<sub>3</sub>, a State and Federal nonattainment area for PM<sub>2.5</sub>, a State nonattainment area for PM<sub>10</sub>, a Federal and State attainment area for CO, SO<sub>2</sub>, and NO<sub>2</sub>, and a State attainment area for sulfates, vinyl chloride and Pb<sup>6</sup> (See **Table 3-4**).

<sup>6</sup> San Joaquin Valley Air Pollution Control District. Ambient Air Quality Standards and Valley Attainment Status. <http://www.valleyair.org/aqinfo/attainment.htm>. Accessed March 6, 2019

**Table 3-4. Summary of Ambient Air Quality Standards and Attainment Designation**

Summary of Ambient Air Quality Standards & Attainment Designation					
Pollutant	Averaging Time	California Standards*		National Standards*	
		Concentration*	Attainment Status	Primary	Attainment Status
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm	Nonattainment/ Severe	–	No Federal Standard
	8-hour	0.070 ppm	Nonattainment	0.070 ppm	Nonattainment (Extreme)**
Particulate Matter (PM <sub>10</sub> )	AAM	20 µg/m <sup>3</sup>	Nonattainment	–	Attainment
	24-hour	50 µg/m <sup>3</sup>		150 µg/m <sup>3</sup>	
Fine Particulate Matter (PM <sub>2.5</sub> )	AAM	12 µg/m <sup>3</sup>	Nonattainment	12 µg/m <sup>3</sup>	Nonattainment
	24-hour	No Standard		35 µg/m <sup>3</sup>	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment/ Unclassified	35 ppm	Attainment/ Unclassified
	8-hour	9 ppm		9 ppm	
	8-hour (Lake Tahoe)	6 ppm		–	
Nitrogen Dioxide (NO <sub>2</sub> )	AAM	0.030 ppm	Attainment	53 ppb	Attainment/ Unclassified
	1-hour	0.18 ppm		100 ppb	
Sulfur Dioxide (SO <sub>2</sub> )	AAM	–	Attainment	--	Attainment/ Unclassified
	24-hour	0.04 ppm		--	
	3-hour	–		0.5 ppm	
	1-hour	0.25 ppm		75 ppb	
Lead (Pb)	30-day Average	1.5 µg/m <sup>3</sup>	Attainment	–	No Designation/ Classification
	Calendar Quarter	–		--	
	Rolling 3-Month Average	–		0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> )	24-hour	25 µg/m <sup>3</sup>	Attainment	No Federal Standards	
Hydrogen Sulfide (H <sub>2</sub> S)	1-hour	0.03 ppm (42 µg/m <sup>3</sup> )	Unclassified		
Vinyl Chloride (C <sub>2</sub> H <sub>3</sub> Cl)	24-hour	0.01 ppm (26 µg/m <sup>3</sup> )	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/km-visibility of 10 miles or more due to particles when the relative humidity is less than 70%.	Unclassified		

\* For more information on standards visit: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

\*\* No Federal 1-hour standard. Reclassified extreme nonattainment for the Federal 8-hour standard May 5, 2010.

\*\*\*Secondary Standard

Source: CARB 2016; SJV APCD 2016



### 3.3.2 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report (**Appendix A**) was prepared using CalEEMod, Version 2016.3.2 for the proposed Project in April 2019. The sections below detail the methodology of the air quality and greenhouse gas emissions report and its conclusions.

#### 3.3.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated using CalEEMod, Version 2016.3.2. The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the Project applicant. All remaining assumptions were based on the default parameters contained in the model. Localized air quality impacts associated with the Project would be minor and were qualitatively assessed. Modeling assumptions and output files are included in **Appendix A**.

#### 3.3.2.2 Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature. Maintenance will be provided on an as needed basis by existing staff, and the operational equipment, such as the use of 3.4 kW treatment system, will result in negligible emissions. The Project does propose the use of a diesel-powered back-up generator. Generator use was estimated as 100 hours per year. Modeling assumptions and output files are included in **Appendix A**.

#### 3.3.2.3 Thresholds of Significance

To assist local jurisdictions in the evaluation of air quality impacts, the SJVAPCD has published the *Guide for Assessing and Mitigating Air Quality Impacts*. This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. Accordingly, the SJVAPCD-recommended thresholds of significance are used to determine whether implementation of the Project would result in a significant air quality impact. Projects that exceed recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized below in **Table 3-5**.

**Table 3-5. SJVAPD Thresholds of Significance**

SJVAPCD Thresholds of Significance							
Source	Annual Emissions (Tons/Year)					Probability, Hazard Index	Frequency
	ROG	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO	TAC	Odor
Short Term Emissions Thresholds	10	10	15	15	100	Probability of contracting cancer >10 in 1 million or result in a hazard index >1	Frequently expose members of the public to objectionable odors
Long Term Emissions Thresholds	10	10	15	15	100	Probability of contracting cancer >10 in 1 million or result in a hazard index >1	Frequently expose members of the public to objectionable odors

### 3.3.2.4 Local

**Traver Community Plan<sup>7</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect the air quality of the community of Traver:

- *AQ-1.3 The County shall require development to be located, designed, and constructed in a manner that would minimize cumulative air quality impacts. Applicants shall be required to propose alternatives as part of the State CEQA process that reduce air emissions and enhance, rather than harm, the environment.*
- *AQ -1.4 The County shall evaluate the compatibility of industrial or other developments which are likely to cause undesirable air pollution with regard to proximity to sensitive land uses, and wind direction and circulation in an effort to alleviate effects upon sensitive receptors*
- *AQ -2.2 The County shall require major development projects, as defined by the SJVAPCD, to reasonably mitigate air quality impacts associated with the project. The County shall notify developers of SJVAPCD Rule 9510 – Indirect Source Review requirements and work with SJVAPCD to determine mitigations, as feasible, that may include, but are not limited to the following:*
  - *Providing bicycle access and parking facilities,*
  - *Increasing density,*
  - *Encouraging mixed use development,*
  - *Providing walkable and pedestrian-oriented neighborhoods,*
  - *Providing increased access to public transportation,*
  - *Providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles, and*
  - *Establishing telecommuting programs or satellite work centers.*

**Tulare County General Plan<sup>8</sup>:** The Tulare County General Plan sets forth the following goals and policies pertaining to air quality:

- *AQ-1.1 The County shall cooperate with other local, regional, Federal, and State agencies in developing and implementing air quality plans to achieve State and federal Ambient Air Quality Standards. The County shall partner with the SJVAPCD, Tulare County Association of Governments (TCAG), and the California Air Resource Board to achieve better air quality conditions locally and regionally.*
- *AQ-1.4 The County shall ensure that air quality impacts identified during the CEQA review process are consistently and reasonably mitigated when feasible.*
- *AQ-4.2 The County shall require developers to implement dust suppression measures during excavation, grading, and site preparation activities consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions. Techniques may include, but are not limited to, the following:*
  - *Site watering or application of dust suppressants,*
  - *Phasing or extension of grading operations,*
  - *Covering of stockpiles,*
  - *Suspension of grading activities during high wind periods (typically winds greater than 25 miles per hour), and*
  - *Revegetation of graded areas.*

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<sup>7</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>8</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%2030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 6, 2019

### 3.3.2.5 Regional

**San Joaquin Valley Air Pollution Control District:** The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SJVAB, within which the Proposed Project is located. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the CAA and the CCAA.

The SJVAPCD Rules and Regulations that are applicable to the Project include, but are not limited to, the following:

**Regulation VIII (Fugitive Dust Prohibitions), Regulation VIII (Rules 8011-8081):** This regulation is a series of rules designed to reduce particulate emissions generated by human activity, including construction and demolition activities, carryout and trackout, paved and unpaved roads, bulk material handling and storage, unpaved vehicle/traffic areas, open space areas, etc. If a non-residential area is 5.0 or more acres in area, a Dust Control Plan must be submitted as specified in Section 6.3.1 of Rule 8021. Additional requirements may apply, depending on total area of disturbance.

**Regulation IV (Prohibitions), Rule 4702 (Internal Combustion Engines):** This rule requires a permit from SJVAPCD for the operation of stationary internal combustion engines rated at least 25 brake horsepower. Pursuant to this rule, spark-ignited engines and compressed-ignited engines must meet the applicable requirements and emission limits specified in 40 CFR 60 Subpart III (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines) and 40 CFR 60 Subpart JJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines).

**Thresholds of Significance.** Projects that produce emissions that exceed the thresholds shall be considered significant for a project level and/or cumulatively considerable impact to air quality. The thresholds are defined for purposes of determining cumulative effects as the baseline for “considerable”. Projects located within the SJVAPCD are subject to the significance thresholds identified in section 3.3.2.3 above.

## 3.3.3 Impact Assessment

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

**a) No Impact.** As noted in Impact Assessments III-b and III-c below, implementation of the Project would not result in short-term or long-term increases in emissions that would exceed applicable thresholds of significance. Projects that do not exceed the recommended thresholds would not be considered to conflict with or obstruct the implementation of applicable air quality plans.

### III-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?

**b) Less Than Significant Impact.**

#### Short-Term Construction-Generated Emissions

Construction-generated emissions are temporary in duration, lasting approximately eight months for site preparation, grading, and all phases of construction. The construction of the Project would result in the temporary generation of emissions associated with site grading and excavation, motor vehicle exhaust

associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces.

Estimated construction-generated emissions are summarized in **Table 3-6**.

**Table 3-6. Unmitigated Short-Term Construction-Generated Emissions of Criteria Air Pollutants**

Short-Term Construction-Generated Emissions of Criteria Air Pollutants					
Source	Annual Emissions (Tons/Year) <sup>(1)</sup>				
	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
2019	0.0595	0.5977	0.3257	0.1300	0.0815
2020	0.0847	0.6161	0.5648	0.0342	0.0324
Maximum Annual Proposed Project Emissions:	0.0847	0.6161	0.5648	0.1300	0.0815
SJVAPCD Significance Thresholds:	10	10	100	15	15
Exceed SJVAPCD Thresholds?	No	No	No	No	No

1. Emissions were quantified using CalEEMod Output Files Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.

It is important to note that the Project would be required to comply with SJVAPCD Regulation VIII (Fugitive PM<sub>10</sub> Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would further reduce emissions of fugitive dust from the Project site, and adequately minimize the Project's potential to adversely affect nearby sensitive receptors to localized PM impacts.

Given that project-generated emissions would not exceed applicable SJVAPCD significance thresholds and the Project would be required to comply with SJVAPCD Regulation VIII, construction-generated emissions of criteria pollutants would be considered less than significant.

### Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature, as illustrated in **Table 3-7**. Maintenance will continue to be provided on an as needed basis by existing staff, and the operational equipment, such as the use of stationary pumps and a 3.4 kW treatment system, will continue to result in negligible emissions. The Project's proposed diesel-powered back-up generator would be reserved for emergency situations and would likely operate less than 100 hours per year. Therefore, Project-related impacts to air quality would be considered less than significant.

**Table 3-7. Unmitigated Long-Term Operational Emissions**

Long-Term Operational Emissions of Criteria Air Pollutants					
Source	Annual Emissions (Tons/Year) <sup>(1)</sup>				
	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub>	PM <sub>2.5</sub>
Maximum Annual Project Emissions:	0.0275	0.0768	0.0701	0.0040	0.0040
SJVAPCD Significance Thresholds:	10	10	100	15	15
Exceed SJVAPCD Thresholds?	No	No	No	No	No

1. Emissions were quantified using CalEEMod Output Files Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.

### III-c) Expose sensitive receptors to substantial pollutant concentrations?

#### c) Less Than Significant Impact.

##### Toxic Air Contaminants

Implementation of the Project would not result in the long-term operation of any major onsite stationary sources of TACs, nor would Project implementation result in a substantial increase in vehicle trips along area roadways, in comparison to existing conditions. As mentioned above in Impact Assessment III-b, the Project's proposed diesel-powered back-up generator would be reserved for emergency situations and would likely operate less than 100 hours per year. However, construction of the Project may result in temporary increases in emissions of diesel-exhaust particulate matter (DPM) associated with the use of off-road diesel equipment. More than 90% of DPM is less than one  $\mu\text{m}$  in diameter, and thus is a subset of  $\text{PM}_{2.5}$ .<sup>9</sup> Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure to TACs are typically calculated based on a long-term (e.g., 70-year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic. Construction activities would occur over an approximate eight-month period, which would constitute less than one percent of the typical 70-year exposure period. As a result, exposure to construction generated DPM would not be anticipated to exceed applicable thresholds (i.e. incremental increase in cancer risk of 10 in one million).

Although the Project is located in close proximity to single-family homes and a church, construction of the Project is not anticipated to result in a substantial increase in DPM or other TACs. As indicated in **Table 3.6** construction of the Project would generate maximum unmitigated annual emissions of approximately 0.0815 tons/year of  $\text{PM}_{2.5}$ , which includes DPM. Operation of the diesel-powered back-up generator at a frequency of 100 hours per year would generate maximum unmitigated annual emissions of approximately 0.0040 tons/year of  $\text{PM}_{2.5}$ , as illustrated in **Table 3-7**. Project-related impacts to sensitive receptors would be less than significant.

##### Naturally Occurring Asbestos

Naturally occurring asbestos, which was identified by CARB as a TAC in 1986, is located in many parts of California and is commonly associated with ultramafic rock. The Project site is not located near any areas that are likely to contain ultramafic rock<sup>10</sup>. As a result, risk of exposure to asbestos during the construction process would be considered less than significant.

##### Fugitive Dust

Construction of the Project would include ground-disturbing activities which could result in increased emissions of airborne particulate matter. The Project would be required to comply with SJVAPCD Regulation VIII (Fugitive  $\text{PM}_{10}$  Prohibitions). Mandatory compliance with SJVAPCD Regulation VIII would reduce emissions of fugitive dust from the Project site.

Although the Project is located within close proximity to single-family homes and a church, construction of the Project is not anticipated to result in a substantial increase in particulate matter. As indicated in **Table 3-6** and **Table 3-7**, respectively, construction of the Project would generate maximum unmitigated annual emissions of approximately 0.1300 tons/year of  $\text{PM}_{10}$ , while operation of the Project would generate maximum unmitigated annual emissions of approximately 0.0040 tons/year of  $\text{PM}_{10}$ , both of which are substantially less than SJVAPCD's threshold of significance of 15 tons/year. Project-related impacts to sensitive receptors would be less than significant.

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<sup>9</sup> CARB. Inhalable Particulate Matter. <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm> Accessed March 6 2019.

<sup>10</sup> Van Gosen, B.S. and J.P. Clinkenbeard. 2011. Report Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California – California Geological Survey map Sheet 59. United States Geological Survey.

**III-d) Would the project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?)**

**d) Less Than Significant Impact.** Implementation of the Project would not result in long-term emissions of odors. However, construction would involve the use of a variety of gasoline- or diesel-powered equipment that would emit exhaust fumes. Similarly, infrequent use of the diesel-powered emergency back-up generator may occasionally produce an odorous exhaust. Exhaust fumes, particularly diesel exhaust, may be considered objectionable by some people. The Project is located within an area heavily influenced by agricultural production, which includes the use of diesel-powered equipment and various odorous chemicals on a regular basis. Construction activities would be short-term in nature, as would infrequent use of the emergency generator. Conditions created by Project-related activities would not vary substantially from the baseline conditions routinely experienced onsite and in the vicinity. Impacts would be less than significant.



## 3.4 Biological Resources

Table 3-8. Biological Resources Impacts

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

### 3.4.1 Environmental Setting

The Project site is located within the lower San Joaquin Valley, part of the Great Valley of California. The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Transverse Ranges and Mojave Desert to the south.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and

rarely exceed 70 degrees. On average, the Central Valley receives approximately 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin<sup>11</sup>. The Project lies approximately five miles south of the Kings River and five miles north of the lower reaches of the Kaweah River System. Historically, these water features were tributaries to the dry Tulare Lake endothermic basin, but now most of the water is diverted for irrigation of agricultural crops. There are several channelized irrigation canals, ditches, and catch basins associated with agricultural activities in the vicinity. Aquatic features in the vicinity include the onsite excavated stormwater drainage basin, which could be classified as excavated palustrine by definition, although it is not labeled on the National Wetlands Inventory (NWI) map. Furthermore, an irrigation canal which runs north of the deciduous orchard, approximately 0.13 miles north of the site. According to the NWI map, the irrigation canal is classified as riverine, although it is excavated and only runs seasonally, likely due to controlled flood releases or diversion activities related to agricultural irrigation.

The Project area is surrounded by agricultural lands to the north and residential development to the south, east and west. Directly east of the well site is a church and then to the east of that is the existing basin that will be modified. The well site is an existing operational well site for two wells. Well No. 1 is offline and Well No. 3 has high levels of TCP that require treatment. The well site is zoned R-2 (Two-Family Residential).

### 3.4.2 Methodology

A reconnaissance-level field survey of the Project site and surrounding area was conducted on March 20, 2019 by Provost & Pritchard. The survey consisted of walking through the Project area while identifying and noting land uses, biological habitats and communities, and plant and animal species encountered. Furthermore, the site and surrounding areas were assessed for suitable habitats of various wildlife species.

The biologist conducted an analysis of potential Project-related impacts to biological resources based on the resources known to exist or with potential to exist within the Project site and surrounding areas. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system; the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS); the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field investigation did not include a wetland delineation or focused surveys for special status species. The field survey conducted included an appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or State agencies, such as the U.S. Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB).

At the time of the field survey, the unpaved vacant lot near Jacobs Drive and Church Drive was nearly barren, and it appeared to have been graded, disked, compacted, or otherwise subject to years of ground-disturbance. Native vegetation was essentially absent with the exception of scattered fiddleneck (*Amsinckia*

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<sup>11</sup> DWR Groundwater Basin Boundary Assessment Tool <https://gis.water.ca.gov/app/bbat/> Accessed 17 April 2019.

*menziesii*), and the sparse occurrence of common invasive weedy vegetation (*Brassica nigra*, *Brassica rapa*, *Capsella bursa-pastoris*, *Bromus diandrus*, *Bromus madritensis*, *Hordeum murinum*, *Erdoum botrys*, and *Malva parviflora*). There were no trees or shrubs within Project areas, but adjacent developments contained trees and shrubs commonly associated with landscaping, such as Chinese elm (*Ulmus parvifolia*) and Mexican fan palm (*Washingtonia robusta*).

The stormwater drainage basin onsite is enclosed with a chain-link fence. Access was provided via a padlocked gate. At the time of the field survey, water was absent from the basin, and herbaceous vegetation provided nearly 100% cover. Species of vegetation in the basin were similar to those recorded within the ruderal vacant lot, with the exception of the presence of *Trifolium sp.* and *Conium maculatum* within the basin.

Nearly all of the yards in the vicinity contained large, barking, domestic dogs. Feral cats and domestic dogs were also observed throughout. Ground squirrels were absent, probably due to the use of rodenticides or other agricultural pest control methods employed in adjacent farmlands. Soils onsite were compacted, with the exception of a few gopher mounds, and the surveyed area contained surprisingly few murid rodent burrows, all of which appeared to be inactive. Mammal tracks and sign observed onsite were limited to domestic dog and cat tracks. Given the ruderal nature and isolation from areas of natural habitat, mammal species expected to occur onsite would likely be limited to some common murid rodents and “agricultural pests,” such as Botta’s pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and rabbits (*Lepus californicus* and *Sylvilagus audubonii*), as well as other disturbance-tolerant mammals, including coyote (*Canis latrans*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and occasionally gray fox (*Urocyon cinereoargenteus*).

**Table 3-9. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity**

Species	Status	Habitat	Occurrence on Project Site
<b>American badger (<i>Taxidea taxus</i>)</b>	CSC	Grasslands, savannas, and mountain meadows near timberline are preferred. Most abundant in drier open spaces of shrub and grassland. Burrows in soil.	<b>Absent.</b> The highly disturbed habitats of the Project site are unsuitable for this species. The site is surrounded by development and frequently disturbed agricultural lands, and therefore would not be expected to pass through the site during dispersal or mating movements.
<b>burrowing owl (<i>Athene cunicularia</i>)</b>	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by burrowing mammals, most often ground squirrels.	<b>Unlikely.</b> The disturbed habitats of the Project site are unsuitable for this species. Nesting and foraging habitat is absent due to incompatible topography and/or vegetative cover. Furthermore, the Project site is not large enough to support a pair of burrowing owls. This species likely occurs within the uncultivated grasslands near Cross Creek and Cottonwood Creek, approximately 5 miles south and southeast from the Project. At most, a burrowing owl individual could potentially pass over or through the site but would not be expected to nest or forage within or adjacent to proposed impact areas.
<b>California tiger salamander (<i>Ambystoma californiense</i>)</b>	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	<b>Absent.</b> The highly disturbed habitats of the Project area and surrounding lands are unsuitable for this species. Wetland habitat suitable for breeding is absent from the Project site and potential aestivation habitat is marginal, at best.
<b>loggerhead shrike (<i>Lanius ludovicianus</i>)</b>	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the	<b>Unlikely.</b> Nesting, foraging, and perching habitat onsite and in the vicinity is marginal, at best. This species was observed within a riparian corridor along Cottonwood Creek,

Species	Status	Habitat	Occurrence on Project Site
		Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	surrounded by uncultivated grassland in 1992, approximately 5 miles southeast of the Project. At most, this species could potentially pass over or through the site but would not be expected to nest or forage within or adjacent to proposed impact areas.
<b>northern California legless lizard (<i>Anniella pulchra</i>)</b>	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the day. Occasionally observed on the surface at dusk and night. Prefers soil with a high moisture content.	<b>Absent.</b> The disturbed habitats and well-drained, compacted soils onsite are unsuitable for this species. There is a historic (1934) recorded observation of this species in the general vicinity of Visalia, although the exact location is unknown. In 2015, this species was observed within Kaweah Oaks Preserve, approximately 18 miles southeast of the Project.
<b>northern leopard frog (<i>Lithobates pipiens</i>)</b>	CSC	Inhabits grassland, wet meadows, potholes, forests, woodland, brushlands, springs, canals, bogs, marshes, and reservoirs. Generally prefers permanent water with abundant riparian vegetation.	<b>Absent.</b> Suitable habitat is absent from the Project area, as the northern leopard frog prefers permanent water with abundant aquatic vegetation. The Project site is not located within the historic range of any native or introduced populations.
<b>pallid bat (<i>Antrozous pallidus</i>)</b>	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	<b>Unlikely.</b> Individuals could potentially roost in crevices of buildings or structures adjacent to the Project area. Oaks and other cavity-prone trees are absent. Roosting habitat of sufficient size to house a colony (typically 30-70 individuals) is absent and this species would likely be deterred from roosting in the vicinity due to frequent human disturbance. Foraging habitat in the vicinity is marginal, at best.
<b>San Joaquin kit fox (<i>Vulpes macrotis mutica</i>)</b>	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	<b>Unlikely.</b> The highly disturbed habitats of the Project area and fragmentation of the surrounding lands are unsuitable for this species. The Project is located approximately 65 miles east of the nearest known core population in Ciervo-Panoche Natural Area. Although some populations of San Joaquin Kit Fox in other parts of California have adapted to an urbanized environment, modern kit fox occurrences are locally scarce. At most, this species could conceivably pass through the Project area during dispersal movements.
<b>Swainson's hawk (<i>Buteo swainsoni</i>)</b>	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	<b>Possible.</b> Swainson's hawks are relatively uncommon in this portion of Tulare County. There are known nest trees within 5 miles of the Project site. However, nesting and foraging habitat onsite and in the immediate vicinity of the Project is marginal, at best due to frequent human disturbance and absence of native trees large enough to support a raptor nest. Trees onsite and in the vicinity are ornamental, associated with landscaping.
<b>valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)</b>	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active March to June.	<b>Absent.</b> The Project is not located within the presumed historical range or presumed current distribution of this species. In 2014 USFWS published findings suggesting that previous CNDDDB observations of this

Chapter Three: Impact Analysis  
Del Oro Water Company, Traver Well No. 3 1,2,3-TCP Project

Species	Status	Habitat	Occurrence on Project Site
			species within Tulare County should be discounted.
<b>vernal pool fairy shrimp</b> ( <i>Branchinecta lynchi</i> )	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	<b>Absent.</b> Suitable vernal pool habitat for this species is absent from the Project area and surrounding lands.
<b>vernal pool tadpole shrimp</b> ( <i>Lepidurus packardii</i> )	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	<b>Absent.</b> Suitable vernal pool habitat for this species is absent from the Project area and surrounding lands.
<b>western mastiff bat</b> ( <i>Eumops perotis californicus</i> )	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings and tunnels.	<b>Unlikely.</b> Roosting and breeding habitat is absent from the Project area and surrounding lands, and foraging habitat is marginal, at best. There is a historic (1899) observation of this species mapped in the vicinity of Traver, although the exact location is unknown. This species was observed foraging along the riparian corridor of Packwood Creek, approximately 15 miles southeast of the Project in 2002. At most, an individual of this species could conceivably forage over the adjacent deciduous orchard in the absence of superior foraging grounds.
<b>western pond turtle</b> ( <i>Emys marmorata</i> )	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	<b>Absent.</b> Suitable aquatic habitat is absent from the Project area and the vicinity. Upland habitat for nesting and wintering is absent. The stormwater drainage basin onsite is fenced and located more than 4 miles from the lower reaches of the Kings River and the Kaweah River system. The only recorded observation of this species in the vicinity of the Project is a historic (1879) collection mapped in the vicinity of Visalia, although the exact location is unknown.
<b>western spadefoot</b> ( <i>Spea hammondi</i> )	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	<b>Absent.</b> The highly disturbed habitats of the Project area and surrounding lands are unsuitable for this species. Wetland or vernal pool habitat suitable for breeding is absent from the Project site and potential aestivation habitat is marginal, at best. In the absence of vernal pools, natural seasonal ponds, or intermittent drainages, western spadefoot individuals could make use of artificial ponds. However, the stormwater drainage basin onsite is isolated from other suitable habitat because it is surrounded by miles of roads and development. Furthermore, stormwater drainage basins often contain bullfrogs, which are an apex predator of this species. All observations of this species in the vicinity have been within vernal pools in uncultivated grassland near Cross Creek, approximately 5 miles south of the Project.
<b>western yellow-billed cuckoo</b> ( <i>Coccyzus americanus occidentalis</i> )	FT, CE	Suitable nesting habitat in California includes dense riparian willow-cottonwood and mesquite habitats along a perennial river. Once a common breeding species in riparian habitats of lowland California, this species currently breeds consistently in only two locations in the State: along the Sacramento and South Fork Kern Rivers.	<b>Absent.</b> Suitable nesting habitat for this species is absent from the Project area and surrounding lands. There is one recorded observation of this species within Tulare County. The observation is dated 1919 and the location corresponds to an area that is now referred to as Downtown Visalia, an area that consists exclusively of urban

**Chapter Three: Impact Analysis**  
Del Oro Water Company, Traver Well No. 3 1,2,3-TCP Project

Species	Status	Habitat	Occurrence on Project Site
			development. The status of this observation has since been updated to “extirpated,” which means the habitat has been destroyed or the species has been searched for but unobserved for many years. It is believed this species no longer occurs within Tulare County.



**Table 3-10. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity**

Species	Status	Habitat	Occurrence on Project Site
<b>brittlescale (<i>Atriplex depressa</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkali or clay soils in shadescale scrub, valley grassland, alkali sink, and sometimes riparian communities at elevations below 1050 feet. Equally likely to occur in wetlands and non-wetlands. Blooms June – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>California alkali grass (<i>Puccinellia simplex</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March – May.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>California satintail (<i>Imperata brevifolia</i>)</b>	CNPS 2B	Although this facultative species is equally likely to occur in wetlands and non-wetlands, it is often found in wet springs, meadows, streambanks, and floodplains at elevations below 1600 feet. Blooms September – May.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>Earlimart orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)</b>	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, within valley or foothill grasslands, at elevations below 325 feet. Equally likely to occur within wetlands and non-wetlands. Blooms August – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>heartscale (<i>Atriplex cordulata</i> var. <i>cordulata</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in saline or alkaline soils within shadescale scrub, valley grassland, and wetland-riparian communities at elevations below 230 feet. Blooms June – July.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>Hoover's spurge (<i>Euphorbia hooveri</i>)</b>	FT, CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in vernal pools within valley grassland, freshwater wetland, and riparian communities at elevations below 800 feet. Blooms July – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>lesser saltscare (<i>Atriplex minuscula</i>)</b>	CNPS 1B	Found in the San Joaquin Valley in playas; sandy, alkaline soils in shadescale scrub, valley grassland, and alkali sink communities at elevations below 300 feet. Blooms April – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>recurved larkspur (<i>Delphinium recurvatum</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and other parts of California. Occurs in poorly drained, fine, alkaline soils in grassland at elevations between 100 feet and 1965 feet. Most often found in non-wetlands, but occasionally found in wetlands. Blooms March – June.	<b>Absent.</b> Suitable habitat and soils required by this species is absent from the Project area and surrounding lands.
<b>San Joaquin adobe sunburst (<i>Pseudobahia peirsonii</i>)</b>	FT, CE, CNPS 1B	Found in the San Joaquin Valley and the Sierra Nevada Foothills in bare dark clay in valley grassland and foothill woodland communities at elevations between 325 feet and 2950 feet. Blooms March – May.	<b>Absent.</b> Suitable habitat and soils required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>San Joaquin Valley Orcutt grass (<i>Orcuttia inaequalis</i>)</b>	FT, CE, CNPS 1B	Found in the eastern San Joaquin Valley and the Sierra Nevada foothills in vernal pools within valley grassland, freshwater wetland, and wetland-riparian communities at elevations below 2600 feet. Blooms April – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The status of many of the historic observations of this species along the Valley floor have been updated to "extirpated."

Species	Status	Habitat	Occurrence on Project Site
<b>Sanford's arrowhead</b> ( <i>Sagittaria sanfordii</i> )	CNPS 1B	Found in the San Joaquin Valley and other parts of California in freshwater-marsh, primarily ponds and ditches, at elevations below 1000 feet. Blooms May – October.	<b>Absent.</b> Habitats of stormwater drainage basin are marginal, at best, for this species. At the time of the field survey, suitable habitat was not observed nor was this species observed.
<b>spiny-sepaed button-celery</b> ( <i>Eryngium spinosepalum</i> )	CNPS 1B	Found in the Sierra Nevada Foothills and portions of the San Joaquin Valley. Occurs in vernal pools, swales, and roadside ditches at elevations between 325 feet and 4160 feet in valley grassland, freshwater wetlands, and riparian communities. Blooms April – July.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>subtle orache</b> ( <i>Atriplex subtilis</i> )	CNPS 1B	Found in the San Joaquin Valley in saline depressions at elevations below 230 feet. Blooms June – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>Winter's sunflower</b> ( <i>Helianthus winteri</i> )	CNPS 1B	Found in the Sierra Nevada foothills on steep, south-facing grassy slopes, rock outcrops, and road-cuts at elevations ranging from 600 feet to 1500 feet. Blooms year-round.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is outside of the elevational range for this species.

#### EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field surveys or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

#### STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CCT	California Threatened (Candidate)
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Concern
		CWL	California Watch List
		CCE	California Endangered (Candidate)
		CR	California Rare

#### CNPS LISTING

1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

#### 3.4.2.1 Local

Traver Community Plan<sup>12</sup>: The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect biological resources of the community:

<sup>12</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

- *ERM-1.1 The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.*

2030 Tulare County General Plan<sup>13</sup>: The Tulare County General Plan sets forth the following goals and policies that protect biological resources:

- The County shall review development proposals against the California Natural Diversity Data Base, and other available studies provided by the California Department of Fish and Game, and consult, as appropriate, with the California Department of Fish and Game and U.S. Fish and Wildlife to assist in identifying potential conflicts with sensitive natural communities or special status species.
- On project sites that have the potential to contain species of local or regional concern, sensitive natural communities or special-status species, the County shall require the project applicant to have the site surveyed and mapped by a qualified biologist. A report on the finding of this survey shall be submitted to the County as part of the application and environmental review process.

### 3.4.3 Impact Assessment

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

##### **a) Less Than Significant Impact with Mitigation Incorporated.**

#### **Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds (Including Swainson's Hawk)**

The Project site contains marginal foraging habitat for several avian species, including the Swainson's hawk. Although the Project site does not contain any trees, there are a few ornamental trees in the vicinity large enough to house a raptor nest, and smaller avian species may nest within the adjacent orchard habitat. Ground-nesting birds, such as the killdeer could nest on the bare ground, and swallows could nest within buildings or structures in the vicinity.

Swainson's hawks are common in this portion of Tulare County, and there are known nest trees within five miles of the Project site. In the absence of preferred habitat, especially within the Central Valley, Swainson's hawks often nest within eucalyptus trees lining highways, and several raptor species nest within ornamental Mexican fan palms. Although nesting habitat onsite and in the vicinity is not ideal due to the absence of native riparian trees, and foraging habitat is suboptimal, raptors, such as the special status Swainson's hawk could conceivably nest or forage near Project areas. In the event that a Swainson's hawk or other avian species is foraging within the Project site during construction activities, the individual would be expected to fly away from disturbance they encounter, subsequently eliminating the risk of injury or mortality while foraging. Although the Project does not include the removal of any trees or shrubs, raptors and migratory birds occurring within the Project site could be injured or killed by Project activities. Furthermore, construction activities could disturb birds nesting within or adjacent to work areas, resulting in nest abandonment. Project construction activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitutes a violation of State and federal laws and is considered a significant impact under CEQA.

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<sup>13</sup> Tulare County General Plan. <http://generalplan.co.tulare.ca.us/> Accessed 5 October 2018

The Project does not involve the removal of any trees or shrubs, and habitats onsite are suboptimal for foraging and nesting. A swath of superior nesting and foraging habitat in the vicinity is available in the form of agricultural fields directly north and in undeveloped areas, such as the uncultivated grassland near Cross and Creek and Cottonwood Creek, approximately five miles south and southeast of the Project. For these reasons, loss of nesting and/or foraging habitat would not be considered a potentially significant impact under CEQA.

Nesting bird season is generally accepted as February 1 through August 31; however, Swainson's hawk nesting season is generally accepted as March 1 through September 15. For simplicity, these timeframes have been combined.

Implementation of the following measures will reduce potential impacts to nesting raptors, migratory birds, and special status birds, including Swainson's hawk to a less than significant level under CEQA, and will ensure compliance with State and federal laws protecting these avian species.

The following measures will be implemented during or prior to the start of construction:

**Mitigation Measure BIO-1a** (Avoidance): The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) to avoid impacts to nesting birds.

**Mitigation Measure BIO-1b** (Pre-construction Survey): If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for active nests within a week prior to the start of construction. The survey shall include the APE and surrounding lands within 0.5 mile. If no active nests are observed, no further mitigation is required. Raptor nests are considered "active" upon the nest-building stage.

**Mitigation Measure BIO-1c** (Establish Buffers): On discovery of any active nests in the survey area, the biologist shall determine appropriate construction avoidance zones around the nests based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged.

Implementation of Mitigation Measures **BIO-1a** through **BIO-1c** will reduce potential impacts to nesting raptors, migratory birds, and special status birds, including Swainson's hawk to a less than significant level under CEQA, and will ensure compliance with State and federal laws protecting these avian species.

#### Project-Related Impacts to Special Status Plant Species

14 special status plant species have been documented in the Project vicinity, including brittlescale (*Atriplex depressa*), California alkali grass (*Puccinellia simplex*), California satintail (*Imperata brevifolia*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), heartscale (*Atriplex cordulata* var. *cordulata*), Hoover's spurge (*Euphorbia hooveri*), lesser saltscale (*Atriplex miniscula*), recurved larkspur (*Delphinium recurvatum*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), San Joaquin Valley orcutt grass (*Orcuttia inequalis*), Sanford's arrowhead (*Sagittaria sanfordii*), spiny-sealed button-celery (*Eryngium spinosepalum*), subtle orache (*Atriplex subtilis*), and Winter's sunflower (*Helianthus winteri*). As explained in **Table 3-10**, all of the aforementioned plant species are absent from the Project area due to past and ongoing disturbance and/or the absence of suitable habitat. Therefore, the implementation of the Project will have no effect on individual plants or regional populations of these special status plant species. Mitigation measures are not warranted.

#### Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site

After completing a biological survey, 10 of the 16 published accounts of special status animal species were declared absent from the Project area, one of which is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

In 2014, USFWS published *Withdrawal of the Proposed Rule to Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife*, in which the presumed historical range and the presumed extant range of the valley elderberry longhorn beetle is redefined. Very few of the records involve observation of an adult valley elderberry longhorn beetle; the majority are based exclusively on observation of exit holes, which may not be an accurate depiction of occupancy. There are several problems with recording an observation of a sensitive species based on an ambiguous sign, such as an exit hole. Two subspecies of elderberry longhorn beetle exist: the valley elderberry longhorn beetle and the California elderberry longhorn beetle. These two subspecies are so similar that experts are only able to distinguish between the two with certainty by adult male coloration. Thus, species accounts may be unreliable in areas where range overlaps and the sex of the subject is not specified. The document further states that all observations within Tulare County should be discounted as they likely represent the California elderberry longhorn beetle.

Of the 16 regionally occurring special status species, 15 are considered absent or unlikely to occur within the Project area due to past or ongoing disturbance and/or absence of suitable habitat. As explained in **Table 3-9**, the following 10 species were deemed absent from the Project area: American badger (*Taxidea taxus*), California tiger salamander (*Ambystoma californiense*), northern California legless lizard (*Anniella pulchra*), northern leopard frog (*Lithobates pipiens*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardii*), and vernal pool fairy shrimp (*Branchinecta lynchi*), western pond turtle (*Emys marmorata*), western spadefoot (*Spea hammondi*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The following 5 species were deemed unlikely to occur within the Project area: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and western mastiff bat (*Eumops perotis californicus*). Since it is highly unlikely that these species would occur onsite, implementation of the Project should have no impact on these 15 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

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

**b) No Impact.** Natural water features and riparian habitat is absent from the Project area and adjacent lands. According to CNDDB, there are no recorded observations of natural communities of special concern with potential to occur within the Project area or vicinity. Additionally, no natural communities of special concern were observed during the biological survey. Therefore, implementation of the Project will have no impact on riparian habitat or any other sensitive natural communities. Mitigation measures are not warranted.

#### **IV-c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

**c) No Impact.** Wetlands are absent from the Project area and adjacent lands. Furthermore, there is no potential for indirect downstream effects because the Project does not involve lake or streambed altering activities. Therefore, implementation of the Project will have no impact on wetlands and mitigation measures are not warranted.

**IV-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?**

**d) Less Than Significant Impact.** The Project area does not contain features that would be likely to function as wildlife movement corridors. Furthermore, the Project is located in a region often disturbed by intensive agricultural cultivation practices and human disturbance which would discourage dispersal and migration. Potential Project-related impacts to nesting birds has been discussed in Impact Assessment IV-a. Implementation of mitigation measures **BIO-1a** through **BIO-1c** above will reduce potential impacts to nesting birds to a less than significant level.

**IV-e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

**e) No Impact.** The Project description is in compliance with the goals and policies set forth in the Tulare County General Plan and the Traver Community Plan. There will be no impact.

**IV-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?**

**f) No Impact.** The Project site is not within a designated Habitat Conservation Plan, Natural Conservation Plan, or any other State or local habitat conservation plan. There would be no impact.



## 3.5 Cultural Resources

**Table 3-11. Cultural Resources Impacts**

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

### 3.5.1 Environmental Setting

The project area is located in Traver (**Figure 2-1**), a rural community within the San Joaquin Valley at approximately 300 feet above sea level. The Project is located in an established subdivision in Tulare County, California located in the SW ¼ of Section 16 T. 17 S., R. 22E M.D.B. & M., on the Traver 7.5 Quadrangle USGS topographic map. This is part of the Great Central Valley. This encompasses an area that is approximately 430 miles long north/south and 40 miles wide. “The valley floor is composed of several thousands of feet of sediments deposited from runoff from the surrounding mountains” (Schoenherr 1995: 516). The rainfall in this area averages between 10-12 inches per year. Agriculture and overgrazing have modified the area with the introduction of invasive weeds and desertification is apparent over most of the area, with the most obvious indications being salt build up and polluted waterways (Schoenherr 1995:16). The valley is divided and named for the two river systems that drain it; the Sacramento in the north and the San Joaquin in the south. This area supported a wide variety of wildlife, including elk, pronghorn, and mule deer until the advent of agriculture. Pronghorn were rare by 1875, and by 1885 only one band of elk were limited to the area around Buena Vista.

The project area is located in the Lower Sonoran Lifezone within the California Valley Grassland Community. The natural water sources near the project area include the Kings River approximately 3.5 miles to the northwest and the Saint Johns River, roughly the same distance to the south. The majority of the waterways in this area have been heavily modified for agriculture.

### 3.5.2 Methodology

Culturescape conducted a cultural resource study within the proposed project area (approximately 1.53 acres). The study included a records search of the California Historical Resources Information System (CHRIS), a Sacred Lands File search from the Native American heritage Commission (NAHC), tribal outreach, and a pedestrian survey.

A Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) did not identify tribal locations of significance. A list of tribal contacts affiliated with the Project area was provided by the NAHC to Provost and Pritchard Consulting Group. A location map and a description of the project with a request for feedback were mailed to all listed parties on March 26, 2019 including the Santa Rosa Rancheria Tachi Yokut Tribe, Lemoore, Chairperson, the Tulare River Indian Tribe, Neil Pevron, Chairperson, and the

Wuksache Indian Tribe/Eshom Valley Band, Salinas, Chairperson. A follow up telephone call was attempted on April 5, 2019 to confirm delivery of project materials and to solicit tribal input. No responses were received from any of the tribes.

A records search conducted by the Southern San Joaquin Valley Information Center (SSJVIC) of the CHRIS resulted in no previously recorded cultural resources within the project area. One previous cultural study, TU-01751 had been conducted within the study area. There are two recorded cultural resources within the one-half mile radius, the Traver Canal and the Southern Pacific Railroad.

No cultural resources were observed during a pedestrian survey that consisted of 15 meter transects within the project area. Rodent burrows and roadways were examined opportunistically. One isolated historic slip-form bottle was discovered on the ramp within the catchment basin during survey, however, this was only noted as its location was on a modern construction with no obvious provenience. The area has been highly disturbed with a new housing development constructed adjacent to the catch basin.

### 3.5.2.1 Local

**Traver Community Plan<sup>14</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no Cultural goals or policies that Traver adopted, from the Tulare County Plan:

**Tulare County General Plan<sup>15</sup>:** The Tulare County General Plan sets forth the following goals and policies pertaining to Cultural Resources:

- ERM-6.1 *The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.*
- ERM-6.2 *The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.*
- ERM-6.10 *The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.*

## 3.5.3 Impact Assessment

**V-a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?**

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

**a-b) No Impact.**

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<sup>14</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>15</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%2030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 8, 2019

A cultural resource study of the APE was completed by Culturescape. The study included a records search of the California Historical Resources Information System, a Sacred Lands File search from the NAHC, tribal outreach, and a pedestrian survey. No historical, unique archaeological, or tribal cultural resources were identified.

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

**c) No Impact.** No human remains were identified, and no evidence was found in the course of preparing the cultural resources assessment to indicate that the area has been used as a cemetery or burial ground in the past. Regardless, it is always possible that human remains may be present at subsurface levels. State law prescribes protective measure that must be taken in the event that human remains are discovered. Specifically, Section 7050.5 of the California Health and Safety Code requires that the County Coroner shall be immediately notified of the discovery and no further excavation or disturbance of the site or any nearby area may continue until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she is required to notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendant from the deceased Native American. The most likely descendant shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains. Compliance with state and federal law would ensure that no impacts occur to any human remains that may be discovered on site.

## 3.6 Energy

**Table 3-12. Energy Impacts**

Energy				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.6.1 Environmental Setting

PG&E has sufficient energy supplies to serve the growth that has occurred in Tulare County. Much of the energy consumed in the region is for residential, commercial, and transportation purposes.

Construction equipment and construction worker vehicles operated during Project construction would use fossil fuels. This increased fuel consumption would be temporary and would cease at the end of the construction activity, and it would not have a residual requirement for additional energy input. The marginal increases in fossil fuel use resulting from Project construction are not expected to have appreciable impacts on energy resources.

#### 3.6.1.1 Local

Traver Community Plan<sup>16</sup>: The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies pertaining to Energy that Traver has adopted. Energy.

### 3.6.2 Impact Assessment

#### VI-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?

**a) Less Than Significant Impact.** As discussed in **Section 3.3**, the proposed Project will not exceed any air emission thresholds during construction or operation. The Project will comply with construction best management practices and may be required to complete a Stormwater Pollution Prevention Plan (SWPPP) as part of construction and operational permits. Once completed, the Project will be mostly passive in nature and will not use an excessive amount of energy. Approximately 3.4 kW of power/year is needed to operate the pump on the treatment system. Assuming 900 hours of runtime per year—enough to account for the average yearly well production—the annual energy requirement is 3,060 kWh. Additionally, a backup

<sup>16</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

generator for emergency power will be installed. The Project will not result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.

**VI-b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?**

**b) No Impact.** The proposed Project will be passive in nature once it is completed, and the construction phase will be temporary in nature and will not exceed any thresholds set by the SJVAPCD. There is currently no state or local plan for renewable energy. Should one be implemented, the treatment system requiring 3.4 kW/year of additional power would not conflict with such a plan.

## 3.7 Geology and Soils

Table 3-13. Geology and Soils Impacts

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

### 3.7.1 Environmental Setting

#### 3.7.1.1 Geology and Soils

The Project is located in northwestern Tulare County, in the central section of California's Great Valley Geomorphic Province, or Central Valley. The Sacramento Valley makes up the northern third and the San Joaquin Valley makes up the southern two-thirds of the geomorphic province. Both valleys are watered by large rivers flowing west from the Sierra Nevada Range, with smaller tributaries flowing east from the Coast Ranges. Most of the surface of the Great Valley is covered by Quaternary (present day to 1.6 million years



ago) alluvium. The sedimentary formations are steeply upturned along the western margin due to the uplifted Sierra Nevada Range.<sup>17</sup> From the time the Valley first began to form, sediments derived from erosion of igneous and metamorphic rocks and consolidated marine sediments in the surrounding mountains have been transported into the Valley by streams.

### 3.7.1.2 Faults and Seismicity

The Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. The nearest major fault is the San Andreas Fault, Parkfield section, located approximately 65 miles southwest of the Project site. The San Andreas Fault is the dominant active tectonic feature of the Coast Ranges and represents the boundary of the North American and Pacific plates. A smaller fault zone, the Nunez Fault is approximately 56 miles west of the site and an unmade fault approximately 40 miles southeast of the Project site.

### 3.7.1.3 Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, depth to groundwater, and the duration and intensity of ground shaking. Although no specific liquefaction hazard areas have been identified in the county, this potential is recognized throughout the San Joaquin Valley where unconsolidated sediments and a high-water table coincide. It is reasonable to assume that due to the depth to groundwater within the northwestern portion of Tulare County, liquefaction hazards would be negligible. There is moderate risk of soil slumping and liquefaction when near the Tule River. Using the USDA NRCS soil survey of Tulare County, an analysis of the soils onsite was performed (**Appendix D**). Soils in the area consist of Calgro-Calgro, saline-Sodic.

### 3.7.1.4 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of ground water, oil, or natural gas. These areas are typically composed of open-textured soils that become saturated. These areas are high in silt or clay content. The Project site is comprised of Calgro-Calgro, saline-Sodic (0 to 2 percent slopes). It is moderately well drained with a low to moderate risk of subsidence (**Appendix D**).

### 3.7.1.5 Dam and Levee Failure

Lake Kaweah is located approximately 26 miles east, and the Project site lies within the inundation zone for the Terminus Dam.

### 3.7.1.6 Local

**Traver Community Plan**<sup>18</sup>: The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies pertaining to geology and soils that Traver has adopted.:

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<sup>17</sup> Harden, D.R. 1998, California Geology, Prentice Hall, 479 pages

<sup>18</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

### 3.7.2 Impact Assessment

#### VII-a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

*VII-a-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.*

*VII-a-ii) Strong seismic ground shaking?*

**a-i and a-ii) Less Than Significant Impact.** The Project site and its vicinity are located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest major fault is the San Andreas Fault, Parkfield section, located approximately 65 miles southwest of the Project site. A smaller fault zone, the Nunez Fault is approximately 40 miles southwest of the site and an unnamed fault is approximately 40 miles southeast of the site, neither of which is anticipated to cause damage to the well infrastructure if there was a fault occurrence.

The Project involves construction of a water treatment system, trenching of an 18-inch diameter pipeline, and excavation of an existing County basin, and does not include development of habitable structures. Operation of the Project would not require permanent staff onsite or an increase in the number of employees required for routine maintenance. Instead, routine maintenance and repairs would be performed infrequently, on an as-needed basis by current Del Oro Traver District employees.

Therefore, implementation of the Project would not cause potential substantial direct or indirect effects, including the risk of loss, injury, or death involving a rupture of a known earthquake fault or involving strong seismic ground shaking. Any impact would be less than significant.

*VII-a-iii) Seismic-related ground failure, including liquefaction?*

**a-iii) Less Than Significant Impact.** Liquefaction is a process which involves the temporary transformation of soil from a solid state to a fluid form during intense and prolonged groundshaking. Water-saturated areas with shallow depth to groundwater and uniform sands, loose-to-medium in density, are prone to liquefaction. Specific liquefaction hazard areas have not been identified in the County. The Geotechnical Engineering Investigation Report states that the regional groundwater depth at the site is greater than 70 feet below ground surface and, therefore, the liquefaction potential is low. The Project site is not in a wetland area and is located in the northwestern portion of the County where liquefaction is considered a low to moderate risk. Implementation of the Project would not cause potential substantial direct or indirect effects, including the risk of loss, injury, or death. The impact would be less than significant.

*VII-a-iv) Landslides?*

**a-iv) No Impact.** As the Project is located on the Valley floor, no major geologic landforms exist on or near the site that could result in a landslide event. The potential landslide impact at this location is minimal as the site is approximately 20 miles from the foothills and the local topography is essentially flat and level. Implementation of the Project would not cause potential substantial direct or indirect effects from landslides, including the risk of loss, injury, or death. There will be no impact.

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**VII-b) Result in substantial soil erosion or the loss of topsoil?**

**b) Less Than Significant Impact.** The overall project site consists of approximately 1.53 acres. Earthmoving activities associated with the Project will include excavation, trenching, grading, and infrastructure construction that will disturb less than an acre of soil. These activities have the potential to expose soils to erosion processes. The extent of the erosion depends on steepness of the slope, vegetation/groundcover, soil compactness, runoff concentration, and weather. The project site is generally flat and will be graded toward storm drain manhole with open grating cover. Erosion will be minimized through compaction and adding Class II aggregate base. Stormwater runoff will enter the storm drain on the project site and be gravity-fed directly to a County stormwater basin at a nearby property within the APE. Del Oro Water Company and Tulare County have drafted an agreement providing for use of the basin. has .... Construction of the Project is anticipated to be completed within eight months, which will include grading, construction of the water treatment system and connection to the stormwater drainage basin. Construction will likely take place Fall of 2019 to Spring of 2020. Construction will utilize Best Management Practices detailed in the California Storm Water Best Management Practice Handbook for Construction Activity.<sup>19</sup>

Since the Project site has relatively flat terrain with a low potential for soil erosion, with BMP's the impact would be less than significant.

**VII-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?**

**c) Less Than Significant Impact.**

The Project site and surrounding areas do not contain substantial grade changes and the modifications of the site will not create substantial grade changes. As a result, the existing geological unit and soils and modification of the sites geologic unit or soils provides minimal risk of unstable soils that would result in landslides on or off-site. As mentioned above, the Project site and its vicinity are also located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code). The nearest major fault is the San Andreas Fault, Parkfield section, located approximately 65 miles southwest of the Project site. A smaller fault zone, the Nunez Fault is approximately 40 miles southwest of the site and an unnamed fault is approximately 40 miles southeast of the site. As a result, lateral spreading, liquefaction, subsidence, and collapse are also not likely to occur as a result of an earthquake.

The project is not within the subsidence area mapped by the United States Geological Survey, California Water Science Center. Additionally, the treatment system will not significantly impact the value of water pumped by the well and, therefore, will not influence subsidence more than the current system.

Given the limited grade changes, the low risk of earthquakes, and lack of expansive soil, the result of on or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse would be less than significant.

**VII -d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial direct or indirect risks to life or property?**

**d) Less Than Significant Impact.** Soils onsite consist of Calgro-Calgro, saline-Sodic, complex, which is classified as moderately well drained with a low runoff class (See **Appendix D**). The geotechnical engineering investigation report states that the expansion index in the area is less than 20 (very low expansion potential). Furthermore, the Project will be consistent with the California Building Standards Code. Any impacts would be less than significant.

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<sup>19</sup> California Storm Water Best Management Practice Handbook for Construction Activity, [https://www.casqa.org/sites/default/files/BMPHandbooks/BMP\\_NewDevRedev\\_Complete.pdf](https://www.casqa.org/sites/default/files/BMPHandbooks/BMP_NewDevRedev_Complete.pdf) , Accessed February 19, 2019

**VII-e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?**

**e) No Impact.** Septic installation or alternative wastewater disposal systems are not necessary for the project. There will be no impact.

**VII f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

**f) No Impact.** No known paleontological resources have been identified at the Project site. The geology of the project site is composed of recent Holocene fan and basin deposits of the Great Valley according to the Geologic Map of California Fresno Sheet 1:250,000 (Mathews and Burnett 1965). Recent Holocene sediments are not old enough to have significant paleontological resources. The area is flat and no unique geologic features have been noted in the Project area.

The Project will have no impact to unique paleontological resources or unique geologic features.

## 3.8 Greenhouse Gas Emissions

**Table 3-14. Greenhouse Gas Emissions Impacts**

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

### 3.8.1 Environmental Setting

The Earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the Earth. As the infrared energy is absorbed, the air surrounding the Earth is heated. An overall warming trend has been recorded since the late 19<sup>th</sup> century, with the most rapid warming occurring over the past two decades. The 10 warmest years of the last century all occurred within the last 15 years. It appears that the decade of the 1990s was the warmest in human history (National Oceanic and Atmospheric Administration, 2010). Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

#### 3.8.1.1 Greenhouse Gases

Commonly identified GHG emissions and sources include the following:

**Carbon dioxide (CO<sub>2</sub>)** is an odorless, colorless natural greenhouse gas. CO<sub>2</sub> is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.

**Methane (CH<sub>4</sub>)** is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.

**Nitrous oxide (N<sub>2</sub>O)**, also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.

**Water vapor** is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.

**Ozone (O<sub>3</sub>)** is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.



**Aerosols** are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

**Chlorofluorocarbons (CFCs)** are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.

**Hydrofluorocarbons (HFCs)** are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.

**Perfluorocarbons (PFCs)** have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.

**Sulfur hexafluoride (SF<sub>6</sub>)** is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

### 3.8.1.2 Effects of Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth, and what the effects of clouds will be in determining the rate at which the mean temperature will increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO<sub>2</sub> to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O have increased 31 percent, 151 percent, and 17 percent respectively since the year 1750 (CEC 2008). GHG emissions are typically expressed in carbon dioxide-equivalents (CO<sub>2</sub>e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH<sub>4</sub> has the same contribution to the greenhouse effect as approximately 21 tons of CO<sub>2</sub>. Therefore, CH<sub>4</sub> is a much more potent GHG than CO<sub>2</sub>.

## 3.8.2 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report ([Appendix A](#)) was prepared in April 2019. The sections below detail the methodology of the report and its conclusions.

### 3.8.2.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the Project were calculated using CalEEMod, Version 2016.3.2. Emissions' modeling was assumed to occur over an approximate eight-month period and covering a site area of approximately 1.53 acres. Remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in [Appendix A](#).

### 3.8.2.2 Long-Term Operational Emissions

Long-term operational emissions associated with the Project are estimated to be minimal in nature. Maintenance will be provided on an as needed basis by existing staff, and the operational equipment, such as the use of stationary pumps and a 3.4 kW treatment system, will result in negligible emissions. The Project does propose the use of a diesel-powered back-up generator. Generator use was estimated as 100 hours per year. Modeling assumptions and output files are included in **Appendix A**.

### 3.8.2.3 Thresholds of Significance

CEQA Guidelines Amendments became effective March 18, 2010. Included in the Amendments are revisions to the Appendix G Initial Study Checklist. In accordance with these Amendments, a project would be considered to have a significant impact to climate change if it would:

- a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or,
- b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

In accordance with SJVAPCD's *CEQA Greenhouse Gas Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects*<sup>20</sup>, proposed projects complying with Best Performance Standards (BPS) would be determined to have a less-than-significant impact. Projects not complying with BPS would be considered less than significant if operational GHG emissions would be reduced or mitigated by a minimum of 29 percent, in comparison to business-as-usual (year 2004) conditions. In addition, project-generated emissions complying with an approved plan or mitigation program would also be determined to have a less-than-significant impact.

### 3.8.2.4 Local

**Traver Community Plan**<sup>21</sup>: The Tulare County General Plan sets forth goals and policies that Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies related to Greenhouse Gas Emissions.:

- *AQ -1.7 The County shall monitor and support the efforts of Cal/EPA, CARB, and the SJVAPCD, under Assembly Bill 32 (AB 32) (Health and Safety Code §38501 et seq.), to develop a recommended list of emission reduction strategies. As appropriate, the County will evaluate each new project under the updated General Plan to – 76 – determine its consistency with the emission reduction strategies.*
- *AQ-1.8 The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.*
  - *Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,*
  - *Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and*
  - *Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.*

<sup>20</sup> Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA.  
<http://www.valleyair.org/Programs/CCAP/12-17-09/3%20CCAP%20-%20FINAL%20LU%20Guidance%20-%20Dec%2017%202009.pdf>  
Accessed 7 January 2019

<sup>21</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

Tulare County General Plan<sup>22</sup>: The Tulare County General Plan sets forth goals and policies pertaining to greenhouse gases:

- *AQ-1.8 The County will develop a Greenhouse Gas Emissions Reduction Plan (Plan) that identifies greenhouse gas emissions within the County as well as ways to reduce those emissions. The Plan will incorporate the requirements adopted by the California Air Resources Board specific to this issue. In addition, the County will work with the Tulare County Association of Governments and other applicable agencies to include the following key items in the regional planning efforts.*
  - *Inventory all known, or reasonably discoverable, sources of greenhouse gases in the County,*
  - *Inventory the greenhouse gas emissions in the most current year available, and those projected for year 2020, and*
  - *Set a target for the reduction of emissions attributable to the County's discretionary land use decisions and its own internal government operations.*

### 3.8.3 Impact Assessment

#### VIII-a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

##### a) Less Than Significant Impact.

##### Short-Term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3-15**. As indicated, construction of the Project would generate maximum annual emissions of approximately 78.0510 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>). Construction-related production of GHGs would be temporary and last approximately eight months.

**Table 3-15. Short-Term Construction-Generated GHG Emissions**

Short-Term Construction-Generated GHG Emissions	
Year	Emissions (MT CO <sub>2e</sub> ) <sup>(1)</sup>
2019	54.7055
2020	78.0510
AB 32 Consistency Threshold for Land-Use Development Projects*	1,100
AB 32 Consistency Threshold for Stationary Source Projects*	10,000
Exceed Threshold?	No

1. Emissions were quantified using the CalEEmod, Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.

\* As published in the Bay Area Air Quality Management District's CEQA Air Quality Guidelines. Available online at [http://www.baaqmd.gov/~/\\_media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~/_media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en) Accessed March 6, 2019.

##### Long-Term Operational Emissions

Estimated long-term operational emissions are summarized in **Table 3-16**. As indicated, operation of the Project would generate maximum annual emissions of approximately 12.8015 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>).

<sup>22</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%2030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 6, 2019

**Table 3-16. Long-Term Operational GHG Emissions**

Long-Term Operational GHG Emissions	
	Emissions (MT CO <sub>2</sub> e) <sup>(1)</sup>
Estimated Total Annual Operational CO <sub>2</sub> e Emissions	12,8015
AB 32 Consistency Threshold for Land-Use Development Projects*	1,100
AB 32 Consistency Threshold for Stationary Source Projects*	10,000
Exceed Threshold?	No

1. Emissions were quantified using the CalEEMod, Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.

\* As published in the Bay Area Air Quality Management District's CEQA Air Quality Guidelines. Available online at [http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa\\_guidelines\\_may2017-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en) Accessed March 6, 2019.

Long-term operational emissions associated with the Project will include the use of a 3.4kW treatment system and an emergency back-up generator. All equipment will meet current energy-efficiency requirements, and although usage is estimated at less than 100 hours per year, the emergency back-up generator will be permitted through SJVAPCD. Maintenance will continue to be provided on an as needed basis by existing Del Oro Water Company- Traver District staff and would not result in an increase in vehicle trips or vehicle miles traveled. Furthermore, there is no population growth associated with the Project. As shown in the table above the Project does not exceed the AB32 Consistency Threshold for Land-Use Development projects or Stationary Source projects and would not require any additional analysis for cumulative impacts. Therefore, Project-related emissions of GHGs would be less than significant.

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

**b) Less Than Significant Impact.** In accordance with SJVAPCD's recommended guidance, project-generated GHG emissions would be considered less than significant if: (1) the proposed Project complies with applicable BPS; (2) operational GHG emissions would be reduced or mitigated by a minimum of 29 percent in comparison to business-as usual (year 2004) conditions; or (3) project-generated emissions would comply with an approved greenhouse gas emissions plan (adopted statewide, regional, or local plan for reduction or mitigation of greenhouse gas emissions) or greenhouse gas mitigation program, which avoids or substantially reduces greenhouse gas emissions within the geographic area in which the project is located.

The SJVAPCD recognizes that the CARB's Cap-and-Trade regulation is an adopted State-wide greenhouse gas emissions plan for reducing or mitigating GHG emissions from targeted industries. In June of 2014, the SJVAPCD issued APR 2025, which is an internal policy document to provide guidance to SJVAPCD staff on how to determine significance of greenhouse gas emissions from projects subject to the California Air Resources Board Cap-and-Trade regulation or occurring at entities subject to the California Air Resources Board Cap-and-Trade regulation.<sup>23</sup>

The APR document outlined that fuel suppliers and distributors are subject to cap and trade regulations from emissions of greenhouse gases that would result from the combustion or oxidation of the fuels imported or delivered. Those fuel suppliers not under this regulation were found to be less than 1% of greenhouse gas emissions. SJVAPCD determined the combustion of these fuels that were not regulated to be insignificant. The document also mentioned large industrial facilities and electrical generation facilities were also regulated under the Cap and Trade program. The GHG emissions produced by operation of the treatment system would fall under this program.

<sup>23</sup> [https://www.valleyair.org/policies\\_per/Policies/APR-2025.pdf](https://www.valleyair.org/policies_per/Policies/APR-2025.pdf)

In this policy document, the SJVAPCD concluded that the combustion of fossil fuels including fuels associated with on- and off-road vehicles, are subject to Cap-and-Trade requirements as they are regulated under one of the three groups above and if not regulated by one of the groups above, found to be insignificant. The SJVAPCD further concluded that through implementation of the Cap-and-Trade regulation or through insignificance, project specific GHG emissions generated by fossil fuel use would be fully mitigated. As noted above, Project-generated construction GHG emissions from the Project would be attributable to the consumption of fossil fuels associated with the operation of on- and off-road vehicles. As discussed above, the SJVAPCD has determined that project-generated GHG emissions associated with the use of fossil fuels would be fully mitigated through implementation of CARB's Cap-and-Trade regulation or through insignificance and, therefore, would be considered have a less than significant individual and cumulative impact on the environment.

Although the Project is not located in the Bay Area, the Bay Area Air Quality Management District's thresholds for significance are based on the Statewide AB 32 objectives and are felt to be valid for other areas of the state. Bay Area Air Quality Management District's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce Statewide GHG emissions. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact and would be considered significant. If mitigation can be applied to lessen the emissions such that the project meets its share of emission reductions needed to address the cumulative impact, the project would normally be considered less than significant.

In the absence of SJVAPCD numerically quantified thresholds of significance for emissions of GHG, the widely accepted Bay Area Air Quality Management District thresholds are often used as a planning tool when addressing potential project-related impacts. These thresholds are based on the Statewide AB 32 objectives and are used in **Table 3-15** and **Table 3-16** above to illustrate that implementation of the Project will not result in a significant increase in GHGs.

For the aforementioned reasons, implementation of the Project is not anticipated to conflict with any applicable plan, policy or regulation for reducing the emissions of GHGs, nor will the Project have a significant impact on the environment. The impact would be considered less than significant.



## 3.9 Hazards and Hazardous Materials

**Table 3-17. Hazards and Hazardous Materials Impacts**

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

### 3.9.1 Environmental Setting

#### 3.9.1.1 Hazardous Materials

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code (GC) Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. The Department of Toxic Substances Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the EnviroStor database, the State Water Resources Control Board (SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense (DOD) sites, and Land Disposal program. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on March 12,

2019 determined that there are no known active hazardous waste generators or hazardous material spill sites within the Project site or immediate surrounding vicinity.

### 3.9.1.2 Airports

The Fresno Yosemite International Airport is located approximately 25 miles northwest and Sequoia Field is located approximately 9.2 miles east of the Project.

### 3.9.1.3 Emergency Response Plan

The Tulare County Office of Emergency Services (OES) is the County's emergency management agency, responsible for coordinating multi-agency responses to complex, large-scale emergencies and disasters occurring within the unincorporated area of the County.

### 3.9.1.4 Sensitive Receptors

A portion of the Project will be located within the right-of-way of Jacobs Drive, which will span across the frontage of two single-family residences. Also, the nearest school (Traver Joint Elementary School) is located approximately 0.14 miles northeast of the Project.

### 3.9.1.5 Local

**Traver Community Plan<sup>24</sup>:** The Tulare County General Plan sets forth the following goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies that are relevant to hazards and hazardous materials that Traver has adopted.

## 3.9.2 Impact Assessment

### **IX-a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? and;**

**a) Less Than Significant Impact.** The new treatment system will require the granular activated carbon (GAC) vessels to be backwashed when new carbon is placed in the vessel or if suspended solids accumulate in the top portion of the GAC. The frequency of carbon changeout depends on the makeup of the water and well flow rate. A third-party distributor will replace the spent GAC with new GAC. The spent GAC will be transported to their facility for reactivation and recycling. No hazardous waste is produced during this process. Well No. 3 cannot produce a high enough flow rate to backwash the GAC vessels. In order to provide an adequate water supply for backwashing, a backwash supply storage tank and pump station will be required at the site. The waste backwash will enter a storm drain onsite and move by gravity feed to a County stormwater basin at a nearby parcel. The backwash discharge will be permitted through the Central Valley Regional Board through a general or individual permit. The backwash consists of well water with a negligible amount of carbon fines.

The treatment site will also include the use of chlorine as part of a chlorination system for disinfection of the treated water and a nitrate analyzer for water leaving the GAC system to detect potential nitrate sloughing. Storage, handling, and distribution of chlorine will be monitored and comply with all regulations set forth by the County of Tulare. The Project will result in a less than significant impact for the routine transport, use, and disposal of hazardous material to the public or the environment, therefore impacts are less than significant.

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<sup>24</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

**IX -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?**

**a-c) Less Than Significant Impact.** Construction of the Project may involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. Any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. The Project will result in a less than significant impact to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

**IX -c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

**a-c) Less Than Significant Impact.** At its nearest point, the Project area is located approximately 0.14 miles northeast of Traver Joint Elementary School. The Project is simply water treatment. The only byproducts will be non-hazardous spent carbon and periodic backwash discharge consisting of well water with insignificant carbon fines. Chlorine will be injected into the water supply for disinfection, which is standard practice for many water systems. The liquid chlorine will be housed safely under double lock in the adjacent on-site storage structure. Impacts will be less than significant.

**IX -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?**

**d) No Impact.** The Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. A search of the DTSC EnviroStor database and the SWRCB Geotracker performed on March 12, 2019 determined that there are no known hazardous waste generators or hazardous material spill sites or closed sites within the Project site or immediate surrounding vicinity. There will be no impact.

**IX -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?;**

**e) No Impact.** The Project is not located within an airport land use plan or within two miles of an airport. The Fresno Yosemite International Airport is located approximately 25 miles northwest and Sequoia Field is located approximately 9.2 miles east of the Project. Construction of a water treatment system, pipeline, rehabilitation of an existing County basin would not be a safety hazard for people working in the area. Operation of the well site would not generate excessive noise, and any construction noise would be temporary. There would be no impact.

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

**f) Less Than Significant Impact.** The Project includes the construction and operation of a water treatment system and installation of an 18-inch diameter pipeline. Construction traffic associated with the Project would be minimal and temporary, lasting approximately eight months. Operational traffic will consist of as-needed maintenance trips and will have no effect on roadways or emergency access. A portion of the Project will involve open trenching in the right-of-way of Jacobs Drive for approximately 250 feet. Partial road closures and detours will occur due to the open trenching within the road right-of-way. Temporary lane diversions will be necessary for the two single-family residences adjacent to Jacobs Drive, between Church Drive and Bowhay Drive. Disturbances to traffic patterns, such as a partial road closures and detours will be temporary and minimal in nature, as their alternate routes will be made available. The community streets adjacent to the project are not part of any emergency response plan or evacuation plan for the community of Traver. The project will comply with the requirements of the Tulare County Encroachment Permit. Therefore, Project-

related impacts to emergency evacuation routes or emergency response routes on local roadways would be considered less than significant.

**IX -g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?**

**g) No Impact.** The nearest State Responsibility Area is located approximately 13.8 miles northeast of the Project site. (See **Figure 3-5**). The Project does not include any residential components, nor would it require any employees to be stationed permanently at the site on a daily basis. There would be no impact.

## 3.10 Hydrology and Water Quality

**Table 3-18. Hydrology and Water Quality Impacts**

Hydrology and Water Quality				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.10.1 Environmental Setting

The Project is located within the lower San Joaquin Valley, part of the Great Valley of California. The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Transverse Ranges and Mojave Desert to the south. Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives an average of seven inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

Water resources in Tulare County include many natural rivers and streams, man-made surface water conveyance structures, and groundwater. Tulare County's groundwater and surface water management is accomplished through various combinations of public and private water entities, including the Bureau of Reclamation, water utility companies, and local irrigation districts, all of which are governed by State and federal regulations. West-flowing Tule River, Deer Creek, and the White River are the major drainages in the

subbasin which empty into the Tulare lakebed. Deer Creek is located two miles south of the Project site and the Friant-Kern Canal is four miles east of the site.

According to the U.S. Geological Survey (USGS) classification system, the Project is located within the Tulare-Buena Vista Lakes watershed; Hydrologic Unit Code (HUC): 18030012.<sup>25</sup> This watershed is broadly defined as “the drainage into the Tulare and Buena Vista Lake closed basins.”<sup>26</sup>

The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin.<sup>27</sup>

### 3.10.1.1 Local

**Traver Community Plan<sup>28</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect the community of Traver’s hydrology and water quality:

- *WR-2.2 The County shall continue to support the State in monitoring and enforcing provisions to control non-point source water pollution contained in the U.S. EPA NPDES program as implemented by the Water Quality Control Board.*
- *WR-2.3 The County shall continue to require the use of feasible BMPs, and other mitigation measures designed to protect surface water and groundwater from the adverse effects of construction activities, agricultural operations requiring a County Permit and urban runoff in coordination with the Water Quality Control Board.*
- *PFS-1.3 The County shall review development proposals for their impacts on infrastructure (for example, sewer, water, fire stations, libraries, streets, etc). New development shall be required to pay its proportionate share of the costs of infrastructure improvements required to serve the project to the extent permitted by State law. The lack of available public or private services or adequate infrastructure to serve a project, which cannot be satisfactorily mitigated by the project, may be grounds for denial of a project or cause for the modification of size, density, and/or intensity of the project.*

**Tulare County General Plan<sup>29</sup>:** The Tulare County General Plan sets forth the following additional goals and policies pertaining to hydrology and water quality.:

- *PFS-2.5 Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.*
- *WR-1.2 The County shall support the collection of monitoring data for facilities or uses that are potential sources of groundwater pollution as part of project approvals, including residential and industrial development.*
- *WR-1.11 The County shall consult with water agencies within those areas of the County where groundwater extraction exceeds groundwater recharge, with the goal of reducing and ultimately reversing groundwater overdraft conditions in the County.*
- *WR-2.6 The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.*
- *PFS-2.1 The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development.*

<sup>25</sup> USGS Watershed Maps. <https://water.usgs.gov/maps.html> Accessed March 6, 2019.

<sup>26</sup> Ibid.

<sup>27</sup> DWR Bulletin 118. BBAT. <https://gis.water.ca.gov/app/bbat/> Accessed March 6, 2019

<sup>28</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%2007/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>29</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%2030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 6, 2019



### 3.10.2 Impact Assessment

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

**a) Less than significant impact.** Well No. 3 meets all drinking water standards except for TCP. Additionally, Well No. 3 has consistently exceeded the MCL concentration. Wells 2 and 3 are currently the only active sources of supply for the water system and therefore, both wells are needed to provide the necessary redundancy when one well has to be taken off-line for maintenance. Both wells would be needed to supply fire hydrants in the event of a fire. The proposed project will ensure Well No 3 is in compliance with the new TCP standard by installing granular activated carbon (GAC) treatment.

In order for the GAC to remove TCP from the water, the carbon must have enough adsorption capacity and the water must be in contact with the carbon for enough time for adsorption to take place. The parameter used to indicate the time the water is in contact with the carbon is the empty bed contact time (EBCT). An EBCT of approximately 15 minutes is recommended for TCP removal treatment. In order to more fully utilize the carbon, it is recommended that the GAC treatment system be configured using pairs of vessels in series. The project will be constructed so water will flow through one vessel filled with GAC and then through a second vessel filled with GAC before entering the distribution system. Operating with vessels in series is particularly important with TCP, which has an MCL equal to the Detection Limiting for the Purposes of Reporting. With series operation, The District will be able to allow the GAC in the lead vessel to approach full saturation/usage before the carbon is changed out. It will also provide improved treatment reliability and reduce the likelihood of an inadvertent treatment failure and resulting MCL violation.

As part of the process, the granulated activated carbon will require water be used to backwash the GAC treatment vessels before using new granulated activated carbon and when suspended solids accumulate in the top of the vessels. This discharge will then be piped to a County stormwater basin. The discharge would contain unaltered groundwater with minimal carbon fines and is considered a low threat discharge. This discharge will not violate any water quality or waste discharge standards and will require a general or individual permit from the Central Valley Regional Board.

#### **X -b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin?**

**b) Less Than Significant Impact.** The proposed project will bring Well No 3 into reliable compliance with the new TCP standard, but will not increase the overall production of water between the three wells. Although the subbasin is critically-overdrafted, the amount of water being removed from the aquifer will not change. The existing well site and pumping rate were designed to not interfere with the drawdown of nearby wells.

The amount of impervious surface being installed is estimated to be around 3,400 square feet of concrete. This amount will have minimal effects on groundwater recharge. The backwash water will also be routed to the unlined County storm basin which may increase groundwater recharge.

Therefore, implementation of the Project will not interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the San Joaquin Valley Kings subbasin, nor will it substantially decrease ground water supplies. Any impacts will be less than significant.

#### **X -c) 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:**

*(i) result in substantial erosion or siltation on- or off-site;*

- (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite;*
- (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- (iv) impede or redirect flood flows?*

**c) Less Than Significant Impact.** There are no streams or rivers onsite or in the immediate vicinity. The Project does not propose significant alteration of the topography of the site. In addition to installing about 3,400 square feet of concrete as part of the installation of treatment vessels, chlorination, system, generator, driveway, truck pad, and associated infrastructure at the treatment site, and about 250-feet of 18-inch diameter piping within the road right-of-way, the Project proposes calculated grading and additional grading of an existing off site storm drainage basin to prevent storm runoff from pooling around the equipment.

The project site is generally flat and will be graded toward storm drain manhole with open grating cover. Erosion will be minimized through compaction and adding Class II aggregate base. Stormwater runoff will enter the storm drain on the project site and be gravity-fed directly to a County stormwater basin at a nearby property within the APE. Del Oro Water Company and Tulare County have drafted an agreement providing for use of the basin. Construction of the Project is anticipated to be completed within eight months, which will include grading, construction of the water treatment system and connection to the stormwater drainage basin. Construction will likely take place Fall of 2019 to Spring of 2020. Construction will utilize Best Management Practices detailed in the California Storm Water Best Management Practice Handbook for Construction Activity.<sup>30</sup>

In order to minimize polluted run-off during construction activities, the contractor will comply with all Cal/OSHA regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite.

The project will not alter the existing drainage pattern of the site or area, including through the alteration or 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, substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, provide substantial additional sources of polluted runoff or impede or redirect flows. Impacts will be less than significant.

#### **X-d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

**d) Less Than Significant Impact.** The project site is in a 100- year flood zone, See **Figure 3-3**. The project will be designed to ensure that there is minimal release of pollutants. (Ex. Treatment tanks installed with a higher pad above the flood zone.) Tsunamis do not occur in the area, and there are no lakes or large bodies of water near the community of Traver. Impacts would be less than significant.

#### **X-e) Otherwise substantially degrade water quality?**

**e) No Impact. The project will not otherwise degrade water quality.** As discussed above, implementation of the Project would correct water quality issues affecting the community of Traver. Furthermore, construction activities will require compliance with all Cal/OSHA regulations in order to reduce the potential for incidental release of pollutants or hazardous substances into surface water or groundwater and construction will utilize Best Management Practices detailed in the California Storm Water Best Management Practice Handbook for Construction Activity. There will be no impact.

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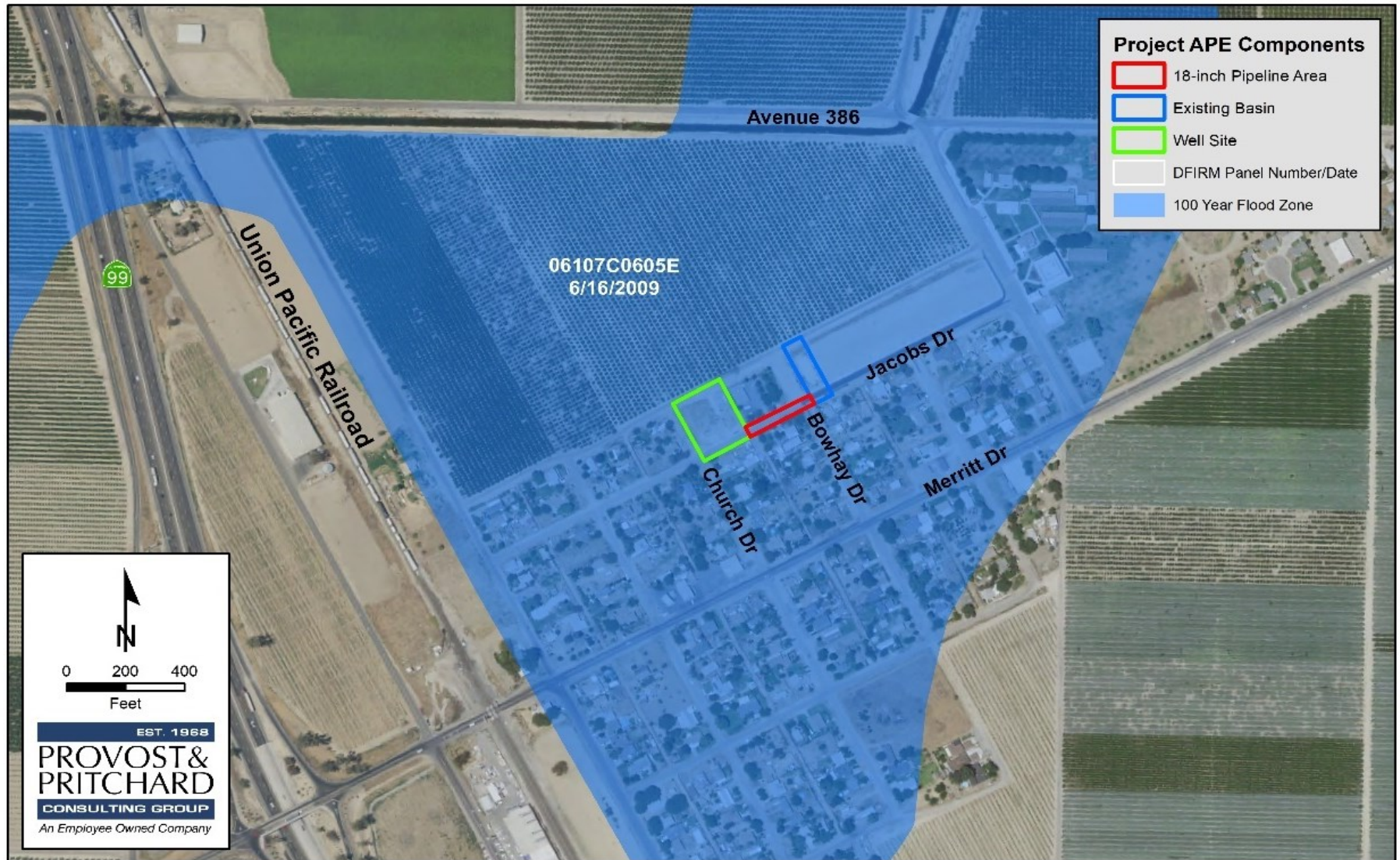
<sup>30</sup> California Storm Water Best Management Practice Handbook for Construction Activity, [https://www.casqa.org/sites/default/files/BMPHandbooks/BMP\\_NewDevRedev\\_Complete.pdf](https://www.casqa.org/sites/default/files/BMPHandbooks/BMP_NewDevRedev_Complete.pdf), Accessed February 19, 2019

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**X-f) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

**f) No Impact.** The proposed Project is intended to provide clean drinking water to the residence of Traver. The proposed water treatment project will not affect any watershed. The Project falls within the Tulare Lake Basin, 4.3 miles south of the King's River and 4.1 miles north of the Saint John's River. The Central Valley Water Quality Control Plan dictates the requirements of the Tulare Lake Basin. The best management practices outlined in Section X-C above will help ensure water quality standards are met. The Project falls within the San Joaquin Valley, Kings groundwater sub-basin. The project will also not cause any increase in overall production of water between the three wells. The Project will not conflict with or obstruct implementation of any water quality control plan or sustainable groundwater management plan.





3/8/2019 : G:\Del Oro Traver District-2704\270418001-TCP Design Services\GIS\Map\FEMA.mxd

Figure 3-3. FEMA Flood Map

## 3.11 Land Use and Planning

**Table 3-19. Land Use and Planning Impacts**

Land Use and Planning				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.11.1 Environmental Setting

The Project is located within the unincorporated community of Traver in northwest Tulare County. The Project site is located approximately 0.5 miles east of State Route 99. The Project is located along Jacobs Drive, between Church Drive and Baker Drive. The Project site is surrounded by residential development, agriculture, and a church.

The Project will be located in three distinct areas. (See **Figure 3-4**). The existing well site is zoned as R-2 (Two-Family Residential) and designated by the Traver Community Plan as Medium Density Residential. The pipeline will be located within the road right-of-way of Jacobs Drive. The existing basin is zoned as R-1 (Single-Family Residential) and planned as Medium Density Residential. Properties to the west and south of the Project are zoned as R-2 (Two-Family Residential) and planned as Medium Density Residential. The property to the east is zoned as R-1 (Single-Family Residential) and planned as Medium Density Residential. The property to the north is zoned as R-A (Rural Residential) and planned for Medium Density Residential.

There are a variety of land uses within the Traver Planning Area. Along SR 99, there is a mix industrial and mixed uses. The majority of the west side of SR 99 is not within the Traver Urban Development Boundary and is dominated by agricultural uses. Merritt Drive is the main arterial facility traversing the community and includes some community serving commercial uses, a bus line, post office, and Traver Elementary School. Residential uses are located on both sides of Merritt Drive

#### 3.11.1.1 Local

**Traver Community Plan<sup>31</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals and policies pertaining to land use that Traver has adopted.

### 3.11.2 Impact Assessment

#### XI-a) Would the project physically divide an established community?

**a) No Impact.** Well No 3 is located on an existing well lot that is zoned Medium Density Residential. The pipeline portion of the Project will be located in the road right-of-way of Jacobs Drive. The existing county basin is zoned as Medium Density Residential. The Project site is in the central region of the Traver Urban

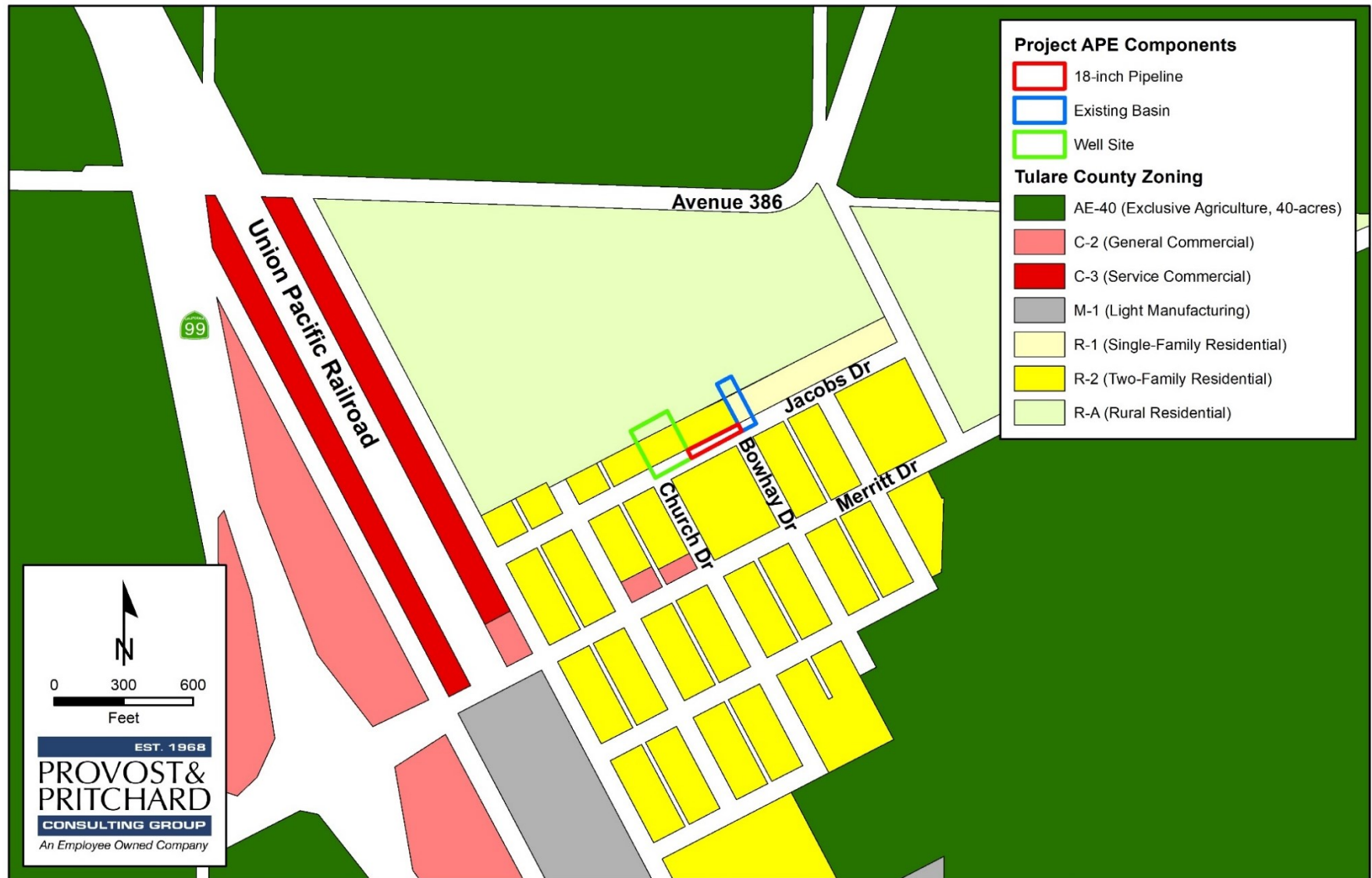
<sup>31</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

Development Boundary. The Project does not include the permanent alteration of roads, trails, or paths. Partial road closures and detours during construction will provide for alternative routes. Implementation of the Project will not divide an established community. There would be no impact.

**XI-b) Would the project cause a significant environmental conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?**

**b) Less Than Significant Impact.** The existing basin is located within the R-1 (Single-Family Residential) and R-A (Rural Residential). These properties are designated by the Traver Community Plan, which adheres to the Tulare County General Plan. The Traver Community Plan Land Use Map designates the two aforementioned parcels at this area as Medium Density Residential. The purpose of the Project is to modify a public facility to reduce the levels of 1,2,3- trichloropropane below the maximum containment level in the water supplied to the community of Traver. The project components are already established uses, except for the proposed pipeline. The proposed pipeline will be located in Jacobs Drive right-of-way. Construction would be typical and require an encroachment permit from Tulare County. The pipeline will be installed through a previously disturbed area. The installation of the piping in a disturbed location, the permitting for the installation of piping within the County roadway, and the permitting for the connection of piping to the County basin will ensure through the approval process that the changes in the environment will not conflict with a plans, policies, and regulations which would otherwise avoid or mitigate an environmental effect. The project would be consistent with all applicable plans, policies, ordinances, and regulations, including those adopted for the purpose of avoiding or mitigating an environmental effect. Any impact would be less than significant.





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Figure 3-4. Zoning Map

## 3.12 Mineral Resources

**Table 3-20. Mineral Resources Impacts**

Mineral Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### 3.12.1 Environmental Setting

The most economically significant mineral resources in Tulare County are sand, gravel, and crushed stone used as sources for aggregate (road materials and other construction). The two major sources of aggregate area alluvial deposits (riverbeds and floodplains) and hard rock quarries. Consequently, most of Tulare County's mineral resources are located at the base of the Sierra Nevada foothills or along the Kaweah River, Lewis Creek, and the Tule River.

California Department of Conservation's Division of Oil, Gas and Geothermal maintains a database of oil wells in the Project area (DOGGR). According to the DOGGR Well Finder there is one plugged and abandoned well approximately 1.2 miles southeast of the Project.

The Project site is not delineated on a local land use plan as a locally important mineral resources recovery site.

**XII-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?**

**XII-b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

**a) and b) No Impact.** The California Surface Mining and Reclamation Act of 1975 (SMARA) was to address protecting the state's need for a continuing supply of mineral resources, while protecting public an environmental health. SMARA requires that all cities incorporate into their general plans mapped mineral resource designations approved by the State Mining and Geology Board. The State Geologist classifies land in California based on availability of mineral resources. Because available aggregate construction material is limited, five designations have been established for the classification of sand, gravel and crushed rock resources: Scientific Resource, Mineral Resource Zone 1, Mineral Resources Zone 2, and Mineral Resource Zone 3, and Mineral Resource Zone 4.

According to the Tulare County General Plan, the Project site is not within a Mineral Resource Zone. The nearest mineral resource zone is an MRZ-3a located along the St. Johns River east of Visalia, which is approximately 15.7 miles southeast of the Project. In addition, California's Division of Oil, Gas and Geothermal Resources has no record of active or inactive oil or gas wells or petroleum resources on the

Project site or in the vicinity<sup>32</sup>. Therefore, implementation of the Project would not result in the loss of availability of a known mineral resource since no known mineral resources that would be of value to the region and residents of the state have been identified in this area. Furthermore, the Project area has not been designated as a locally important mineral resource recovery site by a general plan, specific plan, or land use plan. There would be no impact.

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<sup>32</sup> DOGGR Map of Oil and Gas Wells. <https://maps.conservation.ca.gov/doggr/wellfinder/#openModal/-119.80553/36.52896/13> Accessed 18 December 2018.

## 3.13 Noise

**Table 3-21. Noise Impacts**

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

### 3.13.1 Environmental Setting

There are a variety of sources that produce noise in Traver, including traffic, railroad operations, airport operations, and agricultural operations. Traffic and railroad noise are the most dominant source of ambient noise near the Project site. State Route (SR) 99 runs through the Traver and is the largest source of traffic noise in the area due to the high volumes of traffic. Operations along the Union Pacific railroad line are another significant source of noise in Traver. According to the Tulare County General Plan EIR, there are more than 20 freight train operations per day along the Union Pacific rail line in Tulare County and may occur at any time of day or night. Noise levels are higher at at-grade crossings due to the warning horn. As such, Traver is impacted by warning horn noise whenever a train crosses Merritt Drive therefore, impacting adjacent land uses whenever a train passes through the community. Passenger trains presently do not operate on Union Pacific tracks in Tulare County. Noise levels in the vicinity of grade crossings are somewhat higher than this due to the use of the warning horn. The Project is approximately 0.2 miles east of the Union Pacific Railroad and 0.32 miles from SR 99. The Fresno Yosemite International Airport is located approximately 25 miles northwest and Sequoia Field which is located approximately 9 miles east of the Project.

The Project will consist of the development of a water treatment system, the trenching of an 18-inch diameter pipeline approximately 250 feet east to an existing County basin that will be excavated approximately one foot deeper. The construction period will be approximately eight months. Truck trips will be limited to daily construction and as-needed maintenance. Construction equipment will consist of an excavator, backhoe/loader, concrete truck, and concrete pump.

#### 3.13.1.1 Local

Traver Community Plan<sup>33</sup>: The Tulare County General Plan sets forth goals and policies that the

<sup>33</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

Traver has adopted because they are applicable to the Traver Community Plan. Traver has adopted the following goals and policies to protect the community of Traver's from noise impacts:

- *HS-8.11 The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.*

### 3.13.2 Impact Assessment

#### **XIII-a) Would the project result in 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?**

**a) Less Than Significant Impact.** The construction phase of the Project will involve temporary noise sources, originating predominately from off-road equipment, such as backhoes, scrapers, and tractors. According to the Federal Highway Administration Construction Noise Handbook, Backhoes have a Lmax noise limit at 50 feet of 85 dba, Graders have a limit of 85 dba, and tractors have a limit of 84 dba. The Project will comply with the Traver Community Plan. According to the Traver Community Plan, construction shall be limited to 7:00 a.m. to 7:00 p.m.

The operational phase of the project will involve the running of backwash pump about once per year for a short duration and other operational maintenance activities, including GAC and chlorine deliveries approximately four times a year, and routine monitoring by existing staff. Pumps generally produce a noise level of 76 dBA at a distance of 50 feet.

In the Tulare County General Plan, Tulare County finds acceptable levels of noise to be a maximum Ldn of 65 db for residential multi-family and 75 db for industrial, as outlined by the State Land Use Compatibility Standards for Community Noise Environment. The well site is zoned R-2 (Two-Family Residential). The closest residence is around 45-feet from the edge of project site. And the proposed pumps are located further away from the closest residence and will not exceed Tulare County acceptable levels.

The Project is located adjacent to agricultural lands, accustomed to noises associated with farm equipment, including tractors that have a maximum limit of 84 dba. Although the sound levels for the operation of the pump and the construction may not meet the acceptable noise levels for residential and industrial for construction or operation of the system, these periods of noise would be an exception and temporary in nature. Normal baseline noise levels in the area may also tend to be higher, given the proximity to agricultural production. Operational maintenance would not generate significant new noise.

Additionally, equipment engine attenuation is a source mitigation option that assumes all construction equipment and vehicles powered with an internal combustion engine are in good working order, adequately muffled, and maintained in accordance with the manufacturers' recommendations. The contractors shall use equipment furnished with mufflers that are in good condition and appropriate for the equipment.

The project will not result in noise in excess of a noise ordinance. The project will result in noise in excess of the General Plan standard, but not in excess of the current surrounding area activities. Less than significant.

#### **XIII-b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?**

**b) Less Than Significant Impact.** The construction phase of the Project will have excavation and grading as part of development of the well treatment and associated infrastructure. Construction on the well site, within the basin, and in the shoulder road right-of-way will use backhoes, scrapers, and tractors. The project will not require drilling into concrete. Impact devices are pieces of construction equipment that create high levels of noise and vibration. The Federal Transportation Administration does not consider backhoes,

scrapers, and tractors as impact equipment. Total construction will last approximately eight months. The project will not generate excessive ground borne vibration or ground borne noise. Impacts would be less than significant.

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

**c) No Impact.** The Project is not located within an airport land use plan or within two miles of an airport. The Fresno Yosemite International Airport is located approximately 17 miles northeast and a private airstrip is located approximately 3.5 miles southeast of the Project. Furthermore, the Project does not involve the development of habitable structures or require the presence of permanent staff onsite. There would be no impact.



## 3.14 Population and Housing

**Table 3-22. Population and Housing Impacts**

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

### 3.14.1 Environmental Setting

Traver's population decreased from 732 in 2000 to 713 in 2010. According to the Traver Community Plan, the population growth rate has been 0.013. The projected population for 2019 is 801 people.<sup>34</sup>

#### 3.14.1.1 Local Regulations

Traver Community Plan<sup>35</sup>: The Tulare County General Plan sets forth goals and policies that Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies pertaining to Population and Housing that Traver has adopted.

### 3.14.2 Impact Assessment

**XIV-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)?**

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

**a-b) No Impact.** The Project involves construction of a treatment system for an existing well, installation of a proposed 18-inch diameter pipeline, and deepening of an existing stormwater basin. The goal of the Project is not to induce population growth, but rather to bring drinking water quality into compliance with regulations for 1,2,3-TCP. The Project will not encourage population growth directly or indirectly. No housing or habitable structures would be built, nor will any be removed. Implementation of the Project will not result in displacement of people or existing housing. The Project will also not induce substantial unplanned growth through new infrastructure. The amount of drinking water produced will not change and new public roadways will not be built. The eight workers needed to complete the project is also minor and will not bring large population growth to the area. The operation of the system will also be performed by current employees. Therefore, there will be a less than significant impact.

<sup>34</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>35</sup> Ibid

## 3.15 Public Services

**Table 3-23. Public Services Impacts**

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

### 3.15.1 Environmental Setting

**Fire Protection:** As Traver is within the jurisdiction of Tulare County, Tulare County will provide the fire protection services. Fire response is currently provided by one County Fire Station servicing Traver. The Tulare County Fire Station #2, Kings River Station will be serving Traver and is approximately 4.7 miles north of the Project. The Kings River Station has one Fire Engine and is staffed with three company officers, two Fire Lieutenants, one Fire Captain, and eight paid On-Call Fire Fighters are assigned to this station. Response time is approximately seven minutes from this station to Traver.

**Police Protection:** The Tulare County Sherriff's Department has an Oroshi substation that covers 289 square miles and serving rural populations, including Traver. This substation serves approximately 53,250 people. Total staff for the substation is 23 deputies, four sergeants, and one lieutenant. There is a minimum of three deputies and one sergeant on a shift. This station is approximately 15.7 miles northeast of the Project. The majority of crimes in Traver involve burglaries, thefts, assaults, malicious mischief, domestic disputes, narcotics and gang issues. There was a Traver substation, however, this facility closed in late 2007, early 2008 due to budget constraints.

**Schools:** The closest school to the Project is the Traver Joint Elementary School District. It serves the community of Traver students from K-8 with approximately 222 students. The school is approximately 0.14 miles northeast of the Project.

**Parks:** There are no County owned/operated parks in Traver. The nearest County owned/operated parks are the Ledbetter Park in the unincorporated community of Cutler approximately 15.7 miles northeast of Traver. The closest park to the Project is Burris Park, located 8.3 miles west of the Project in Kings County.

**Other public facilities:** Disposal services are provided by the Tulare County Consolidated Waste Management Authority (CWMA). This agency regulates the solid waste needs of Tulare County. Traver within the district that is served by Pena's Disposal. Traver's solid waste is currently taken to the Material Recovery Facility operated by Pena's Disposal. From the facility, any remaining waste is transported to a landfill. The Visalia Landfill is the closest landfill to the Project. It is approximately 11.1 miles southeast of the Project. Visalia Landfill is at approximately 50 percent capacity.

### 3.15.1.1 Local Regulations

**Traver Community Plan<sup>36</sup>:** The Tulare County General Plan sets forth goals and policies that Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies that have potential relevance to public services that Traver has adopted.

### 3.15.2 Impact Assessment

**XV-a) 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) Less Than Significant Impact / No Impact.** The Project would not require the addition or alteration of any public services. The site is within northwestern Tulare County and would utilize existing services provided by the County. There would be no impact.

**Fire Protection** – The Project would continue to be served by the Tulare County Fires Station #2, Kings River Station located approximately 4.7 miles north of the Project site. The community of Traver is equipped with fire hydrants. According to Uniform Fire Code, a supply of 1,000 gallons per minute for a 2-hour duration meets the minimum fire protection flow requirement. Well No. 2 currently produces 220 gallons per minute. Well No. 3 currently produces 550 gallon per minute. There is another well, Well No. 1, which is located on the same parcel as Well No. 3. However, Well No. 1 is inactive. With the combined well production, the existing water supply would be 770 gpm. The water system is currently not meeting fire flow requirements by a deficit of 230 gallons per minute and will continue to not meet fire flow requirements. The purpose of the Project will remedy the water quality being produced and not affect the water supply. The project will bring both Well No. 3 into reliable compliance with the new TCP standard while at the same time maintaining supply capacities of at least 220 gpm and 550 gpm for wells 2 and 3, respectively. There would be no impact to public fire services.

**Police Protection** – Tulare County would continue to provide sheriff protection services to the Project site. Emergency response is adequate to the Project site. The closest substation is located in Orosi, approximately 15.7 miles northeast of the Project site. No residential or office construction is proposed for this Project and no additional police protection would be required. There would be no impact.

**Schools** – The Project site is located approximately 0.14 miles northeast of the Project. Implementation would not include construction of any residential structures. The project would also not bring in many new residents with families, given the limited duration of construction work. The maintenance and operation of the system will also be performed by current employees. The Project would not result in a substantial increase of population that would require additional school facilities; therefore, there would be a less than significant impact.

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<sup>36</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

Parks – The construction of the project could bring a small number of employment opportunities, some of the employees which could come from outside the region. The operation of the system will be performed by existing employees. As the Project would not substantially induce population growth, the Project would not create a need for additional park or recreational services. Ledbetter Park is the nearest regional park, located approximately 15.7 miles northeast of the Project site. Additionally, public schools, such as the Traver Joint Elementary School includes various public recreation facilities. The impact would be less than significant.

Other Public Facilities- Disposal services will still be provided by the Tulare County Consolidated Waste Management Authority (CWMA). The project will produce minor solid waste during construction of the facility. Once built, the operation of the project will not generate any solid waste. The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered waste facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for any of the public services. The impacts would be less than significant.

## 3.16 Recreation

**Table 3-24. Recreation Impacts**

Recreation				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.16.1 Environmental Setting

Recreational sites often provide wildlife habitat, vegetation to mitigate air pollution, and in some cases aquifer recharge areas or watershed protection, sometimes in addition to agricultural or forestry based economic returns. There are no County owned/operated parks in Traver. The nearest County owned/operated parks are the Ledbetter Park in the unincorporated community of Cutler approximately 15.7 miles northeast of Traver. The closest park to the Project is Burris Park, located 8.3 miles west of the Project in Kings County.

#### 3.16.1.1 Local Regulations

Traver Community Plan<sup>37</sup>: The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies that pertain to Recreation that Traver has adopted.

### 3.16.2 Impact Assessment

**XVI-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?**

**XVI-b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

**a-b) Less than significant Impact.** The Project includes the construction and operation of a new water treatment system, installation of an 18-inch proposed pipeline, and deepening of an existing stormwater basin. It would not increase the demand for recreational facilities or put a strain on the existing recreational facilities. Existing employees will operate and maintain the system. No population growth would be associated with the Project or be necessitated by the Project. There would be a less than significant impact.

<sup>37</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

## 3.17 Transportation

**Table 3-25. Transportation/Traffic Impacts**

Transportation/Traffic				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.17.1 Environmental Setting

Traver is a rural unincorporated community in northwestern Tulare County, dominated by agricultural production. State Route 99 is the nearest highway, which is approximately 0.5 miles west of the Project site. The Project site is surrounded by residential development, agriculture uses, and a church. The Project consists of constructing a water treatment system because there are traces of 1,2,3- trichloropropane exceeding the maximum containment level at Well No. 3. The water treatment system will consist of two 12-foot granular active carbon (GAC) vessels, a large supply tank for backwash water, a chlorination building, and a generator for emergency power. Also included will be an 18-inch diameter pipeline that will connect to the existing well to the county stormwater basin east of the well site. All project land parcels are adjacent to Jacobs Drive, (See **Figure 2-3**). Jacobs Drive is a paved, rural, two-way road with unpaved road shoulders. The Fresno Yosemite International Airport is located approximately 25 miles northwest, the Sequoia Field is located approximately 9 miles east, and a private airstrip is located approximately 3.5 miles southeast of the Project. There are no bus routes or sidewalks on Jacobs Drive. Traver is a small disadvantaged community and little traffic occurs on Jacobs Drive.

#### 3.17.1.1 Local Regulations

**Traver Community Plan**<sup>38</sup>: The Tulare County General Plan sets forth goals and policies that Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies pertaining to transportation that Traver has adopted.

<sup>38</sup> Traver Community Plan.  
<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.



### 3.17.2 Impact Assessment

#### **XVII-a) Would the project conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

##### **a) No Impact.**

The Project includes the construction of a water treatment system, an 18-inch diameter pipeline, and deepening of an existing county stormwater basin. Construction traffic associated with the Project would be minimal and temporary, approximately lasting eight months. Operational traffic will be minimal. Operational traffic will not increase and consist of routine maintenance and inspections that are already completed regularly. There would not be a significant adverse effect to existing roadways in the area.

The pipeline will be installed within the right-of-way of Jacobs Drive adjacent to residences, but off of the paved roadway. Installation of the pipeline will require construction in the right-of-way of Jacobs Drive for approximately 250-feet. 250-feet of 18-inch piping will be installed within the road right-of-way. Road closures and detours will affect a small portion of Jacobs Drive and will allow partial access. These construction-related impacts would be temporary and alternate routes will be available for use by vehicles, pedestrians, and bicycles. All disturbances to roadways, driveways, sidewalks, curb, and gutter incurred from the Project will be temporary and repaired.

There are no bus routes or sidewalks on Jacobs Drive. Traver is a small disadvantaged community and little traffic occurs on Jacobs Drive. As a result, the well treatment project will not conflict with a plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

#### **XVII-b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3. Subdivision (b)?**

**b) No Impact:** Section 15064.3 Subdivision (b) of the CEQA guidelines specify for Land Use Projects “Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major traffic stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.”

Guidelines also specify, “Quantitative Analysis. If existing models or methods are not available to estimate the vehicles miles traveled for the particular project being considered, a lead agency may analyze the project vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

No models or methods are available for use of this project. Instead the project will be evaluated qualitatively.

The project is located near the already developed traffic corridor of Highway 99, with already established roads along the project properties and to the South of the properties. The delivery of four GAC vessels annually will not create any traffic issues for the community of Traver. There are no sidewalks or bus routes in the area. Foot traffic and bike traffic are very limited. Most of the community consists of farmworkers who work in nearby agricultural farms in the County. As a result, the project may be determined, consistent with Section 15064.3, to not have a significant impact on transportation impacts.

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

**c) Less Than Significant Impact.** No new roadway design features are associated with the Project. Other construction hazards will be minimized with signage and enforcement of proper personal protective equipment worn by contractors and inspectors. This may include signage, cones, and flagging to reduce any hazards during construction. The new driveway to be constructed at the well site is designed according to state and county standards.

**XVII-d) Result in inadequate emergency access?**

**d) Less Than Significant Impact.** All potential disturbances to roadways during construction will be temporary and repaired. Road closures and detours will affect a small portion of Jacobs Drive. Partial access will occur during the construction phase of the Project. There will be alternate routes available for emergency vehicles. The operational phase of the Project will have better emergency access during inclement weather due to the driveway and aggregate base to be installed. Access to the basin will not change from the current configuration. Therefore, overall potential Project-related impacts to emergency access on local roadways would be considered less than significant.

## 3.18 Tribal Cultural Resources

**Table 3-26. Tribal Cultural Resources Impacts**

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

### 3.18.1 Environmental Setting

#### 3.18.1.1 Regional Setting

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra Nevada mountains.

Although population estimates vary and population size was greatly affected by the introduction of Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokut descendants continue to live in Fresno County, either on tribal reservations, or in local towns and communities.

Prior to the appearance of agriculture, starting in the nineteenth century, this location would have been prairie grasslands, grading into riparian environments and marshlands further south toward the north bank of Tulare Lake<sup>39</sup>. The study area and immediate surroundings have been urbanized and/or farmed and grazed for many years and no native vegetation is present. Perennial bunchgrasses such as purple needlegrass and nodding needlegrass most likely would have been the dominant plant cover in the study area prior to cultivation. Currently, the study area consists of commercial and residential properties surrounded by vineyards.

<sup>39</sup> Preston, Willliam L., 1981, Vanishing Landscapes: Land and Life in the Tulare Lake Basin. Berkeley, University of California Press.

### 3.18.1.2 Methodology

On May 21, 2019, a project notification letter with an invitation to consult on the Project was sent by certified mail to the one tribe on the State Water Board's Assembly Bill (AB) 52 list for Tulare County: the Santa Rosa Rancheria Tachi Yokut Tribe. Delivery receipt indicated the letter was received May 24, 2019. The Tribe did not request consultation.

Other efforts to identify tribal cultural resources are reported in the cultural resources study prepared for the Project by Culturescape. The study reports the sacred lands file search from the NAHC returned negative results and tribal outreach letters to the Santa Rosa Rancheria Tachi Yokuts and two other Yokuts Tribes were sent. None of the tribes identified tribal cultural resources in the Project Area.

### 3.18.1.3 Local

**Traver Community Plan<sup>40</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no goals or policies that pertain to Tribal Cultural Resources that Traver has adopted.:

**Tulare County General Plan<sup>41</sup>:** The Tulare County General Plan sets forth the following goals and policies pertaining to utilities and service systems that have potential relevance to Tribal Cultural Resources:

- ERM-6.8 *The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.*
- ERM-6.10 *The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.*

## 3.18.2 Impact Assessment

**XVIII-a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

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

*XVIII-a-ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**a) No Impact** No listed sites were identified in the Project area. Therefore, there will be no impact to listed tribal cultural resources. Tribal cultural resources were not identified in the Project area through either the cultural resources study, or the AB 52 notification process.

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<sup>40</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>41</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 8, 2019

## 3.19 Utilities and Service Systems

**Table 3-27. Utilities and Service Systems Impacts**

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

### 3.19.1 Environmental Setting

#### 3.19.1.1 Water Supply

The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin. Declines in groundwater basin storage and groundwater overdraft are recurring problems in the Central Valley. Measures for ensuring the continued availability of groundwater for municipal needs have been identified and planned in several areas of the county. The measures include groundwater conservation and recharge, and supplementing or replacing groundwater sources for irrigation with surface water.

#### 3.19.1.2 Wastewater Collection and Treatment

No wastewater will be generated during Project construction or operation.

#### 3.19.1.3 Landfills

The community of Traver is served by the Visalia Landfill which is located approximately 11 miles southeast of the Project site.

### 3.19.1.4 Local

**Traver Community Plan<sup>42</sup>:** The Tulare County General Plan sets forth goals and policies that the Traver has adopted because they are applicable to the Traver Community Plan. There are no utility and service system goals or policies that Traver has adopted:

**Tulare County General Plan<sup>43</sup>:** The Tulare County General Plan sets forth the following goals and policies pertaining to utilities and service systems:

- *PFS-2.5 Where connection to a community water system is not feasible per PFS-2.4: Water Connections, service by individual wells or new community systems may be allowed if the water source meets standards for quality and quantity.*
- *WR-1.2 The County shall support the collection of monitoring data for facilities or uses that are potential sources of groundwater pollution as part of project approvals, including residential and industrial development.*
- *WR-1.11 The County shall consult with water agencies within those areas of the County where groundwater extraction exceeds groundwater recharge, with the goal of reducing and ultimately reversing groundwater overdraft conditions in the County.*
- *WR-2.6 The County shall encourage and support the identification of degraded surface water and groundwater resources and promote restoration where appropriate.*

### 3.19.2 Impact Assessment

#### **XIX-a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electrical power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**a) Less than Significant with Mitigation Incorporated** The proposed Project would not exceed wastewater treatment requirements or require new wastewater treatment facilities. The Project does entail the expansion of existing water and electrical facilities in that the project will install well treatment infrastructure as part of the existing Del Oro Traver District water system. The Project will also expand an existing County stormwater drainage basin the impacts and mitigations of such components are analyzed in the rest of the document. Such impacts are less than significant with mitigation measures BIO-1a through BIO-c.

#### **XIX -b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

**b) No Impact.** The project is construction and operation of a treatment system of an existing water well which currently supplies the community of Traver. Currently this well has high levels of TCP and the project will bring the drinking water source into compliance. The project itself, will not create a need for water, besides the need to backwash the system. However, this water will be discharged to the storm basin where it may eventually recharge the aquifer. All other water used in the process will be produced to serve the community of Traver. The project will not increase the amount of water being produced or served to the community across the 3 wells of the system. It will improve the quality, versatility, and reliability of the system. As a result, there will be no impact.

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<sup>42</sup> Traver Community Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/130Part%20III%20Community%20Plans%202%20of%207/009Traver/GPA%2014-003%20TRAVER%20COMMUNITY%20PLAN-ADOPTED.pdf> Accessed March 6, 2019.

<sup>43</sup> Tulare County General Plan.

<http://generalplan.co.tulare.ca.us/documents/GP/001Adopted%20Tulare%20County%20General%20Plan%20Materials/000General%20Plan%202030%20Part%20I%20and%20Part%20II/GENERAL%20PLAN%202012.pdf> Accessed March 8, 2019



**XIX -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?**

**c) No Impact.** The proposed Project will not create a wastewater demand on any wastewater treatment provider, nor will it require any wastewater treatment facilities at the Project site, so there will be no need for any sort of capacity determination by a wastewater treatment provider. There would be no impact.

**XIX -d) Would the project 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?**

**d) Less Than Significant Impact.** There will be no solid waste associated with the operational phase of the Project. Any waste associated with construction would be minimal and ideally recycled. Therefore, impacts would be less than significant.

**XIX -e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

**e) No Impact.** The Project involves the construction of a new water treatment system. The operation of the Project will not produce any solid waste. The construction of the Project would generate a minimal amount of solid waste, most of which would be recycled. On January 24, 2006 The Tulare County Board of Supervisors adopted the Construction and Demolition Ordinance establishing regulations for the recycling and diversion of construction and demolition debris within the unincorporated areas of the county. The ordinance became effective March 1, 2006. Prior to any issuance of a permit, every applicant for a building permit involving any covered Project shall submit a properly completed construction and debris recycle and reuse final plan to the Tulare County Resources Management Agency's Permit Center. A construction and debris recycling and reuse final compliance report will also be required 30 days after project completion. The Project would comply with federal, State, and local regulations regarding solid waste. There would be no impact.

## 3.20 Wildfire

**Table 3-28. Wildfire Impacts**

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

### 3.20.1 Environmental Setting

The Project is located in the census-designated place of Traver, in Tulare County. The Project site is in a flat urbanized area of the Central San Joaquin Valley. Construction will be taking place within the existing well site, road rights-of-way, and existing county basin. The Project is not considered to be population growth inducing.

### 3.20.2 Impact Assessment

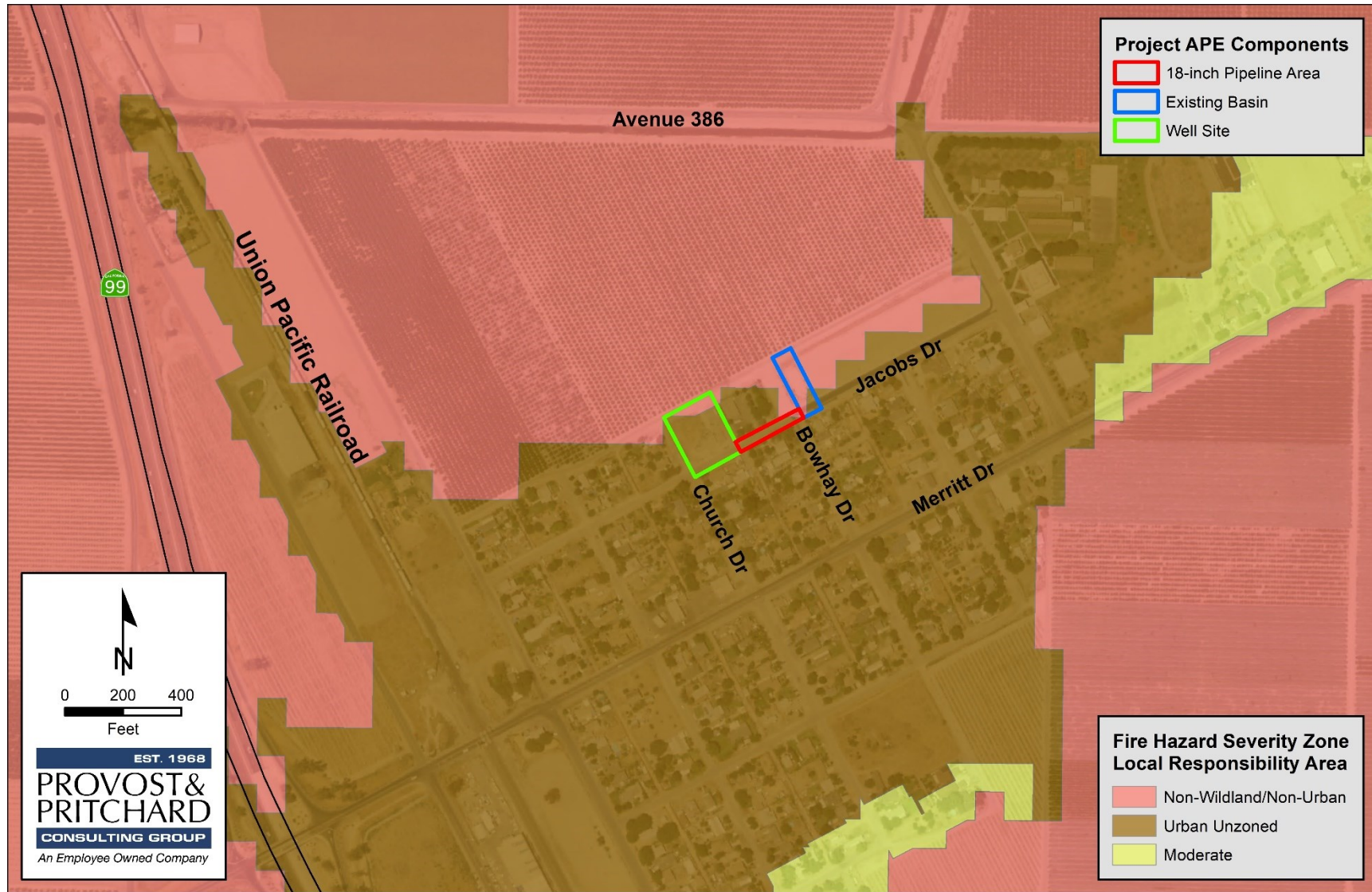
**XX-a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?**

**XX-b) Would the project, due to slope, prevailing winds, or other factors exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from wildfire or the uncontrolled spread of wildfire?**

**XX-c) Would the project 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?**

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

**a-d) No Impact.** The Project is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. (See **Figure 3-5**) The nearest State Responsibility Area (SRA) is 13.85 miles to the northeast of the Project site. Additionally, the site is approximately 28 miles from the nearest Very High classification of Fire Hazard Severity Zone (FHSZ). Therefore, further analysis of the Projects potential impacts to wildfire are not warranted. There would be no impacts.



6/13/2019 : G:\Del Oro Traver District-2704\270418001-TCP Design Services\GIS\Map\FireSev.mxd

Figure 3-5. Fire Hazard Severity Zone Map

## 3.21 CEQA Mandatory Findings of Significance

Table 3-29. Mandatory Findings of Significance Impacts

Mandatory Findings of Significance				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### 3.21.1 Impact Assessment

**XXI-a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**a) Less Than Significant Impact with Mitigation Incorporated.** The analysis conducted in this Initial Study/Mitigated Negative Declaration results in a determination that the Project, with incorporation of mitigation measures, will have a less than significant effect on the environment. The potential for impacts to biological resources and cultural resources from the implementation of the proposed Project will be less than significant with the incorporation of the mitigation measures discussed in **Chapter 3 Impact Analysis**. Accordingly, the proposed Project will involve no potential for significant impacts through: the degradation of the quality of the environment, the reduction in the habitat or population of fish or wildlife, including endangered plants or animals, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of a major period of California history or prehistory.



**XXI -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)?**

**b) Less Than Significant Impact.** CEQA Guidelines Section 15064(i) States that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. The proposed Project would include the construction of a water treatment system consisting of a 12-foot granular active carbon (GAC) vessels, a large supply tank for backwash water, chlorination building, and a generator for emergency power. Also included will be an 18-inch diameter pipeline that will connect to the existing well to the County basin east of the well site. The Project is intended to correct water quality issues experienced by the community of Traver. Trenching will take place in County right-of-way and then will be reconstructed per County road standards. There are no other known projects occurring in the Community of Traver and no future projects in the neighborhood. The water treatment of an existing well in the disadvantaged rural community combined with past, present, and future projects will not contribute to significant cumulative effects to Air Quality, Green House Gas, Noise or Traffic. Implementation of the water treatment Project would not result in significant cumulative impacts and all potential impacts would be reduced to less than significant through the implementation of mitigation measures, regulatory requirements, and standard best management practices.

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

**c) Less than Significant Impact.** The proposed Project would include the construction of a water treatment system, the trenching of an 18-inch diameter pipeline, and the deepening of an existing County basin within normal business operation (7 a.m. to 7 p.m.) according to the County of Tulare’s noise requirements. The proposed Project in and of itself would not create a significant hazard to the public or the environment. On the contrary, implementation of the Project would correct water quality issues experienced by the community of Traver. Construction-related air quality/dust exposure impacts could occur temporarily as a result of project construction. Dust suppression measures during excavation, grading, and site preparation activities will be implemented consistent with SJVAPCD Regulation VIII – Fugitive Dust Prohibitions to limit air quality/dust exposure impacts. Implementation of basic regulatory requirements identified in this IS/MND would ensure that impacts are less than significant. Therefore, the proposed Project would not have any direct or indirect adverse impacts on humans. This impact would be less than significant. References



## Chapter 4 References

### List of Sources, Agencies and Persons Consulted:

AB-52 Native Americans: California Environmental Quality Act

[http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201320140AB52](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140AB52)

California Department of Resources Recycling and Recovery (CalRecycle) website:

<http://www.calrecycle.ca.gov/>

California Department of Toxic Substances Control website:

<http://www.envirostor.dtsc.ca.gov/public/>

California Department of Conservation's Farmland Mapping and Monitoring Program

<https://maps.conservation.ca.gov/>

California Department of Fish and Wildlife: <https://www.wildlife.ca.gov/Data/CNDDDB>

California Emissions Estimator Model (CalEEMod), version 2013.2.2

California State Water Resources Control Board website: <http://geotracker.waterboards.ca.gov/> and

[http://www.swrcb.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml)

Federal Emergency Management Agency (FEMA), Flood Map Service Center website:

<http://msc.fema.gov/portal>

Google Earth: <https://www.google.com/earth/>

Native American Heritage Commission <http://nahc.ca.gov/>

San Joaquin Valley Air Pollution Control District

<http://www.valleyair.org/aqinfo/attainment.htm>

State Water Resources Control Board, GeoTracker <http://geotracker.waterboards.ca.gov/>

U.S. Fish & Wildlife Service National Wetlands Inventor: <https://www.fws.gov/wetlands/>

## Chapter 5 List of Preparers

**The following firms, individuals, and agency staff contributed to the preparation of this document:**

Provost & Pritchard Consulting Group:  
Briza Sholars – Project Manager/Senior Planner/QAQC  
T Jeffcoach, Engineer  
Mallory Serrao – GIS  
Brooke Fletcher – Biologist  
Jackie Lancaster – Administrative Support

# Appendix A

## **Air Quality and Greenhouse Gas Emissions Evaluation Report**

Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

## Del Oro Water Company- Traver Well No. 3

### Tulare County, Annual

## 1.0 Project Characteristics

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### 1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	1.50		1.50	0.00	0

### 1.2 Other Project Characteristics

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	51
<b>Climate Zone</b>	3			<b>Operational Year</b>	2020
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

Project Characteristics -

Land Use -

Construction Phase - Updated phase lengths based on project description.

Grading - Updated area based on project description.

Demolition -

Trips and VMT - Estimated 100 CY of exported dirt. Average dump truck capacity 10-14 CY.

Stationary Sources - Emergency Generators and Fire Pumps -

Construction Off-road Equipment Mitigation -

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	200.00	80.00
tblConstructionPhase	NumDays	20.00	17.00
tblConstructionPhase	NumDays	4.00	25.00
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	2.00	15.00
tblConstructionPhase	PhaseEndDate	9/8/2020	5/22/2020
tblConstructionPhase	PhaseEndDate	8/11/2020	4/10/2020
tblConstructionPhase	PhaseEndDate	10/28/2019	10/23/2019
tblConstructionPhase	PhaseEndDate	11/5/2019	12/20/2019
tblConstructionPhase	PhaseEndDate	8/25/2020	5/1/2020
tblConstructionPhase	PhaseEndDate	10/30/2019	11/13/2019
tblConstructionPhase	PhaseStartDate	8/26/2020	5/4/2020
tblConstructionPhase	PhaseStartDate	11/6/2019	12/23/2019
tblConstructionPhase	PhaseStartDate	10/31/2019	11/18/2019
tblConstructionPhase	PhaseStartDate	8/12/2020	4/13/2020
tblConstructionPhase	PhaseStartDate	10/29/2019	10/24/2019
tblGrading	AcresOfGrading	9.38	1.50
tblGrading	AcresOfGrading	7.50	1.50
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	335.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	100.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00

## 2.0 Emissions Summary

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0595	0.5977	0.3257	6.1000e-004	0.1001	0.0300	0.1300	0.0536	0.0279	0.0815	0.0000	54.3397	54.3397	0.0146	0.0000	54.7055
2020	0.0847	0.6161	0.5648	9.4000e-004	7.8000e-004	0.0334	0.0342	2.1000e-004	0.0322	0.0324	0.0000	77.6693	77.6693	0.0153	0.0000	78.0510
Maximum	0.0847	0.6161	0.5648	9.4000e-004	0.1001	0.0334	0.1300	0.0536	0.0322	0.0815	0.0000	77.6693	77.6693	0.0153	0.0000	78.0510

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0595	0.5977	0.3257	6.1000e-004	0.0463	0.0300	0.0762	0.0244	0.0279	0.0523	0.0000	54.3397	54.3397	0.0146	0.0000	54.7054
2020	0.0847	0.6161	0.5648	9.4000e-004	7.8000e-004	0.0334	0.0342	2.1000e-004	0.0322	0.0324	0.0000	77.6692	77.6692	0.0153	0.0000	78.0509
Maximum	0.0847	0.6161	0.5648	9.4000e-004	0.0463	0.0334	0.0762	0.0244	0.0322	0.0523	0.0000	77.6692	77.6692	0.0153	0.0000	78.0509

	ROG	NOx	CO	SO2	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	53.35	0.00	32.76	54.18	0.00	25.60	0.00	0.00	0.00	0.00	0.00	0.00



## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	10-1-2019	12-31-2019	0.6324	0.6324
2	1-1-2020	3-31-2020	0.5466	0.5466
3	4-1-2020	6-30-2020	0.1387	0.1387
		Highest	0.6324	0.6324

## 2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0275</b>	<b>0.0768</b>	<b>0.0701</b>	<b>1.3000e-004</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>	<b>0.0000</b>	<b>12.7567</b>	<b>12.7567</b>	<b>1.7900e-003</b>	<b>0.0000</b>	<b>12.8015</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-005	3.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0275</b>	<b>0.0768</b>	<b>0.0701</b>	<b>1.3000e-004</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>	<b>0.0000</b>	<b>12.7567</b>	<b>12.7567</b>	<b>1.7900e-003</b>	<b>0.0000</b>	<b>12.8015</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**

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/1/2019	10/23/2019	5	17	
2	Site Preparation	Site Preparation	10/24/2019	11/13/2019	5	15	
3	Grading	Grading	11/18/2019	12/20/2019	5	25	
4	Building Construction	Building Construction	12/23/2019	4/10/2020	5	80	
5	Paving	Paving	4/13/2020	5/1/2020	5	15	
6	Architectural Coating	Architectural Coating	5/4/2020	5/22/2020	5	15	

**Acres of Grading (Site Preparation Phase): 1.5**

**Acres of Grading (Grading Phase): 1.5**

**Acres of Paving: 1.5**

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

**OffRoad Equipment**

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	2.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	8.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.5000e-004	0.0000	2.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.1927	0.1266	2.0000e-004		0.0109	0.0109		0.0102	0.0102	0.0000	18.2037	18.2037	4.6400e-003	0.0000	18.3196
<b>Total</b>	<b>0.0195</b>	<b>0.1927</b>	<b>0.1266</b>	<b>2.0000e-004</b>	<b>2.5000e-004</b>	<b>0.0109</b>	<b>0.0112</b>	<b>4.0000e-005</b>	<b>0.0102</b>	<b>0.0103</b>	<b>0.0000</b>	<b>18.2037</b>	<b>18.2037</b>	<b>4.6400e-003</b>	<b>0.0000</b>	<b>18.3196</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.2 Demolition - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.0000e-004	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0768	0.0768	0.0000	0.0000	0.0768
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.0000e-004	4.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7802	0.7802	3.0000e-005	0.0000	0.7809
<b>Total</b>	<b>5.9000e-004</b>	<b>7.0000e-004</b>	<b>4.0800e-003</b>	<b>1.0000e-005</b>	<b>9.0000e-004</b>	<b>1.0000e-005</b>	<b>9.1000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.8569</b>	<b>0.8569</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8577</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.1927	0.1266	2.0000e-004		0.0109	0.0109		0.0102	0.0102	0.0000	18.2037	18.2037	4.6400e-003	0.0000	18.3195
<b>Total</b>	<b>0.0195</b>	<b>0.1927</b>	<b>0.1266</b>	<b>2.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0109</b>	<b>0.0110</b>	<b>2.0000e-005</b>	<b>0.0102</b>	<b>0.0102</b>	<b>0.0000</b>	<b>18.2037</b>	<b>18.2037</b>	<b>4.6400e-003</b>	<b>0.0000</b>	<b>18.3195</b>



## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.2 Demolition - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.0000e-004	5.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0768	0.0768	0.0000	0.0000	0.0768
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	4.0000e-004	4.0300e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.3000e-004	1.0000e-005	2.4000e-004	0.0000	0.7802	0.7802	3.0000e-005	0.0000	0.7809
<b>Total</b>	<b>5.9000e-004</b>	<b>7.0000e-004</b>	<b>4.0800e-003</b>	<b>1.0000e-005</b>	<b>9.0000e-004</b>	<b>1.0000e-005</b>	<b>9.1000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>0.8569</b>	<b>0.8569</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>0.8577</b>

**3.3 Site Preparation - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0403	0.0000	0.0403	0.0218	0.0000	0.0218	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1461	0.0592	1.3000e-004		6.6200e-003	6.6200e-003		6.0900e-003	6.0900e-003	0.0000	11.6001	11.6001	3.6700e-003	0.0000	11.6918
<b>Total</b>	<b>0.0128</b>	<b>0.1461</b>	<b>0.0592</b>	<b>1.3000e-004</b>	<b>0.0403</b>	<b>6.6200e-003</b>	<b>0.0469</b>	<b>0.0218</b>	<b>6.0900e-003</b>	<b>0.0279</b>	<b>0.0000</b>	<b>11.6001</b>	<b>11.6001</b>	<b>3.6700e-003</b>	<b>0.0000</b>	<b>11.6918</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4236	0.4236	2.0000e-005	0.0000	0.4240
<b>Total</b>	<b>3.1000e-004</b>	<b>2.2000e-004</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4236</b>	<b>0.4236</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.4240</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0181	0.0000	0.0181	9.8100e-003	0.0000	9.8100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1461	0.0592	1.3000e-004		6.6200e-003	6.6200e-003		6.0900e-003	6.0900e-003	0.0000	11.6001	11.6001	3.6700e-003	0.0000	11.6918
<b>Total</b>	<b>0.0128</b>	<b>0.1461</b>	<b>0.0592</b>	<b>1.3000e-004</b>	<b>0.0181</b>	<b>6.6200e-003</b>	<b>0.0248</b>	<b>9.8100e-003</b>	<b>6.0900e-003</b>	<b>0.0159</b>	<b>0.0000</b>	<b>11.6001</b>	<b>11.6001</b>	<b>3.6700e-003</b>	<b>0.0000</b>	<b>11.6918</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1900e-003	0.0000	4.8000e-004	0.0000	4.8000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4236	0.4236	2.0000e-005	0.0000	0.4240
<b>Total</b>	<b>3.1000e-004</b>	<b>2.2000e-004</b>	<b>2.1900e-003</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>0.0000</b>	<b>4.8000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4236</b>	<b>0.4236</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.4240</b>

**3.4 Grading - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0573	0.0000	0.0573	0.0311	0.0000	0.0311	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0178	0.2005	0.0826	1.8000e-004		9.2100e-003	9.2100e-003		8.4700e-003	8.4700e-003	0.0000	15.8348	15.8348	5.0100e-003	0.0000	15.9601
<b>Total</b>	<b>0.0178</b>	<b>0.2005</b>	<b>0.0826</b>	<b>1.8000e-004</b>	<b>0.0573</b>	<b>9.2100e-003</b>	<b>0.0665</b>	<b>0.0311</b>	<b>8.4700e-003</b>	<b>0.0396</b>	<b>0.0000</b>	<b>15.8348</b>	<b>15.8348</b>	<b>5.0100e-003</b>	<b>0.0000</b>	<b>15.9601</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.4 Grading - 2019****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2000e-003	2.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3071	0.3071	1.0000e-005	0.0000	0.3074
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.6000e-004	3.6500e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7060	0.7060	3.0000e-005	0.0000	0.7067
<b>Total</b>	<b>5.6000e-004</b>	<b>1.5600e-003</b>	<b>3.8500e-003</b>	<b>1.0000e-005</b>	<b>8.7000e-004</b>	<b>1.0000e-005</b>	<b>8.7000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>1.0131</b>	<b>1.0131</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.0140</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0258	0.0000	0.0258	0.0140	0.0000	0.0140	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0178	0.2005	0.0826	1.8000e-004		9.2100e-003	9.2100e-003		8.4700e-003	8.4700e-003	0.0000	15.8348	15.8348	5.0100e-003	0.0000	15.9600
<b>Total</b>	<b>0.0178</b>	<b>0.2005</b>	<b>0.0826</b>	<b>1.8000e-004</b>	<b>0.0258</b>	<b>9.2100e-003</b>	<b>0.0350</b>	<b>0.0140</b>	<b>8.4700e-003</b>	<b>0.0225</b>	<b>0.0000</b>	<b>15.8348</b>	<b>15.8348</b>	<b>5.0100e-003</b>	<b>0.0000</b>	<b>15.9600</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.4 Grading - 2019****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.2000e-003	2.0000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3071	0.3071	1.0000e-005	0.0000	0.3074
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.6000e-004	3.6500e-003	1.0000e-005	8.0000e-004	1.0000e-005	8.0000e-004	2.1000e-004	1.0000e-005	2.2000e-004	0.0000	0.7060	0.7060	3.0000e-005	0.0000	0.7067
<b>Total</b>	<b>5.6000e-004</b>	<b>1.5600e-003</b>	<b>3.8500e-003</b>	<b>1.0000e-005</b>	<b>8.7000e-004</b>	<b>1.0000e-005</b>	<b>8.7000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.4000e-004</b>	<b>0.0000</b>	<b>1.0131</b>	<b>1.0131</b>	<b>4.0000e-005</b>	<b>0.0000</b>	<b>1.0140</b>

**3.5 Building Construction - 2019****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9500e-003	0.0559	0.0472	8.0000e-005		3.2100e-003	3.2100e-003		3.1000e-003	3.1000e-003	0.0000	6.4075	6.4075	1.2300e-003	0.0000	6.4383
<b>Total</b>	<b>7.9500e-003</b>	<b>0.0559</b>	<b>0.0472</b>	<b>8.0000e-005</b>		<b>3.2100e-003</b>	<b>3.2100e-003</b>		<b>3.1000e-003</b>	<b>3.1000e-003</b>	<b>0.0000</b>	<b>6.4075</b>	<b>6.4075</b>	<b>1.2300e-003</b>	<b>0.0000</b>	<b>6.4383</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

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

**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	7.9500e-003	0.0559	0.0472	8.0000e-005		3.2100e-003	3.2100e-003		3.1000e-003	3.1000e-003	0.0000	6.4075	6.4075	1.2300e-003	0.0000	6.4383
<b>Total</b>	<b>7.9500e-003</b>	<b>0.0559</b>	<b>0.0472</b>	<b>8.0000e-005</b>		<b>3.2100e-003</b>	<b>3.2100e-003</b>		<b>3.1000e-003</b>	<b>3.1000e-003</b>	<b>0.0000</b>	<b>6.4075</b>	<b>6.4075</b>	<b>1.2300e-003</b>	<b>0.0000</b>	<b>6.4383</b>



## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

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

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0741	0.5398	0.4814	8.0000e-004		0.0291	0.0291		0.0281	0.0281	0.0000	66.2629	66.2629	0.0123	0.0000	66.5704
<b>Total</b>	<b>0.0741</b>	<b>0.5398</b>	<b>0.4814</b>	<b>8.0000e-004</b>		<b>0.0291</b>	<b>0.0291</b>		<b>0.0281</b>	<b>0.0281</b>	<b>0.0000</b>	<b>66.2629</b>	<b>66.2629</b>	<b>0.0123</b>	<b>0.0000</b>	<b>66.5704</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

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

**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	0.0741	0.5398	0.4814	8.0000e-004		0.0291	0.0291		0.0281	0.0281	0.0000	66.2628	66.2628	0.0123	0.0000	66.5703
<b>Total</b>	<b>0.0741</b>	<b>0.5398</b>	<b>0.4814</b>	<b>8.0000e-004</b>		<b>0.0291</b>	<b>0.0291</b>		<b>0.0281</b>	<b>0.0281</b>	<b>0.0000</b>	<b>66.2628</b>	<b>66.2628</b>	<b>0.0123</b>	<b>0.0000</b>	<b>66.5703</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

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

**3.6 Paving - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3000e-003	0.0634	0.0666	1.0000e-004		3.5200e-003	3.5200e-003		3.2500e-003	3.2500e-003	0.0000	8.8243	8.8243	2.8000e-003	0.0000	8.8942
Paving	1.9700e-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>8.2700e-003</b>	<b>0.0634</b>	<b>0.0666</b>	<b>1.0000e-004</b>		<b>3.5200e-003</b>	<b>3.5200e-003</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>	<b>0.0000</b>	<b>8.8243</b>	<b>8.8243</b>	<b>2.8000e-003</b>	<b>0.0000</b>	<b>8.8942</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.6 Paving - 2020****Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.1000e-004	3.1200e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.8000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6672	0.6672	2.0000e-005	0.0000	0.6677
<b>Total</b>	<b>4.6000e-004</b>	<b>3.1000e-004</b>	<b>3.1200e-003</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>2.1000e-004</b>	<b>1.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.6672</b>	<b>0.6672</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6677</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.3000e-003	0.0634	0.0666	1.0000e-004		3.5200e-003	3.5200e-003		3.2500e-003	3.2500e-003	0.0000	8.8243	8.8243	2.8000e-003	0.0000	8.8942
Paving	1.9700e-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>8.2700e-003</b>	<b>0.0634</b>	<b>0.0666</b>	<b>1.0000e-004</b>		<b>3.5200e-003</b>	<b>3.5200e-003</b>		<b>3.2500e-003</b>	<b>3.2500e-003</b>	<b>0.0000</b>	<b>8.8243</b>	<b>8.8243</b>	<b>2.8000e-003</b>	<b>0.0000</b>	<b>8.8942</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.6 Paving - 2020****Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.1000e-004	3.1200e-003	1.0000e-005	7.8000e-004	1.0000e-005	7.8000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6672	0.6672	2.0000e-005	0.0000	0.6677
<b>Total</b>	<b>4.6000e-004</b>	<b>3.1000e-004</b>	<b>3.1200e-003</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>2.1000e-004</b>	<b>1.0000e-005</b>	<b>2.1000e-004</b>	<b>0.0000</b>	<b>0.6672</b>	<b>0.6672</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.6677</b>

**3.7 Architectural Coating - 2020****Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0126	0.0137	2.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	1.9149	1.9149	1.5000e-004	0.0000	1.9187
<b>Total</b>	<b>1.8200e-003</b>	<b>0.0126</b>	<b>0.0137</b>	<b>2.0000e-005</b>		<b>8.3000e-004</b>	<b>8.3000e-004</b>		<b>8.3000e-004</b>	<b>8.3000e-004</b>	<b>0.0000</b>	<b>1.9149</b>	<b>1.9149</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.9187</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.7 Architectural Coating - 2020****Unmitigated Construction Off-Site**

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

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0126	0.0137	2.0000e-005		8.3000e-004	8.3000e-004		8.3000e-004	8.3000e-004	0.0000	1.9149	1.9149	1.5000e-004	0.0000	1.9186
<b>Total</b>	<b>1.8200e-003</b>	<b>0.0126</b>	<b>0.0137</b>	<b>2.0000e-005</b>		<b>8.3000e-004</b>	<b>8.3000e-004</b>		<b>8.3000e-004</b>	<b>8.3000e-004</b>	<b>0.0000</b>	<b>1.9149</b>	<b>1.9149</b>	<b>1.5000e-004</b>	<b>0.0000</b>	<b>1.9186</b>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**3.7 Architectural Coating - 2020****Mitigated Construction Off-Site**

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

**4.0 Operational Detail - Mobile****4.1 Mitigation Measures Mobile****4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Total					

**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



## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

#### 4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.506900	0.034567	0.171206	0.149208	0.024362	0.005798	0.021031	0.077362	0.001819	0.001371	0.004402	0.001155	0.000818

## 5.0 Energy Detail

Historical Energy Use: N

## 5.1 Mitigation Measures Energy

[illegible]

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

## 5.2 Energy by Land Use - NaturalGas

### Unmitigated

[illegible]

**Mitigated**

[illegible]

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

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

**Mitigated**

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

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

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

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

## 6.2 Area by SubCategory

Unmitigated

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

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**6.2 Area by SubCategory****Mitigated**

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

**7.0 Water Detail**

---

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

---

**8.1 Mitigation Measures Waste**

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**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

**8.2 Waste by Land Use****Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	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>

## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**8.2 Waste by Land Use****Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**9.0 Operational Offroad**

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

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

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	100	335	0.73	Diesel

**Boilers**

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

**User Defined Equipment**

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



## Del Oro Water Company- Traver Well No. 3 - Tulare County, Annual

**10.1 Stationary Sources****Unmitigated/Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0275	0.0768	0.0701	1.3000e-004		4.0400e-003	4.0400e-003		4.0400e-003	4.0400e-003	0.0000	12.7567	12.7567	1.7900e-003	0.0000	12.8014
<b>Total</b>	<b>0.0275</b>	<b>0.0768</b>	<b>0.0701</b>	<b>1.3000e-004</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>		<b>4.0400e-003</b>	<b>4.0400e-003</b>	<b>0.0000</b>	<b>12.7567</b>	<b>12.7567</b>	<b>1.7900e-003</b>	<b>0.0000</b>	<b>12.8014</b>

**11.0 Vegetation**

# Appendix B

## Biological Evaluation Report

# Del Oro Water Company Traver Well No. 3

## Biological Evaluation



**Prepared by:**  
Brooke Fletcher, Wildlife Biologist



April 2019

# Table of Contents

1	Introduction.....	1-1
1.1	Project Description .....	1-1
1.2	Report Objectives.....	1-2
1.3	Study Methodology .....	1-3
2	Existing Conditions .....	2-1
2.1	Regional Setting .....	2-1
2.2	Project Site.....	2-1
2.3	Biological Communities.....	2-1
2.3.1	Ruderal.....	2-1
2.4	Soils.....	2-3
2.5	Natural Communities of Special Concern.....	2-3
2.6	Designated Critical Habitat.....	2-3
2.7	Wildlife Movement Corridors .....	2-3
2.8	Special Status Plants and Animals.....	2-4
3	Impacts and Mitigation .....	3-1
3.1	Significance Criteria.....	3-1
3.2	Relevant Goals, Policies, and Laws .....	3-2
3.2.1	Tulare County General Plan.....	3-2
3.2.2	Threatened and Endangered Species .....	3-3
3.2.3	Designated Critical Habitat .....	3-3
3.2.4	Migratory Birds.....	3-3
3.2.5	Birds of Prey .....	3-3
3.2.6	Nesting Birds .....	3-3
3.2.7	Wetlands and other “Jurisdictional Waters” .....	3-4
3.3	Potentially Significant Project-Related Impacts and Mitigation.....	3-5
3.3.1	Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds (Including Swainson’s Hawk) .....	3-5
3.4	Less Than Significant Project-Related Impacts .....	3-6
3.4.1	Project-Related Impacts to Special Status Plant Species .....	3-6
3.4.2	Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site .....	3-6
3.4.3	Project-Related Impacts to Wildlife Movement Corridors .....	3-7
3.4.4	Project-Related Impacts to Critical Habitat.....	3-7
3.4.5	Local Policies or Habitat Conservation Plans .....	3-7
4	References.....	4-1

## APPENDICES

Appendix A. Selected Photographs of the Project Site .....	A-1
Appendix B. CNDDDB Query Results .....	B-1
Appendix C. Soil Report.....	C-1

## LIST OF FIGURES

Figure 1. Regional Location Map .....	1-4
Figure 2. Topographic Quadrangle Map.....	1-5
Figure 3. Area of Potential Effect (APE) Map .....	1-6

## LIST OF TABLES

Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity .....	2-5
Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity .....	2-9

# 1 Introduction

The Del Oro Water Company - Traver District serves drinking water to approximately 500 people through 180 residential service connections. Del Oro Water Company proposes a water treatment system on Well No. 3 for the remediation of 1,2,3-Trichloropropane in order to provide safe drinking water for the unincorporated community of Traver in Tulare County. 1,2,3, TCP: 1,2,3-trichloropropane (TCP) is an exclusively man-made synthetic organic chemical and a carcinogen. TCP was used as a component in agricultural soil fumigants applied over large areas of the Central Valley, including Tulare County.

Implementation of this Project will include development of a water treatment system, associated infrastructure, and general site improvements, including paving, access drives, and a perimeter fence on a ruderal vacant parcel of land which currently houses Well No. 3 on the northwest corner of Jacobs Drive and Church Drive. In addition to the development of the aforementioned ruderal parcel, the Project proposes a pipeline within the right-of-way of Jacobs Drive and improvements of an existing stormwater drainage basin on an adjacent parcel. The site and the proposed Project are described in detail in the Project Description, **Section 1.1**, below.

The following technical report, prepared by Provost & Pritchard Consulting Group, in compliance with the California Environmental Quality Act (CEQA), includes a description of the biological resources present or with potential to occur within the Project site and surrounding areas and evaluates potential Project-related impacts to those resources.

## 1.1 Project Description

Del Oro Water Company proposes a water treatment system for Well No. 3 for the remediation of 1,2,3-Trichloropropane. This system will include one pair of 12-foot granular activated carbon (GAC) vessels, a large supply tank for backwash water, chlorination building, and a generator for emergency power.

GAC treatment at Well No. 3 will consist of two twelve-foot diameter vessels operated as a series-vessel pair. When pumping at 550 gpm the two vessels will provide an empty bed contact time of 19.4 minutes and a hydraulic loading rate of 4.9 gpm/ft<sup>2</sup>. Well 3 cannot produce a high enough flow rate to backwash the GAC vessels. In order to provide an adequate water supply for backwashing, a backwash supply storage tank and pump station will be required at the site. The waste backwash will be moved to a County stormwater basin at a nearby parcel. The treatment site will also include a chlorination system for disinfection of the treated water and a nitrate analyzer to detect potential nitrate sloughing.

Additionally, general site improvements including paved access driveway and perimeter fence around entire parcel are a part of the project. The treatment system/site will be connected to an existing County stormwater basin approximately 250 feet away. The proposed project is located on the north side of Jacobs Drive, east of Church Drive in Traver, CA. The APE is 1.53 acres which includes APN: 040-070-001 and 040-070-014.

Specific dimensions are listed below:

- GAC vessels (2 total): 12' diameter; 14'-10" tall; 34'x17'x2' concrete foundation
- Backwash supply tank: 22' diameter; 19' tall; 2'x3.5' ring wall footing
- Chlorination building: 8'x10' fenced enclosure; height ranging from 7' to 9.5' due to slanted roof; 8'-10"x10'-10" concrete foundation; 4' wide sidewalk in front with emergency eye wash shower, hose bibb, and hose rack
- Existing basin expansion—same footprint, about 1 foot deeper

- Piping:
  - 6" DIP – 175'
  - 10" DIP – 80'
  - 18" HDPE/RCP – 415'
- Backwash stand pipe: 4' ID
- Concrete truck pad: 15'x75'x6"
- Drive approach (AC): 905 sf
- Chain link fence: 420 LF; and 30' double access gate
- Generator pad: 10'x8'
- Site improvement area: 125'x90' = 11,250 sf
- Basin improvements area: 12'x60' = 7,200 sf
- Pipeline diameter is 18 inches, length is approximately 400 feet.  $400 \times 10 = 4,000$  sf

Construction of the Project is anticipated to be completed within eight months, which will include grading, site preparation, drilling and installation of a new well, construction of a hydropneumatic tank and associated infrastructure, connection to the existing distribution system, and development of a stormwater drainage basin. Construction will likely take place Fall of 2019 to Spring of 2020. Construction equipment will likely include an excavator, backhoe/loader, concrete truck, concrete pumper. Construction will require one super, one foreman, two operators, four laborers/carpenters/masons.

Generally, construction will occur between the hours of 7am and 5pm, Monday through Friday, excluding holidays. Post-construction activities will include system testing, commissioning, and site clean-up. Construction will require temporary staging and storage of materials and equipment. Staging areas will be located onsite.

Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products.

Operation and maintenance of Well No. 3 will continue to be performed by Del Oro Water Company, Traver's existing maintenance staff.

## 1.2 Report Objectives

Construction activities such as those proposed by Del Oro Water Company could potentially damage biological resources or modify habitats that are crucial for sensitive plant and wildlife species. In cases such as these, development may be regulated by state or federal agencies, subject to provisions of California Environmental Quality Act (CEQA), and/or addressed by local regulatory agencies.

This report addresses issues related to the following:

- 1) The presence of sensitive biological resources onsite, or with the potential to occur onsite.
- 2) The federal, state, and local regulations regarding these resources.
- 3) Mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies.

Therefore, the objectives of this report are:

- 1) Summarize all site-specific information related to existing biological resources.
- 2) Make reasonable inferences about the biological resources that could occur onsite based on habitat suitability and the proximity of the site to a species' known range.



- 3) Summarize all state and federal natural resource protection laws that may be relevant to the Project.
- 4) Identify and discuss Project impacts to biological resources likely to occur onsite within the context of CEQA or state or federal laws.
- 5) Identify and publish a set of avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

## 1.3 Study Methodology

A reconnaissance-level field survey of the Project site and surrounding area was conducted on March 20, 2019 by Provost & Pritchard. The survey consisted of walking through the Project area while identifying and noting land uses, biological habitats and communities, and plant and animal species encountered. Furthermore, the site and surrounding areas were assessed for suitable habitats of various wildlife species.

The biologist conducted an analysis of potential Project-related impacts to biological resources based on the resources known to exist or with potential to exist within the Project site and surrounding areas. Sources of information used in preparation of this analysis included: the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB); the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system; the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California; CalFlora's online database of California native plants; the Jepson Herbarium online database (Jepson eFlora); U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS); the NatureServe Explorer online database; the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database; the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHHR) database; the California Herps online database; and various manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

The field investigation did not include a wetland delineation or focused surveys for special status species. The field survey conducted included an appropriate level of detail to assess the significance of potential impacts to sensitive biological resources resulting from the Project. Furthermore, the field survey was sufficient to generally describe those features of the Project that could be subject to the jurisdiction of federal and/or State agencies, such as the U.S. Army Corps of Engineers (USACE), CDFW, Regional Water Quality Control Board (RWQCB) and State Water Resources Control Board (SWRCB) .

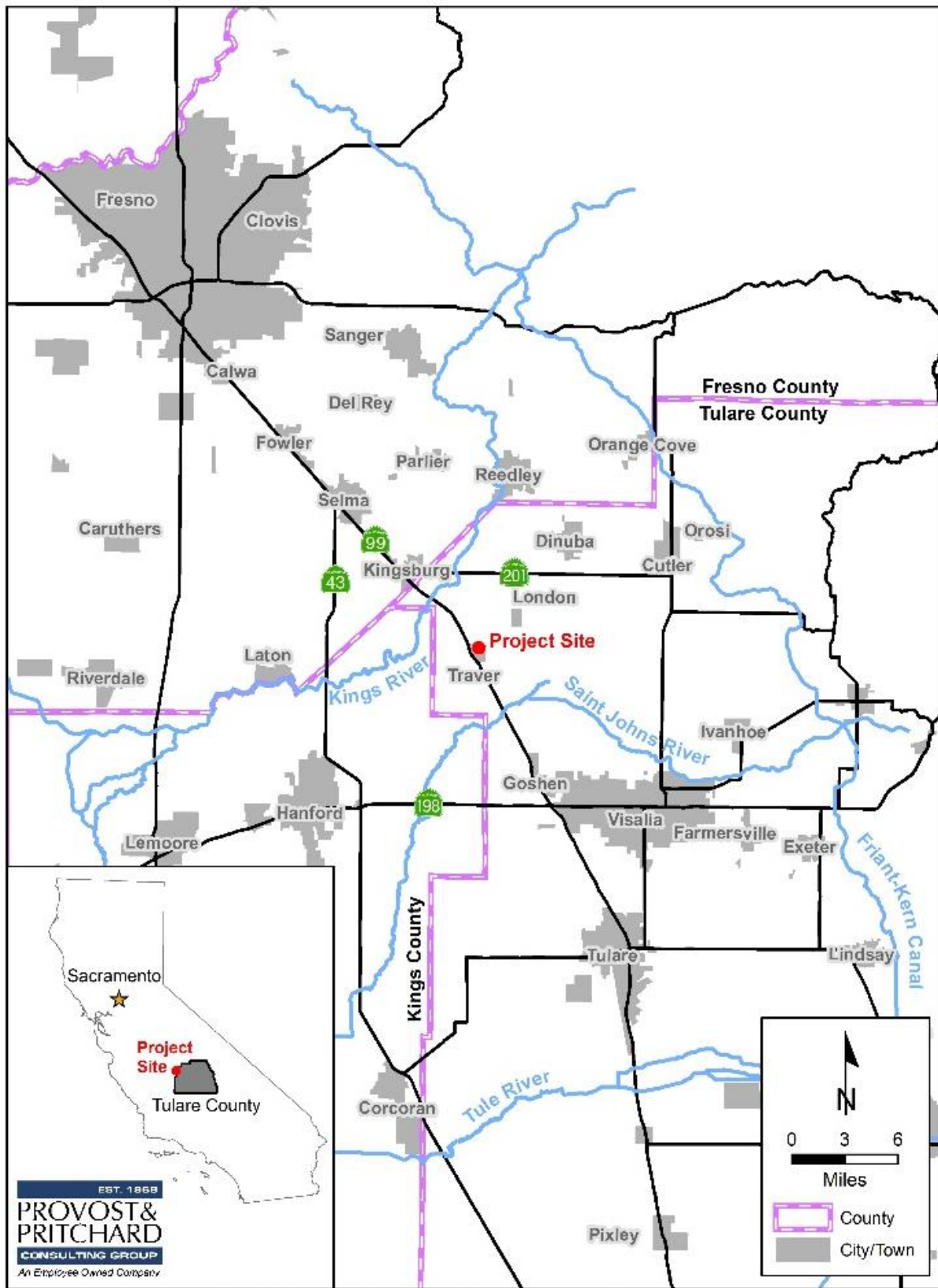


Figure 1. Regional Location Map

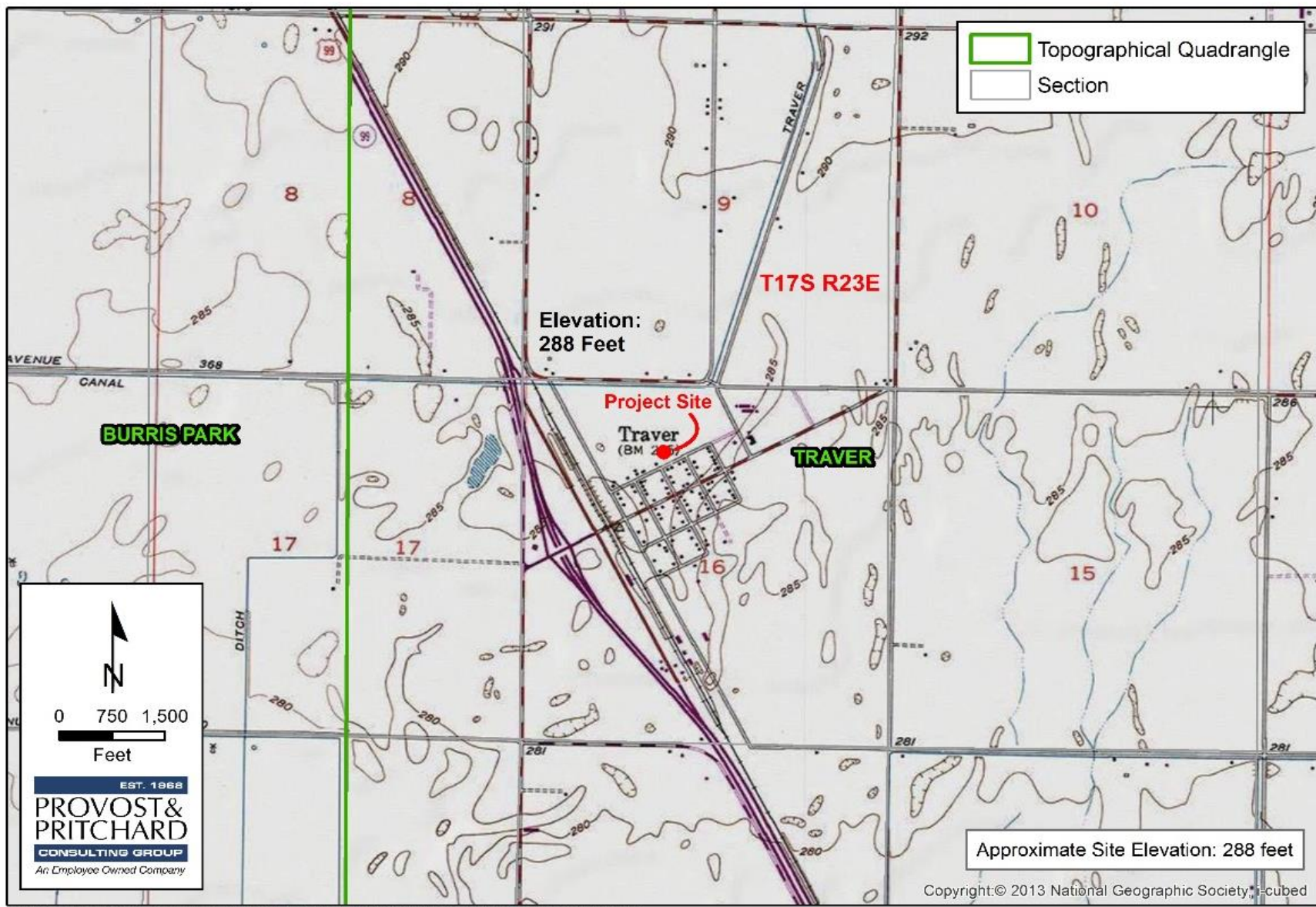
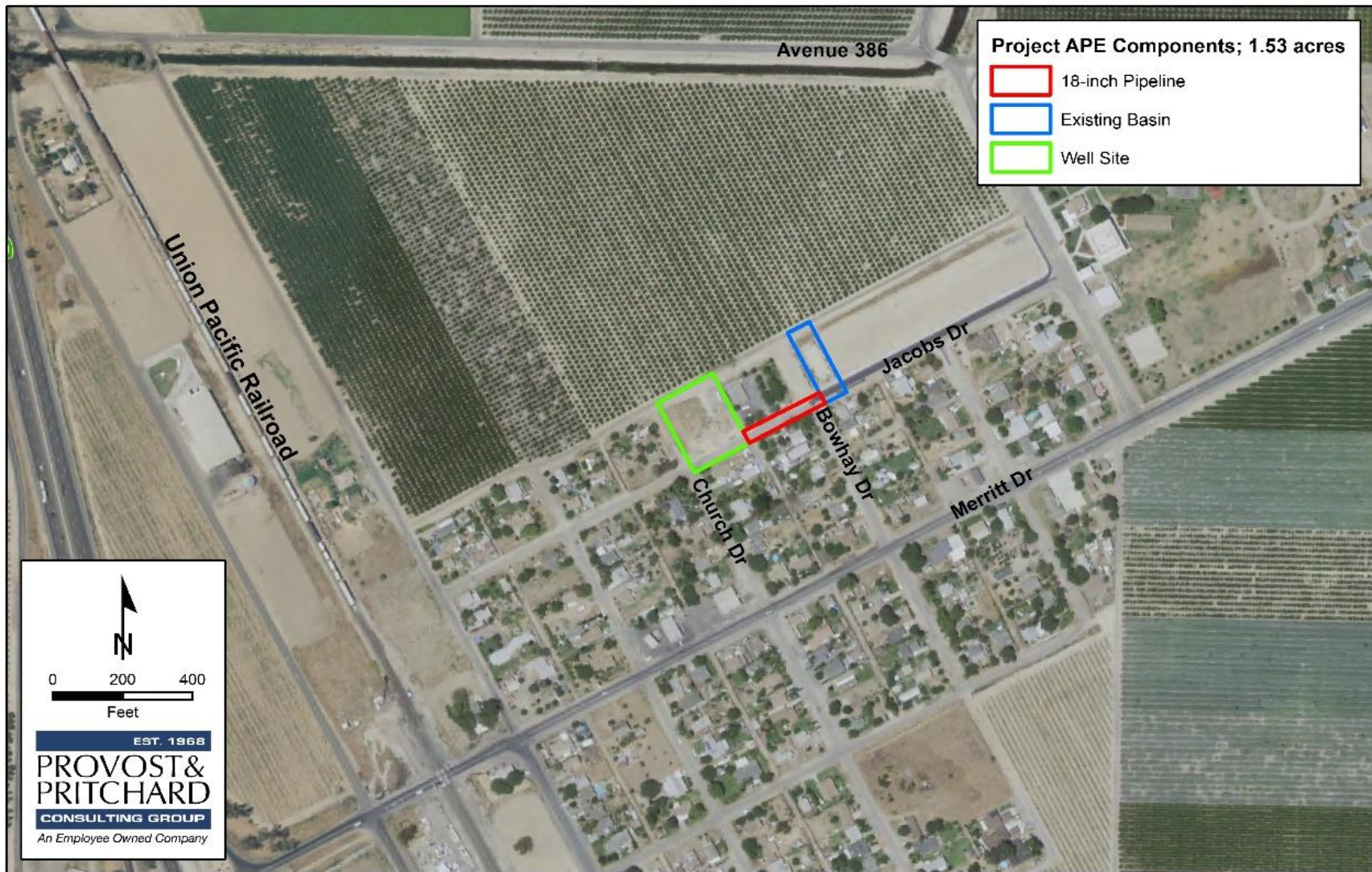


Figure 2. Topographic Quadrangle Map





3/8/2019 : G:\Del Oro Traver District-2704\270418001-TCP Design Services\GIS\Map\APE.mxd

Figure 3. Area of Potential Effect (APE) Map

# 2 Existing Conditions

## 2.1 Regional Setting

The Project site is located in Tulare County within the lower San Joaquin Valley, part of the Great Valley of California (See **Figure 1**). The Valley is bordered by the Sierra Nevada Mountain Ranges to the east, the Coast Ranges to the west, the Klamath Mountains and Cascade Range to the north, and the Transverse Ranges and Mojave Desert to the south.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm, dry summers are followed by cool, moist winters. Summer temperatures often reach above 90 degrees Fahrenheit, and the humidity is generally low. Winter temperatures are often below 60 degrees Fahrenheit during the day and rarely exceed 70 degrees. On average, the Central Valley receives approximately 12 inches of precipitation in the form of rainfall yearly, most of which occurs between October and March.

The Project is located within the Caesar Ditch-Cross Creek watershed; Hydrologic Unit Code (HUC): 180300071205 (EPA, 2019).

The Project lies entirely within the Kings Groundwater Subbasin of the San Joaquin Valley Groundwater Basin. (DWR, 2019). The Project lies approximately five miles south of the Kings River and five miles north of the lower reaches of the Kaweah River System. Historically, these water features were tributaries to the dry Tulare Lake endothermic basin, but now most of the water is diverted for irrigation of agricultural crops. There are several channelized irrigation canals, ditches, and catch basins associated with agricultural activities in the vicinity. Aquatic features in the vicinity include the onsite excavated stormwater drainage basin, which could be classified as excavated palustrine by definition, although it is not labeled on the National Wetlands Inventory (NWI) map. Furthermore, an irrigation canal which runs north of the deciduous orchard, approximately 0.13 miles north of the site. According to the National Wetlands Inventory (NWI) map, the irrigation canal is classified as riverine, although it is excavated and only runs seasonally, likely due to controlled flood releases or diversion activities related to agricultural irrigation.

The community of Traver is served by the the Del Oro Water Company District which provides drinking water to approximately 500 people through 180 residential service connections.

## 2.2 Project Site

## 2.3 Biological Communities

One biological community was identified within the Project area: ruderal. Surrounding land uses consist of irrigated deciduous orchard, and development in the form of a church, roads, and residential homes. Project areas are accessible by pre-compacted dirt roads to the north and paved roads to the south. The habitats of the Project area and surrounding lands are disturbed or frequently maintained and therefore of relatively low quality for most native wildlife species.

### 2.3.1 Ruderal

Ruderal habitats are characterized by a high level of human disturbance and absence of vegetation or dominated by non-native plant species. As illustrated on **Figure 3** and in the photographs of the site in **Appendix A**, the Project area consists of a ruderal vacant lot on the northeast corner of Jacobs Drive and Church Drive, a potential pipeline alignment that runs within the right-of-way of Jacobs Drive in front of a

church, and an existing stormwater drainage basin east of the church, on the northeast corner of Jacobs Drive and Bowhay Drive. There is an irrigated deciduous orchard to the north and all other sides are surrounded by residential development.

At the time of the field survey, the unpaved vacant lot near Jacobs Drive and Church Drive was nearly barren, and it appeared to have been graded, disced, compacted, or otherwise subject to years of ground-disturbance. Native vegetation was essentially absent with the exception of scattered fiddleneck (*Amsinckia menziesii*), and the sparse occurrence of common invasive weedy vegetation (*Brassica nigra*, *Brassica rapa*, *Capsella bursa-pastoris*, *Bromus diandrus*, *Bromus madritensis*, *Hordeum murinum*, *Erdoum botrys*, and *Malva parviflora*). There were no trees or shrubs within Project areas, but adjacent developments contained trees and shrubs commonly associated with landscaping, such as Chinese elm (*Ulmus parvifolia*) and Mexican fan palm (*Washingtonia robusta*).

The stormwater drainage basin onsite is enclosed with a chain-link fence. Access was provided via a padlocked gate. At the time of the field survey, water was absent from the basin, and herbaceous vegetation provided nearly 100% cover. Species of vegetation in the basin were similar to those recorded within the ruderal vacant lot, with the exception of the presence of *Trifolium sp.* and *Conium maculatum* within the basin.

Nearly all of the yards in the vicinity contained large, barking, domestic dogs. Feral cats and domestic dogs were also observed throughout. Ground squirrels were absent, probably due to the use of rodenticides or other agricultural pest control methods employed in adjacent farmlands. Soils onsite were compacted, with the exception of a few gopher mounds, and the surveyed area contained surprisingly few murid rodent burrows, all of which appeared to be inactive. Mammal tracks and sign observed onsite were limited to domestic dog and cat tracks. Given the ruderal nature and isolation from areas of natural habitat, mammal species expected to occur onsite would likely be limited to some common murid rodents and “agricultural pests,” such as Botta’s pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and rabbits (*Lepus californicus* and *Sylvilagus audubonii*), as well as other disturbance-tolerant mammals, including coyote (*Canis latrans*), opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and occasionally gray fox (*Urocyon cinereoargenteus*).

Although none of the structures within the Project area contained projections, crevices, or potential roosts large enough to house a western mastiff bat (*Eumops perotis*), a variety of smaller native bat species, such as the special status pallid bat (*Antrozous pallidus*) could potentially roost within the present structures. However, no bat individuals or bat sign was observed during the biological survey and frequent human disturbance makes the possibility of roosting bats relatively unlikely. Furthermore, the pallid bat is a colonial species, and roosting habitat of sufficient size to house a colony (typically 30-70 individuals) is absent.

The following avian species were observed during the field survey: American robin (*Turdus migratorius*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), and Brewer’s blackbird (*Euphagus cyanocephalus*). Additional avian species expected to occur within ruderal or developed habitats include California scrub jay (*Aphelcoma californica*), barn owl (*Tyto alba*), hummingbirds (Trochilidae), and mourning dove (*Zenaida macroura*). Red-tailed hawks (*Buteo jamaicensis*) and American kestrels (*Falco sparverius*) may perch on power poles and forage over the adjacent orchard.

Although none were observed during the field survey, some reptiles and amphibians such as the Valley gartersnake (*Thamnophis sirtalis fitchi*), San Joaquin fence lizard (*Sceloporus occidentalis biserialis*), California toad (*Anaxyrus boreas halophilus*), western side-blotched lizard (*Uta stansburiana elegans*), Sierran treefrog (*Pseudacris sierra*), and the invasive American bullfrog (*Lithobates catesbeianus*) likely occur in the vicinity of the Project. In the winter and spring, the aforementioned amphibian species may breed in the stormwater drainage basin onsite or in irrigation ditches in the vicinity. Pacific gophersnake (*Pituophis catenifer catenifer*) and California kingsnake (*Lampropeltis californicae*) may occasionally pass through the developed and ruderal areas in the vicinity of the Project.

## 2.4 Soils

According to the September 12, 2018 Soil Survey of Tulare County, Western Part, California, one soil mapping unit occurs within the Project area: Calgro-Calgro, saline-sodic, complex, 0-2% slopes. This soil, which is situated on fan remnants, is classified as Farmland of Statewide Importance, and is associated with irrigated croplands that have been leveled and drained. Both major soil components are moderately deep, moderately well-drained with moderate permeability above the duripan, which generally lies 24 to 25 inches below the surface. Both components contain alluvium parent material derived from granite rock, and both rarely flood. The following are listed as minor components, each comprising 5 % or less of the complex: Colpien, Grangeville, Tujunga, Exeter, and one unnamed soil. The unnamed soil comprises approximately 1 % of the map unit and is associated with depressions that pond for more than two weeks, and is therefore considered hydric. Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported. Soils within the deepest portion of the stormwater drainage basin are likely hydric as senescent hydrophytic vegetation (*Conium maculatum*) was present at the time of the field survey.

The complete Natural Resources Conservation Service (NRCS) Web Soil Survey report is available in **Appendix C** at the end of this document.

## 2.5 Natural Communities of Special Concern

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, or home to special status species. CDFW is responsible for the classification and mapping of all natural communities in California. Just like the special status plant and animal species, these natural communities of special concern can be found within the CNDDDB.

According to CNDDDB, there are no recorded observations of natural communities of special concern with potential to occur within the Project area or immediate vicinity. Additionally, no natural communities of special concern were observed during the biological survey.

## 2.6 Designated Critical Habitat

The USFWS often designates areas of “Critical Habitat” when it lists species as threatened or endangered. Critical Habitat is a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

According to CNDDDB and IPaC, designated critical habitat is absent from the Project area and vicinity.

## 2.7 Wildlife Movement Corridors

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The Project site, which consists of an isolated ruderal patch of land interspersed with development does not contain any features that could serve as a wildlife movement corridor. Furthermore, the Project is located within the community of Traver in a region often disturbed by intensive agricultural production and other human activities which would discourage dispersal and migration.



## 2.8 Special Status Plants and Animals

California contains several “rare” plant and animal species. In this context, “rare” is defined as species known to have low populations or limited distributions. As the human population grows, resulting in urban expansion which encroaches on the already limited suitable habitat, these sensitive species become increasingly more vulnerable to extirpation. State and Federal regulations have provided the CDFW and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to California. Numerous native plants and animals have been formally designated as “threatened” or “endangered” under state and federal endangered species legislation. Other formal designations include “candidate” for listing or “species of special concern” by CDFW. The California Native Plant Society (CNPS) has its list of native plants considered rare, threatened, or endangered. Collectively these plants and animals are referred to as “special status species.”

A thorough search of the CNDDB for published accounts of special status plant and animal species was conducted for the *Traver* 7.5-minute quadrangle that contains the Project site in its entirety, and for the 8 surrounding quadrangles: *Selma*, *Reedley*, *Orange Cove South*, *Burris Park*, *Monson*, *Goshen*, *Visalia*, and *Exeter*. These species, and their potential to occur within the Project area are listed in **Table 1** and **Table 2** on the following pages. Raw data obtained from CNDDB is available in **Appendix B** at the end of this document. Other sources of information utilized in the preparation of this analysis included the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California, CalFlora’s online database of California native plants, the Jepson Herbarium online database (Jepson eFlora), U.S. Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS), the NatureServe Explorer online database, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Plants Database, the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) database, ebird.org, and the California Herps online database. **Figure 2** shows the Project’s 7.5-minute quadrangle, according to USGS Topographic Maps.

**Table 1. List of Special Status Animals with Potential to Occur Onsite and/or in the Vicinity**

Species	Status	Habitat	Occurrence on Project Site
<b>American badger</b> ( <i>Taxidea taxus</i> )	CSC	Grasslands, savannas, and mountain meadows near timberline are preferred. Most abundant in drier open spaces of shrub and grassland. Burrows in soil.	<b>Absent.</b> The highly disturbed habitats of the Project site are unsuitable for this species. The site is surrounded by development and frequently disturbed agricultural lands, and therefore would not be expected to pass through the site during dispersal or mating movements.
<b>burrowing owl</b> ( <i>Athene cunicularia</i> )	CSC	Resides in open, dry annual or perennial grasslands, deserts, and scrublands with low growing vegetation. Nests underground in existing burrows created by burrowing mammals, most often ground squirrels.	<b>Unlikely.</b> The disturbed habitats of the Project site are unsuitable for this species. Nesting and foraging habitat is absent due to incompatible topography and/or vegetative cover. Furthermore, the Project site is not large enough to support a pair of burrowing owls. This species likely occurs within the uncultivated grasslands near Cross Creek and Cottonwood Creek, approximately 5 miles south and southeast from the Project. At most, a burrowing owl individual could potentially pass over or through the site, but would not be expected to nest or forage within or adjacent to proposed impact areas.
<b>California tiger salamander</b> ( <i>Ambystoma californiense</i> )	FT, CT, CWL	Requires vernal pools or seasonal ponds for breeding and small mammal burrows for aestivation. Generally found in grassland and oak savannah plant communities in central California from sea level to 1500 feet in elevation.	<b>Absent.</b> The highly disturbed habitats of the Project area and surrounding lands are unsuitable for this species. Wetland habitat suitable for breeding is absent from the Project site and potential aestivation habitat is marginal, at best.
<b>loggerhead shrike</b> ( <i>Lanius ludovicianus</i> )	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	<b>Unlikely.</b> Nesting, foraging, and perching habitat onsite and in the vicinity is marginal, at best. This species was observed within a riparian corridor along Cottonwood Creek, surrounded by uncultivated grassland in 1992, approximately 5 miles southeast of the Project. At most, this species could potentially pass over or through the site, but would not be expected to nest or forage within or adjacent to proposed impact areas.
<b>northern California legless lizard</b> ( <i>Anniella pulchra</i> )	CSC	Found primarily underground, burrowing in loose, sandy soil. Forages in loose soil and leaf litter during the day. Occasionally observed on the surface at dusk and night. Prefers soil with a high moisture content.	<b>Absent.</b> The disturbed habitats and well-drained, compacted soils onsite are unsuitable for this species. There is a historic (1934) recorded observation of this species in the general vicinity of Visalia, although the exact location is unknown. In 2015, this species was observed within Kaweah Oaks Preserve, approximately 18 miles southeast of the Project.

Species	Status	Habitat	Occurrence on Project Site
<b>northern leopard frog</b> ( <i>Lithobates pipiens</i> )	CSC	Inhabits grassland, wet meadows, potholes, forests, woodland, brushlands, springs, canals, bogs, marshes, and reservoirs. Generally prefers permanent water with abundant riparian vegetation.	<b>Absent.</b> Suitable habitat is absent from the Project area, as the northern leopard frog prefers permanent water with abundant aquatic vegetation. The Project site is not located within the historic range of any native or introduced populations.
<b>pallid bat</b> ( <i>Antrozous pallidus</i> )	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and other man-made structures.	<b>Unlikely.</b> Individuals could potentially roost in crevices of buildings or structures adjacent to the Project area. Oaks and other cavity-prone trees are absent. Roosting habitat of sufficient size to house a colony (typically 30-70 individuals) is absent and this species would likely be deterred from roosting in the vicinity due to frequent human disturbance. Foraging habitat in the vicinity is marginal, at best.
<b>San Joaquin kit fox</b> ( <i>Vulpes macrotis mutica</i> )	FE, CT	Underground dens with multiple entrances in alkali sink, valley grassland, and woodland in valleys and adjacent foothills.	<b>Unlikely.</b> The highly disturbed habitats of the Project area and fragmentation of the surrounding lands are unsuitable for this species. The Project is located approximately 65 miles east of the nearest known core population in Ciervo-Panoche Natural Area. Although some populations of San Joaquin Kit Fox in other parts of California have adapted to an urbanized environment, modern kit fox occurrences are locally scarce. At most, this species could conceivably pass through the Project area during dispersal movements.
<b>Swainson's hawk</b> ( <i>Buteo swainsoni</i> )	CT	Nests in large trees in open areas adjacent to grasslands, grain or alfalfa fields, or livestock pastures suitable for supporting rodent populations.	<b>Possible.</b> Swainson's hawks are relatively uncommon in this portion of Tulare County. There are known nest trees within 5 miles of the Project site. However, nesting and foraging habitat onsite and in the immediate vicinity of the Project is marginal, at best due to frequent human disturbance and absence of native trees large enough to support a raptor a raptor nest. Trees onsite and in the vicinity are ornamental, associated with landscaping.
<b>valley elderberry longhorn beetle</b> ( <i>Desmoceris californicus dimorphus</i> )	FT	Lives in mature elderberry shrubs of the Central Valley and foothills. Adults are active March to June.	<b>Absent.</b> The Project is not located within the presumed historical range or presumed current distribution of this species. In 2014 USFWS published findings suggesting that previous CNDDB observations of this species within Tulare County should be discounted. (See expanded discussion in <b>Section 3.4.2</b> )

Species	Status	Habitat	Occurrence on Project Site
vernal pool fairy shrimp ( <i>Branchinecta lynchi</i> )	FT	Occupies vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	<b>Absent.</b> Suitable vernal pool habitat for this species is absent from the Project area and surrounding lands.
vernal pool tadpole shrimp ( <i>Lepidurus packardii</i> )	FE	Occurs in vernal pools, clear to tea-colored water, in grass or mud-bottomed swales, and basalt depression pools.	<b>Absent.</b> Suitable vernal pool habitat for this species is absent from the Project area and surrounding lands.
western mastiff bat ( <i>Eumops perotis californicus</i> )	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings and tunnels.	<b>Unlikely.</b> Roosting and breeding habitat is absent from the Project area and surrounding lands, and foraging habitat is marginal, at best. There is a historic (1899) observation of this species mapped in the vicinity of Traver, although the exact location is unknown. This species was observed foraging along the riparian corridor of Packwood Creek, approximately 15 miles southeast of the Project in 2002. At most, an individual of this species could conceivably forage over the adjacent deciduous orchard in the absence of superior foraging grounds.
western pond turtle ( <i>Emys marmorata</i> )	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams, and irrigation ditches with riparian vegetation. Requires adequate basking sites and sandy banks or grassy open fields to deposit eggs.	<b>Absent.</b> Suitable aquatic habitat is absent from the Project area and the vicinity. Upland habitat for nesting and wintering is absent. The stormwater drainage basin onsite is fenced and located more than 4 miles from the lower reaches of the Kings River and the Kaweah River system. The only recorded observation of this species in the vicinity of the Project is a historic (1879) collection mapped in the vicinity of Visalia, although the exact location is unknown.

Species	Status	Habitat	Occurrence on Project Site
<b>western spadefoot</b> <i>(Spea hammondi)</i>	CSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Vernal pools or temporary wetlands, lasting a minimum of three weeks, which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	<b>Absent.</b> The highly disturbed habitats of the Project area and surrounding lands are unsuitable for this species. Wetland or vernal pool habitat suitable for breeding is absent from the Project site and potential aestivation habitat is marginal, at best. In the absence of vernal pools, natural seasonal ponds, or intermittent drainages, western spadefoot individuals could make use of artificial ponds. However, the stormwater drainage basin onsite is isolated from other suitable habitat because it is surrounded by miles of roads and development. Furthermore, stormwater drainage basins often contain bullfrogs, which are an apex predator of this species. All observations of this species in the vicinity have been within vernal pools in uncultivated grassland near Cross Creek, approximately 5 miles south of the Project.
<b>western yellow-billed cuckoo</b> <i>(Coccyzus americanus occidentalis)</i>	FT, CE	Suitable nesting habitat in California includes dense riparian willow-cottonwood and mesquite habitats along a perennial river. Once a common breeding species in riparian habitats of lowland California, this species currently breeds consistently in only two locations in the State: along the Sacramento and South Fork Kern Rivers.	<b>Absent.</b> Suitable nesting habitat for this species is absent from the Project area and surrounding lands. There is one recorded observation of this species within Tulare County. The observation is dated 1919 and the location corresponds to an area that is now referred to as Downtown Visalia, an area that consists exclusively of urban development. The status of this observation has since been updated to “extirpated,” which means the habitat has been destroyed or the species has been searched for but unobserved for many years. It is believed this species no longer occurs within Tulare County.

**Table 2. List of Special Status Plants with Potential to Occur Onsite and/or in the Vicinity**

Species	Status	Habitat	Occurrence on Project Site
<b>brittlescale (<i>Atriplex depressa</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in alkali or clay soils in shadscale scrub, valley grassland, alkali sink, and sometimes riparian communities at elevations below 1050 feet. Equally likely to occur in wetlands and non-wetlands. Blooms June – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>California alkali grass (<i>Puccinellia simplex</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and other parts of California in saline flats and mineral springs within valley grassland and wetland-riparian communities at elevations below 3000 feet. Blooms March – May.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>California satintail (<i>Imperata brevifolia</i>)</b>	CNPS 2B	Although this facultative species is equally likely to occur in wetlands and non-wetlands, it is often found in wet springs, meadows, streambanks, and floodplains at elevations below 1600 feet. Blooms September – May.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>Earlimart orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)</b>	CNPS 1B	Found in the San Joaquin Valley in saline or alkaline soils, within valley or foothill grasslands, at elevations below 325 feet. Equally likely to occur within wetlands and non-wetlands. Blooms August – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>heartscale (<i>Atriplex cordulata</i> var. <i>cordulata</i>)</b>	CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in saline or alkaline soils within shadscale scrub, valley grassland, and wetland-riparian communities at elevations below 230 feet. Blooms June – July.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.

Species	Status	Habitat	Occurrence on Project Site
<b>Hoover's spurge</b> <i>(Euphorbia hooveri)</i>	FT, CNPS 1B	Found in the San Joaquin Valley and Sacramento Valley in vernal pools within valley grassland, freshwater wetland, and riparian communities at elevations below 800 feet. Blooms July – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>lesser saltscare</b> ( <i>Atriplex minuscula</i> )	CNPS 1B	Found in the San Joaquin Valley in playas; sandy, alkaline soils in shadescale scrub, valley grassland, and alkali sink communities at elevations below 300 feet. Blooms April – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands.
<b>recurved larkspur</b> <i>(Delphinium recurvatum)</i>	CNPS 1B	Found in the San Joaquin Valley and other parts of California. Occurs in poorly drained, fine, alkaline soils in grassland at elevations between 100 feet and 1965 feet. Most often found in non-wetlands, but occasionally found in wetlands. Blooms March – June.	<b>Absent.</b> Suitable habitat and soils required by this species is absent from the Project area and surrounding lands.
<b>San Joaquin adobe sunburst</b> ( <i>Pseudobahia peirsonii</i> )	FT, CE, CNPS 1B	Found in the San Joaquin Valley and the Sierra Nevada Foothills in bare dark clay in valley grassland and foothill woodland communities at elevations between 325 feet and 2950 feet. Blooms March – May.	<b>Absent.</b> Suitable habitat and soils required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>San Joaquin Valley Orcutt grass</b> ( <i>Orcuttia inaequalis</i> )	FT, CE, CNPS 1B	Found in the eastern San Joaquin Valley and the Sierra Nevada foothills in vernal pools within valley grassland, freshwater wetland, and wetland-riparian communities at elevations below 2600 feet. Blooms April – September.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The status of many of the historic observations of this species along the Valley floor have been updated to “extirpated.”
<b>Sanford's arrowhead</b> <i>(Sagittaria sanfordii)</i>	CNPS 1B	Found in the San Joaquin Valley and other parts of California in freshwater-marsh, primarily ponds and ditches, at	<b>Absent.</b> Habitats of stormwater drainage basin are marginal, at best, for this species. At the time of the field survey,



Species	Status	Habitat	Occurrence on Project Site
		elevations below 1000 feet. Blooms May – October.	suitable habitat was not observed nor was this species observed.
<b>spiny-sepaled button-celery</b> <i>(Eryngium spinosepalum)</i>	CNPS 1B	Found in the Sierra Nevada Foothills and portions of the San Joaquin Valley. Occurs in vernal pools, swales, and roadside ditches at elevations between 325 feet and 4160 feet in valley grassland, freshwater wetlands, and riparian communities. Blooms April – July.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>subtle orache</b> ( <i>Atriplex subtilis</i> )	CNPS 1B	Found in the San Joaquin Valley in saline depressions at elevations below 230 feet. Blooms June – October.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is near or outside of the elevational range for this species.
<b>Winter's sunflower</b> <i>(Helianthus winteri)</i>	CNPS 1B	Found in the Sierra Nevada foothills on steep, south-facing grassy slopes, rock outcrops, and road-cuts at elevations ranging from 600 feet to 1500 feet. Blooms year-round.	<b>Absent.</b> Suitable habitat required by this species is absent from the Project area and surrounding lands. The Project site is outside of the elevational range for this species.

#### EXPLANATION OF OCCURRENCE DESIGNATIONS AND STATUS CODES

Present:	Species observed on the site at time of field surveys or during recent past
Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

#### STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CCT	California Threatened (Candidate)
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Concern
		CWL	California Watch List
		CCE	California Endangered (Candidate)
		CR	California Rare

#### CNPS LISTING

1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

# 3 Impacts and Mitigation

## 3.1 Significance Criteria

### 3.1.1 CEQA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA, and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either “significant” or “less than significant” under CEQA. According to the CEQA Guidelines, “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered “significant” if they would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
- 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 CDFW or USFWS;
- 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;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory finding of significance” if the project has the potential to:

“Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species cause a fish or wildlife population to drop below self-sustaining levels threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened

species, or eliminate important examples of the major periods of California history or prehistory.”

## **3.2 Relevant Goals, Policies, and Laws**

### **3.2.1 Tulare County General Plan**

The Tulare County General Plan (2012) sets forth the following goals and policies that protect biological resources and which have potential relevance to the Project:

- The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.
- The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.
- The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.
- The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.
- The County shall review development proposals against the California Natural Diversity Data Base, and other available studies provided by the California Department of Fish and Game, and consult, as appropriate, with the California Department of Fish and Game and U.S. Fish and Wildlife to assist in identifying potential conflicts with sensitive natural communities or special status species.
- On project sites that have the potential to contain species of local or regional concern, sensitive natural communities or special-status species, the County shall require the project applicant to have the site surveyed and mapped by a qualified biologist. A report on the finding of this survey shall be submitted to the County as part of the application and environmental review process.
- The County shall continue efforts to maintain and enlarge wetland preserves, which provide waterfowl habitat necessary to the maintenance of the flyway route through the valley. Such wetlands should also be protected through stormwater management programs, erosion control, and public education.

### **3.2.2 Traver Community Plan**

The following Tulare County General Plan policies regarding conservation of biological resources have been adopted and published in the Traver Community Plan:

- The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or federal government, through compatible land use development.
- The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.
- When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat.

- The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state.

### **3.2.3 Threatened and Endangered Species**

Permits may be required from the USFWS and/or CDFW if activities associated with a Project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

### **3.2.4 Designated Critical Habitat**

When species are listed as threatened or endangered, the USFWS often designates areas of “Critical Habitat” as defined by section 3(5)(A) of the federal Endangered Species Act (ESA). Critical Habitat is a term defined in the ESA as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical Habitat is a tool that supports the continued conservation of imperiled species by guiding cooperation with the federal government. Designations only affect federal agency actions or federally funded or permitted activities. Critical Habitat does not prevent activities that occur within the designated area. Only activities that involve a federal permit, license, or funding and are likely to destroy or adversely modify Critical Habitat will be affected.

### **3.2.5 Migratory Birds**

The Federal Migratory Bird Treaty Act (MBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all bird’s native to the United States, even those that are non-migratory. The MBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the MBTA (Section 3513), as well as any other native non-game bird (Section 3800).

### **3.2.6 Birds of Prey**

Birds of prey are protected in California under provisions of Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

### **3.2.7 Nesting Birds**

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is “unlawful to take, possess, or needlessly destroy the nest or eggs of any bird

except as otherwise provided by this code or any regulation adopted pursuant thereto.” Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of “take” by the CDFW.

### 3.2.8 Wetlands and other “Jurisdictional Waters”

Natural drainage channels and adjacent wetlands may be considered “waters of the United States” or “jurisdictional waters” subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- 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;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC)* decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water. Furthermore, the Supreme Court clarified that the Environmental Protection Agency (EPA) and the USACE will not assert jurisdiction over ditches excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE regulates the filling or grading of Waters of the U.S. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board has regulatory authority to protect the water quality of all surface water and groundwater in the State of California (“Waters of the State”). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into Waters of the State through the issuance of various permits and orders. Discharges into Waters of the State that are also Waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining certain federal permits, such as a Section 404 Clean Water Act permit. Discharges into all Waters of the State, even those that are not also Waters of the U.S., require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB. The RWQCB also administers the Construction Storm Water Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Storm Water Program. A prerequisite for this permit is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a

certified Qualified SWPPP Developer. Projects that discharge wastewater, storm water, or other pollutants into a Water of the U.S. may require a NPDES permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

The only water feature onsite is an isolated, excavated stormwater drainage basin, and therefore, it can be reasonably assumed that jurisdictional waters are absent.

### **3.3 Potentially Significant Project-Related Impacts and Mitigation**

As discussed in **Section 1**, the Project includes the development of a water treatment system to an existing well site within the community of Traver.

Species identified as candidate, sensitive, or special status species in local or regional plans policies or regulations by CDFW or the USFWS that have the potential to be impacted by the construction phase of the Project are identified below with corresponding mitigation measures.

#### **3.3.1 Project-Related Mortality and/or Disturbance of Nesting Raptors, Migratory Birds, and Special Status Birds (Including Swainson's Hawk)**

The Project site contains marginal foraging habitat for several avian species, including the Swainson's hawk. Although the Project site does not contain any trees, there are a few ornamental trees in the vicinity large enough to house a raptor nest, and smaller avian species may nest within the adjacent orchard habitat. Ground-nesting birds, such as the killdeer could nest on the bare ground, and swallows could nest within buildings or structures in the vicinity.

Swainson's hawks are common in this portion of Tulare County, and there are known nest trees within five miles of the Project site. In the absence of preferred habitat, especially within the Central Valley, Swainson's hawks often nest within eucalyptus trees lining highways, and several raptor species nest within ornamental Mexican fan palms. Although nesting habitat onsite and in the vicinity is not ideal due to the absence of native riparian trees, and foraging habitat is suboptimal, raptors, such as the special status Swainson's hawk could conceivably nest or forage near Project areas. In the event that a Swainson's hawk or other avian species is foraging within the Project site during construction activities, the individual would be expected to fly away from disturbance they encounter, subsequently eliminating the risk of injury or mortality while foraging. Although the Project does not include the removal of any trees or shrubs, raptors and migratory birds occurring within the Project site could be injured or killed by Project activities. Furthermore, construction activities could disturb birds nesting within or adjacent to work areas, resulting in nest abandonment. Project construction activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitutes a violation of State and federal laws and is considered a significant impact under CEQA.

The Project does not involve the removal of any trees or shrubs, and habitats onsite are suboptimal for foraging and nesting. A swath of superior nesting and foraging habitat in the vicinity is available in the form of agricultural fields directly north and in undeveloped areas, such as the uncultivated grassland near Cross and Creek and Cottonwood Creek, approximately five miles south and southeast of the Project. For these

reasons, loss of nesting and/or foraging habitat would not be considered a potentially significant impact under CEQA.

Nesting bird season is generally accepted as February 1 through August 31; however, Swainson's hawk nesting season is generally accepted as March 1 through September 15. For simplicity, these timeframes have been combined.

Implementation of the following measures will reduce potential impacts to nesting raptors, migratory birds, and special status birds, including Swainson's hawk to a less than significant level under CEQA, and will ensure compliance with State and federal laws protecting these avian species.

**Mitigation.** The following measures will be implemented during or prior to the start of construction:

***Mitigation Measure 3.3.1a (Avoidance):*** The Project's construction activities shall occur, if feasible, between September 16 and January 31 (outside of nesting bird season) in an effort to avoid impacts to nesting birds.

***Mitigation Measure 3.3.1b (Pre-construction Survey):*** If activities must occur within nesting bird season (February 1 to September 15), a qualified biologist shall conduct pre-construction surveys for active nests within 30 days prior to the start of construction. The survey shall include the proposed work area and surrounding lands within 0.5 mile. If no active nests are observed, no further mitigation is required. Raptor nests are considered "active" upon the nest-building stage.

***Mitigation Measure 3.3.1c (Establish Buffers):*** On discovery of any active nests near work areas, the biologist shall determine appropriate construction setback distances based on applicable CDFW and/or USFWS guidelines and/or the biology of the species in question. Construction buffers shall be identified with flagging, fencing, or other easily visible means, and shall be maintained until the biologist has determined that the nestlings have fledged.

## 3.4 Less Than Significant Project-Related Impacts

### 3.4.1 Project-Related Impacts to Special Status Plant Species

14 special status plant species have been documented in the Project vicinity, including brittlescale (*Atriplex depressa*), California alkali grass (*Puccinellia simplex*), California satintail (*Imperata brevifolia*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), heartscale (*Atriplex cordulata* var. *cordulata*), Hoover's spurge (*Euphorbia hooveri*), lesser saltscare (*Atriplex miniscula*), recurved larkspur (*Delphinium recurvatum*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), San Joaquin Valley orcutt grass (*Orcuttia inequalis*), Sanford's arrowhead (*Sagittaria sanfordii*), spiny-sealed button-celery (*Eryngium spinosepalum*), subtle orache (*Atriplex subtilis*), and Winter's sunflower (*Helianthus winteri*). As explained in **Table 2**, all of the aforementioned plant species are absent from the Project area due to past and ongoing disturbance and/or the absence of suitable habitat. Therefore, the implementation of the Project will have no effect on individual plants or regional populations of these special status plant species. Mitigation measures are not warranted.

### 3.4.2 Project-Related Impacts to Special Status Animal Species Absent From, or Unlikely to Occur on, the Project Site

After completing a biological survey, 10 of the 16 published accounts of special status animal species were declared absent from the Project area, one of which is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).



In 2014, USFWS published *Withdrawal of the Proposed Rule To Remove the Valley Elderberry Longhorn Beetle From the Federal List of Endangered and Threatened Wildlife*, in which the presumed historical range and the presumed extant range of the valley elderberry longhorn beetle is redefined. Very few of the records involve observation of an adult valley elderberry longhorn beetle; the majority are based exclusively on observation of exit holes, which may not be an accurate depiction of occupancy. There are several problems with recording an observation of a sensitive species based on an ambiguous sign, such as an exit hole. Two subspecies of elderberry longhorn beetle exist: the valley elderberry longhorn beetle and the California elderberry longhorn beetle. These two subspecies are so similar that experts are only able to distinguish between the two with certainty by adult male coloration. Thus, species accounts may be unreliable in areas where range overlaps and the sex of the subject is not specified. The document further states that all observations within Tulare County should be discounted as they likely represent the California elderberry longhorn beetle.

Of the 16 regionally occurring special status species, 15 are considered absent or unlikely to occur within the Project area due to past or ongoing disturbance and/or absence of suitable habitat. As explained in **Table 1**, the following 10 species were deemed absent from the Project area: American badger (*Taxidea taxus*), California tiger salamander (*Ambystoma californiense*), northern California legless lizard (*Anniella pulchra*), northern leopard frog (*Lithobates pipiens*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool tadpole shrimp (*Lepidurus packardii*), and vernal pool fairy shrimp (*Branchinecta lynchi*), western pond turtle (*Emys marmorata*), western spadefoot (*Spea hammondi*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*). The following 5 species were deemed unlikely to occur within the Project area: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), pallid bat (*Antrozous pallidus*), San Joaquin kit fox (*Vulpes macrotis mutica*), and western mastiff bat (*Eumops perotis californicus*). Since it is highly unlikely that these species would occur onsite, implementation of the Project should have no impact on these 15 special status species through construction mortality, disturbance, or loss of habitat. Mitigation measures are not warranted.

### **3.4.3 Project-Related Impacts to Wildlife Movement Corridors**

As discussed in **Section 2.7**, the Project site does not contain features likely to serve as a wildlife movement corridor. Therefore, the Project will not impact wildlife movement corridors or impeded the movement of any wildlife species. Mitigation is not warranted.

### **3.4.4 Project-Related Impacts to Critical Habitat**

Designated critical habitat is absent from the Project area and surrounding lands. Therefore, there will be no impact to critical habitat, and mitigation is not warranted.

### **3.4.5 Local Policies or Habitat Conservation Plans**

Project design appears to be consistent with the goals and policies of the Tulare County General Plan. There are no known habitat conservation plans in the Project vicinity. Mitigation is not warranted.

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## **Appendix A. Selected Photographs of the Project Site**



Photograph 1: Overview of existing Well No. 3 site on ruderal vacant parcel on the northeast corner of Jacobs Drive and Church Drive.





**Photograph 2: Overview of the proposed pipeline alignment along the right-of-way of Jacobs Drive, in front of the church.**



Photograph 3: Overview of the existing stormwater drainage basin.



## Appendix B. CNDDB Query Results



## Selected Elements by Common Name

### California Department of Fish and Wildlife

### California Natural Diversity Database



**Query Criteria:** Quad< IS </span>(Traver (3611944)<span style="color:Red"> OR </span>Selma (3611955)<span style="color:Red"> OR </span>Reedley (3611954)<span style="color:Red"> OR </span>Orange Cove South (3611953)<span style="color:Red"> OR </span>Burris Park (3611945)<span style="color:Red"> OR </span>Monson (3611943)<span style="color:Red"> OR </span>Goshen (3611934)<span style="color:Red"> OR </span>Visalia (3611933)<span style="color:Red"> OR </span>Exeter (3611932))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>American badger</b> <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
<b>brittlescale</b> <i>Atriplex depressa</i>	PDCHE042L0	None	None	G2	S2	1B.2
<b>burrowing owl</b> <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
<b>California alkali grass</b> <i>Puccinellia simplex</i>	PMPOA53110	None	None	G3	S2	1B.2
<b>California satintail</b> <i>Imperata brevifolia</i>	PMPOA3D020	None	None	G4	S3	2B.1
<b>California tiger salamander</b> <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<b>Crotch bumble bee</b> <i>Bombus crotchii</i>	IIHYM24480	None	None	G3G4	S1S2	
<b>Earlimart orache</b> <i>Atriplex cordulata</i> var. <i>erecticaulis</i>	PDCHE042V0	None	None	G3T1	S1	1B.2
<b>Great Valley Valley Oak Riparian Forest</b> <i>Great Valley Valley Oak Riparian Forest</i>	CTT61430CA	None	None	G1	S1.1	
<b>heartscale</b> <i>Atriplex cordulata</i> var. <i>cordulata</i>	PDCHE040B0	None	None	G3T2	S2	1B.2
<b>hoary bat</b> <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4	
<b>Hoover's spurge</b> <i>Euphorbia hooveri</i>	PDEUP0D150	Threatened	None	G1	S1	1B.2
<b>Hopping's blister beetle</b> <i>Lytta hoppingi</i>	IICOL4C010	None	None	G1G2	S1S2	
<b>lesser saltscale</b> <i>Atriplex minuscula</i>	PDCHE042M0	None	None	G2	S2	1B.1
<b>loggerhead shrike</b> <i>Lanius ludovicianus</i>	ABPBR01030	None	None	G4	S4	SSC
<b>molestan blister beetle</b> <i>Lytta molesta</i>	IICOL4C030	None	None	G2	S2	
<b>Moody's gnaphosid spider</b> <i>Talanites moodyae</i>	ILARA98020	None	None	G1G2	S1S2	
<b>Morrison bumble bee</b> <i>Bombus morrisoni</i>	IIHYM24460	None	None	G4G5	S1S2	
<b>northern California legless lizard</b> <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S3	SSC



Selected Elements by Common Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Northern Claypan Vernal Pool</b> <i>Northern Claypan Vernal Pool</i>	CTT44120CA	None	None	G1	S1.1	
<b>Northern Hardpan Vernal Pool</b> <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
<b>northern leopard frog</b> <i>Lithobates pipiens</i>	AAABH01170	None	None	G5	S2	SSC
<b>pallid bat</b> <i>Antrozous pallidus</i>	AMACC10010	None	None	G5	S3	SSC
<b>recurved larkspur</b> <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<b>San Joaquin adobe sunburst</b> <i>Pseudobahia peirsonii</i>	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
<b>San Joaquin kit fox</b> <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2	S2	
<b>San Joaquin Valley Orcutt grass</b> <i>Orcuttia inaequalis</i>	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
<b>Sanford's arrowhead</b> <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
<b>spiny-sepaled button-celery</b> <i>Eryngium spinosepalum</i>	PDAPI0Z0Y0	None	None	G2	S2	1B.2
<b>subtle orache</b> <i>Atriplex subtilis</i>	PDCHE042T0	None	None	G1	S1	1B.2
<b>Swainson's hawk</b> <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
<b>valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S2	
<b>Valley Sacaton Grassland</b> <i>Valley Sacaton Grassland</i>	CTT42120CA	None	None	G1	S1.1	
<b>vernal pool fairy shrimp</b> <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
<b>vernal pool tadpole shrimp</b> <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G4	S3S4	
<b>western mastiff bat</b> <i>Eumops perotis californicus</i>	AMACD02011	None	None	G5T4	S3S4	SSC
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western spadefoot</b> <i>Spea hammondi</i>	AAABF02020	None	None	G3	S3	SSC
<b>western yellow-billed cuckoo</b> <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b>Winter's sunflower</b> <i>Helianthus winteri</i>	PDAST4N260	None	None	G2?	S2?	1B.2

Record Count: 40

## **Appendix C. Soil Report**



United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Tulare County, Western Part, California



March 6, 2019

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# Contents

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<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Tulare County, Western Part, California.....	13
105—Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes.....	13
<b>References</b> .....	16

# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)


### Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tulare County, Western Part, California  
Survey Area Data: Version 12, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 24, 2015—Oct 23, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
105	Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes	2.6	100.0%
<b>Totals for Area of Interest</b>		<b>2.6</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Tulare County, Western Part, California

### 105—Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* hp47

*Elevation:* 250 to 480 feet

*Mean annual precipitation:* 8 to 12 inches

*Mean annual air temperature:* 62 to 65 degrees F

*Frost-free period:* 250 to 300 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Calgro and similar soils:* 60 percent

*Calgro, saline-sodic, and similar soils:* 25 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Calgro

##### Setting

*Landform:* Fan remnants

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from granite

##### Typical profile

*Ap - 0 to 7 inches:* sandy loam

*Bw - 7 to 25 inches:* sandy loam

*2Bkqm - 25 to 33 inches:* cemented

*2Bkq - 33 to 53 inches:* gravelly loamy sand

*3Bkqm - 53 to 60 inches:* cemented

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 40 inches to duripan

*Natural drainage class:* Moderately well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.20 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Very rare

*Frequency of ponding:* None

*Calcium carbonate, maximum in profile:* 2 percent

*Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 12.0

*Available water storage in profile:* Low (about 3.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3s

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* C

*Hydric soil rating:* No

## **Description of Calgro, Saline-sodic**

### **Setting**

*Landform:* Fan remnants  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from granite

### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam  
*Bw - 8 to 24 inches:* sandy loam  
*2Bkqm - 24 to 33 inches:* cemented  
*2Bkq - 33 to 52 inches:* gravelly loamy sand  
*3Bkqm - 52 to 60 inches:* cemented

### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to duripan  
*Natural drainage class:* Moderately well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* Very rare  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 4 percent  
*Salinity, maximum in profile:* Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 100.0  
*Available water storage in profile:* Very low (about 3.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 4s  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

## **Minor Components**

### **Colpien**

*Percent of map unit:* 5 percent  
*Landform:* Fan remnants  
*Hydric soil rating:* No

### **Grangeville**

*Percent of map unit:* 4 percent  
*Landform:* Flood plains, alluvial fans  
*Hydric soil rating:* No

### **Tujunga**

*Percent of map unit:* 3 percent  
*Landform:* Flood plains  
*Hydric soil rating:* No

## Custom Soil Resource Report

### **Exeter**

*Percent of map unit:* 2 percent

*Landform:* Fan remnants

*Hydric soil rating:* No

### **Unnamed, ponded**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

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# Appendix C

## **Cultural and Historical Resources Evaluation Report**

Traver 7.5

SW ¼ of Section 16

T. 17 S., R. 22E., M.D.B. & M.

Cultural Resource Survey for Del Oro Water Company  
Water Treatment Facility  
Traver, Tulare County, California

Submitted to Provost & Pritchard Consulting Group  
286 W. Cromwell Avenue Fresno, CA 93711-6162

By



April, 2019

6182 Carter Rd.

Mariposa, Ca. 95338

**The locations of and specific information regarding archaeological sites are considered sensitive and may be exempt from the Freedom of Information Act pursuant to 54 USC 307103 (National Historic Preservation Act) and 16 USC Section 470(h) and (Archaeological Resources Protections Act). § 6254 (r): California Public Records Act Exemption from Disclosure. This exempts from disclosure public records of Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission**

**The archaeological studies prepared in this document, including any surveys or mitigation plans containing specific information on archaeological sites, should not be released to the general public or unauthorized persons to protect these locations from unintended harm**

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## Summary of the Findings

Culturescape has concluded a cultural resource inventory for historic and prehistoric sites within the proposed project area located in Traver, (approximately 1.53 acres), within an established subdivision in Tulare County, California located in the SW ¼ of Section 16 T. 17 S., R. 22E M.D.B. & M., on the Traver 7.5 Quadrangle USGS topographic map.

Correspondence with the Native American Heritage Commission (NAHC) did not locate any listed tribal locations of significance. A list of tribal representatives was provided by Provost and Pritchard Consulting Group on March 25, 2019. A location map and a description of the project with a request for feedback were mailed to all listed parties on March 26, 2019. A follow up telephone call was attempted on April 5, 2019 to confirm delivery of project materials and to solicit tribal input (Attachment B).

A records search conducted by the Southern San Joaquin Valley Information Center (SSJVIC) resulted in no previously reported cultural resources within the project area. The search located one previous cultural study, TU-01751 that was conducted within the study area and five previous studies that have been conducted within a one-half mile radius, TU-00102, 00504, 01008, 01158, and 01324. There are two recorded cultural resources within the one-half mile radius. These consist of P-54-002171 and P-54-004626, the Traver Canal and the Southern Pacific Railroad. There are no resources that are listed in the National Register of Historic Resources the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

The original survey was a “windshield survey of 640 acres that included only features visible from a slow drive-by method.

No prehistoric cultural artifacts were observed during survey. One historic slip-form bottle was discovered on the ramp within the catchment basin during survey, however, this was only noted as its location was on a modern construction with no obvious provenience. The area has been highly disturbed with a new housing development constructed adjacent to the catch basin. No structures are indicated on historical maps from 1927, however, one home is noted a block from the catch basin on the northwest corner of Jacobs between Bowhay and Baker Drive that may associate with the Southern Pacific Railroad or the construction of the Traver Canal.

If buried cultural materials are encountered during construction, work is to stop in that area until a qualified archaeologist can evaluate the nature and significance of the find.

This report will be filed with the Southern San Joaquin Valley Information Center at the California University, Bakersfield, at the Culturescape office, Mariposa, California. Documentation and photographs are held by Culturescape.

## Table of Contents

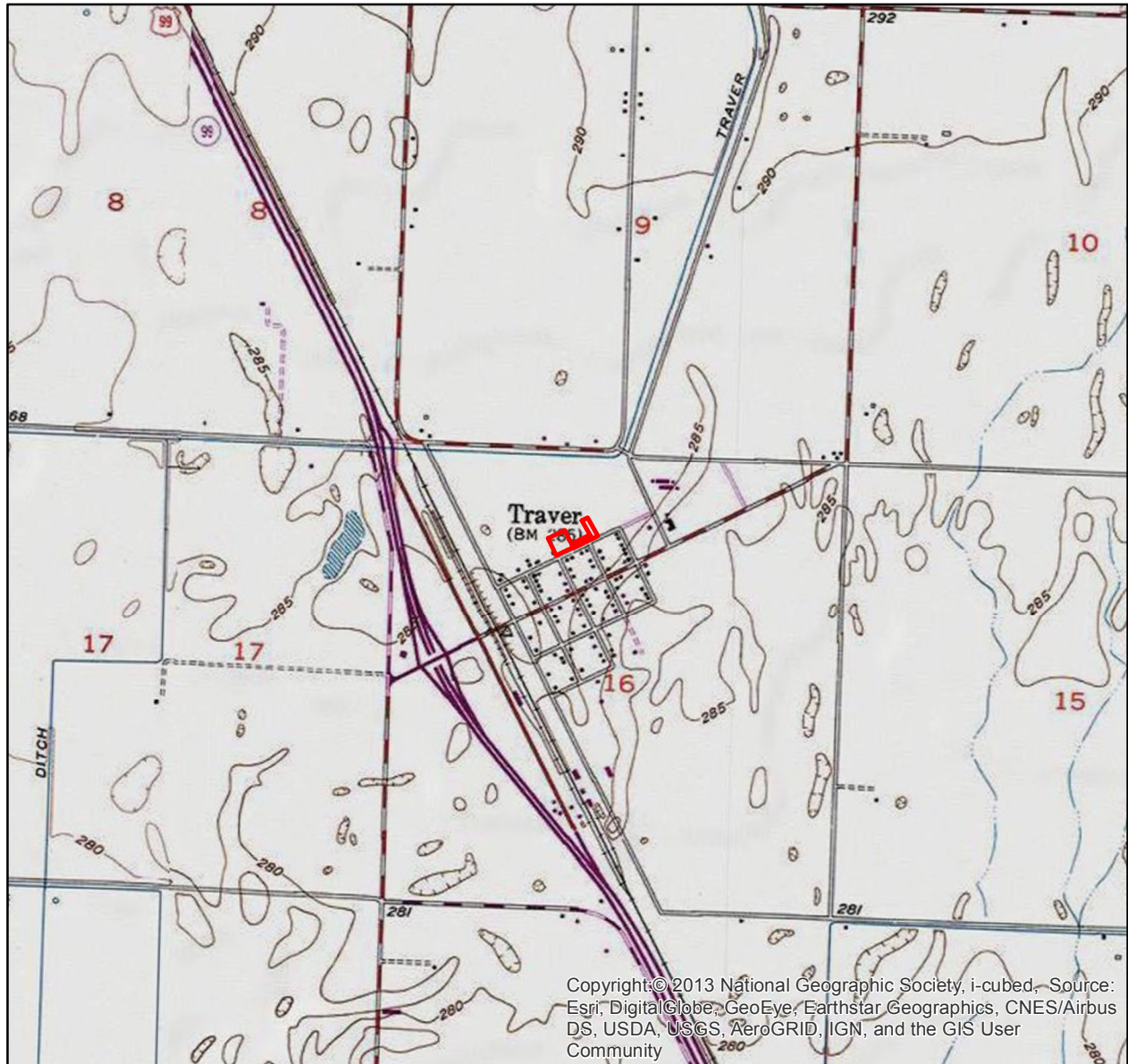
Summary of the Findings .....	i
Introduction to the Study .....	3
Background .....	3
Natural Setting: .....	3
Geology .....	3
Geomorphic Setting and Buried Archaeological Potential .....	4
Archaeological Background.....	4
Regional Prehistory .....	4
Local Archaeological Phases .....	4
The Windmiller Pattern.....	6
Ethnography.....	6
Yokuts.....	6
Railroads.....	<b>Error! Bookmark not defined.</b>
Research Design/Methodology.....	8
Report of Findings: .....	8
Information Center Records Search.....	8
Records Search Results .....	9
Prior Cultural Resources Studies In or Near Project Area.....	9
Cultural Resources Previously Recorded in or Near Project Area .....	9
Tribal Correspondence.....	9
Phase I Survey .....	9
Comments /Discussion .....	9
Sources.....	11
Other Sources .....	13
Attachment A: Record Search.....	14
Attachment B Native American Correspondence.....	18
Attachment C Photographs.....	23
Attachment D Qualifications.....	27





Project Location  
Del Oro Water Company  
Water Treatment Facility  
Well No. 3

Traver 7.5  
T. 17 S., R. 22E MDBM  
Section 16.  
1.53 acres Negative



0 0.25 0.5 1 Miles

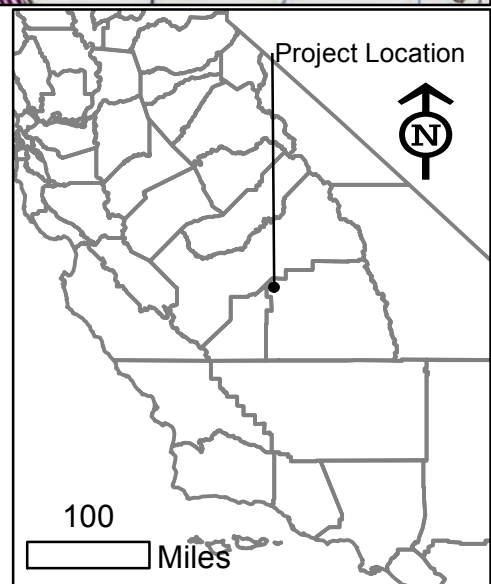
Site Boundary

Survey Boundary for  
Del Oro Water Compan  
Treatment System for Well No. 3  
Presented to Provost and Pritchard

By



Figure 1 Project Location



Project Area  
Del Oro Water Company  
Water Treatment Facility  
Well No. 3

Traver 7.5  
T. 17 S., R. 22E MDBM  
Section 16.  
1.53 acres Negative



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

 Site Boundary

Survey Boundary for  
Del Oro Water Compan  
Treatment System for Well No. 3  
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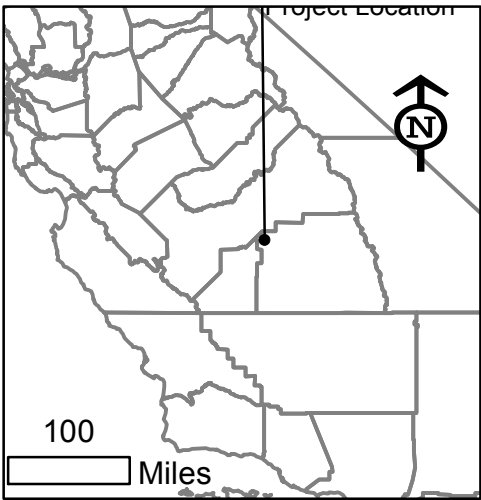


Figure 2 Project Area



## Introduction to the Study

Del Oro Water Company proposes a water treatment system for the remediation of 1, 2, 3-Trichloropropane. This system will include one pair of 12-foot granular activated carbon (GAC) vessels, a large supply tank for backwash water, chlorination building, and a generator for emergency power. Additionally general site improvements including paved access driveway and perimeter fence around entire parcel are a part of the project. The treatment system/site will be connected to an existing County storm water basin approximately 250 feet away along Jacobs Drive within the existing County right-of-way. The proposed project is located on the north side of Jacobs Drive, east of Church Drive in Traver, CA. The APE is 1.53 acres and is designated as APN 040-07-01.

Culturescape has conducted a cultural resource survey within the project area that is located in the SW ¼ of Section 16 T. 17 S., R. 22E M.D.B. & M., on the Traver 7.5 Quadrangle USGS topographic map.

Research consisted of a records search of recorded historical and archaeological sites and maps of the affected area by personnel at the Southern San Joaquin Information Center (SSJVIC), located at California State University, Bakersfield, California. The efforts also included contact with Native American Heritage Commission and correspondence with representatives of affected tribes, a literature review of historic and archaeological data pertaining to the area in question, and field survey.

## Background

### *Natural Setting*

The project area is located in Traver (Figures 1-2), a rural community within the San Joaquin Valley at approximately 300 feet above sea level. This is part of the Great Central Valley. This encompasses an area that is approximately 430 miles long north/south and 40 miles wide. “The valley floor is composed of several thousands of feet of sediments deposited from runoff from the surrounding mountains” (Schoenherr 1995: 516). The rainfall in this area averages between 10-12 inches per year. Agriculture and overgrazing have modified the area with the introduction of invasive weeds and desertification is apparent over most of the area, with the most obvious indications being salt build up and polluted waterways (Schoenherr 1995:16). The valley is divided and named for the two river systems that drain it; the Sacramento in the north and the San Joaquin in the south. This area supported a wide variety of wildlife, including elk, pronghorn, and mule deer until the advent of agriculture. Pronghorn were rare by 1875, and by 1885 only one band of elk were limited to the area around Buena Vista (Schoenherr 1995:549, 550).

The project area is located in the Lower Sonoran Lifezone within the California Valley Grassland Community. The natural water sources near the project area include the Kings River approximately 3.5 miles to the northwest and the Saint Johns River, roughly the same distance to the south. The majority of the waterways in this area have been heavily modified for agriculture (Schoenherr

### *Geology*

The soil in this area is primarily (85 %) Calgro and is comprised of alluvial fan remnants laid down in the Late Pleistocene. (Google Earth Soilweb; Rosenthal Et Al 2007:147).

### *Geomorphic Setting and Buried Archaeological Potential*

The potential for buried archaeological resources within the project area is low because of the distance from a natural water source or unique landform feature. The deposition of Calgro soils is linked to the latter Holocene; however, this soil type is ubiquitous and neither adds nor detracts to the sensitivity of potential buried archaeological deposits (Meyer 2010 Map 2).

## **Archaeological Background**

### *Regional Prehistory*

The archaeological record within California has echoes of antiquity alleged to extend as far back as 14,000 years ago, but is well established by 9,750 years ago in the southern portion of the San Joaquin Valley at Tulare Lake. These early California cultures adapted from Western Pluvial Lake Tradition (WPLT) which included fluted projectile points and flaked stone crescents along with formalized scrapers and non-obsidian debitage. Sites are generally found along “fossil lakeshores and ancient streams” (Moratto 2004:81 [1984]) while Paleo-Coastal Tradition follows similar traits of the WPLT with a time period of at least 12,000 years ago at sites on Channel Islands (Erlandson et al. 2007:57).

The Central Valley of California has long held the attention of California archaeologists. The earliest archaeological investigations in central California were conducted at sites in the Sacramento-San Joaquin Delta region (Schenck and Dawson 1929). These initial reports, primarily descriptive, were followed by more systematic investigations in the 1930s-1940s by archaeologists from Sacramento Junior College and the University of California, Berkeley. This work provided the foundation for the development of chronological frameworks for central California prehistory.

The 1930s-1940s era research identified distinct temporal periods in central California prehistory and provided the basis for a chronological sequence of archaeological cultures for the region (Lillard and Purves 1936; Lillard et al. 1939). Beardsley (1948, 1954) refined the cultural succession model for central California and produced what became known as the Central California Taxonomic System (CCTS). The CCTS was divided into categories such as horizons, which are broad cultural units that are temporally and geographically discrete. Three horizons, Early, Middle and Late, were identified for the archaeological cultures in central California.

The CCTS concentrated on material culture (e.g., burial practices), while issues related to subsistence, settlement strategies, social organization, and trade received minimal or no attention. Consequently, Gerow (1954, 1974a, 1974b; Gerow and Force 1968) questioned the utility of the CCTS and Frederickson (1973, 1974) proposed a revised taxonomic system for central California. Frederickson (1973) used specific economic and/or technological characteristics to define five patterns (i.e., Windmill, Berkeley, Borax Lake, Augustine, and Houx) for the North Coast Ranges, the San Francisco Bay and the lower Sacramento Valley. He assigned the five patterns to six periods: Paleo-Indian (10,000 to 6,000 B.C.); Lower, Middle, and Upper Archaic (6,000 B.C. to A.D. 500); and Upper and Lower Emergent (A.D. 500 to 1800).

### **Local Archaeological Phases**

Among problems that arose with the CCTS is that it was far overreaching and did not fully illustrate subtle change or sub-regional trends, and was therefore misleading: “variability in the archaeological record is not easily accommodated by the horizon scheme” (Moratto 2004:199 [1984]).

Three basic time periods, Paleo-Indian, Archaic and Emergent were proposed by Willey and Phillips in 1958 and this was later modified using new radiocarbon determinations to include five divisions, Paleo-Indian (11,550 to 8550 cal B.C.), Lower Archaic (8550 to 5550 cal B.C.), Middle Archaic (5550 to 550 cal B.C.), Upper archaic (550 cal B.C. to cal A.D. 1100), and Emergent (cal A.D. 1100 to Historic) (Rosenthal ET AL. 2007:150).

The depth of the archaeological record within the San Joaquin extends to the limits of documented occupation within California. The majority of fluted points with estimated dates between 11,550 and 9,550 RCYBP and uncalibrated dates on human bone at 15,802BP and faunal materials without a clear association at 17,745 RCYBP have been located around the shores of the Tulare Lake Basin (Rosenthal, Et AL. 2007:151; Justice 2002:76). Although there is a lack of evidence for direct correlation of human and faunal remains, based on "typologic grounds the Clovis-like points argue for occupation of the ancient Lake Tulare vicinity earlier than 11,000 B.P. (Moratto 2004:82). The study of archaeology of the Central Valley has been limited in part because of the destruction of surface sites through agriculture and because of the deposition of alluvium (Rosenthal, Et AL. 2007:150). The finds around the Tulare Basin are a result of uplifted buried lake deposits caused by "Holocene earthquake activity . . . along the Dudley Ridge" (Justice 2002:76).

The transitional period between the Pleistocene and the Holocene showed extreme changes to the climate and in turn flora and fauna. This promoted adaptations in survival strategies throughout the west (Moratto 2004:90; Rosenthal ET AL.2007:151, 152). The intensification of plant resources began to take place with evidence along foothill sites indicated by a substantial increase in milling equipment. This is not as evident in the valley locations. There does appear to have been "two distinct settlement-subsistence adaptations operating in central California beginning in the Middle Archaic, one centering on the foothills and the other on the valley floor" (Rosenthal ET AL.2007:152,153). While the foothill traditions show an increase in procurement of plant material, primarily pine nuts and acorns. This adaptive subsistence included a high residential mobility. The valley on the other hand began to see occupation along the river corridors and evidence of semi-permanent residence, which included "refined and specialized tool assemblages and features, a wide range of non-utilitarian artifacts abundant trade objects, and plant and animal remains indicative of year-round occupation". By 4050 cal B.C. milling equipment was being used in the valley with a possible increase in fishing and further intensification of marshland resources occurring during the Middle Archaic. This period also saw an increase in exchange of shell and obsidian (Rosenthal ET AL.2007).

Middle Archaic deposits are rare in the Central Valley in part due to the inflow of depositional materials in the early Holocene, with these fans stabilizing roughly around 5550 cal B.C. Archaeology in the Central Valley south of Stockton is still "the least-known area of California, Deep alluvium and the destruction of surface sites for agriculture have in part, led to this lack of information. The areas of Tulare Lake and Buena Vista have been shown to have "cultural affiliations with the Santa Barbara Coast and the Mojave Desert" (Moratto 2004:215).

By the late Middle Archaic, Groups had begun to find stability along river corridors in both the Sacramento and San Joaquin Valleys (Rosenthal ET AL.2007:153) based on mortuary practices, with valley groups periodically occupying locations in the foothills along riparian areas (Rosenthal ET AL.2007:156). Intensification of the resources of the valley led to increased population (Wohlgemuth

2010:57-76) and at the same time a reduction in the rate of animal production after 770 A.D. (Rosenthal ET AL. 2007:162).

### *The Windmill Pattern*

The Windmill Pattern appeared in and around the Sacramento-San Joaquin River Delta around 4000 B.P. and expanded into the San Francisco Bay and Coast Range after 4,000 B.P. (Golla 2007:76). This coincides with a glottochronological split in Miwok and Costanoan language families (Eshleman and Smith 2007:292-293). Similarities in burial practices and projectile points link the Windmill Pattern to what may have been as many as four eastern migrations from the Great Basin (Wallace 1978:34; Eshleman and Smith 2007:293), however, DNA testing does not support this concept (Eshleman and Smith 2007:298). Heizer and Whipple (1971:166) used Windmill sites in the Mokelumne region of the Sacramento Valley as an example of what they referred to as the Early Horizon and estimated the absolute age to be between 4,000 and 5,000 years old. Some sites in the northern Diablo Range were dated at approximately 4650 B.P. (Rosenthal et. al. 2007:154). The Windmill Pattern appears to be widespread in the San Joaquin Valley dating from the Middle Archaic through the Upper Archaic based on burial patterns found as far south as Buena Vista Lake (Rosenthal Et AL 2007:154, 155).

The Windmill Pattern is more prevalent in the Central Valley and is represented by a successful utilization of resources. This is demonstrated by the recovery of a wide variety of projectile point types, baked clay line weights for fishing, trident bone spear tips for fishing, two types of bone fish hooks, and the faunal remains of both terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972).

Trade objects that were obtained were “generally obtained as finished items rather than as raw material” (Moratto 2004:203 [1984]). The presence of artifacts made of exotic materials, such as obsidian, shell, and quartz, indicates that by 4000 B.C. an extensive trade network existed in central California. The Windmill people excelled in flaked and ground stone production. Especially notable are ground and polished charmstones of alabaster, marble, and diorite (Moratto 2004:203 [1984]).

Delta Windmill burials occur both in village plots and in cemeteries separate from habitation sites. Burials typically (85%) contain both grave goods and red ochre (Moratto 2004:203 [1984]). The position of the dead follows certain traits, where “Skeletons are most often extended ventrally and oriented toward the west, although westerly oriented dorsal extensions are also common. Flexed burials, non-westerly orientation and cremations occur infrequently” (Moratto 2004:203 [1984]). At four Windmill sites burials were oriented towards the summer and winter solstice (Moratto 2004:203 [1984]). Burial patterns included internment on low rises above the river flood plain, a greater quantity of wealth and variety along with “more advanced technology in that greater attention was paid to finished products and to artistic elaboration” (Wallace 1978:32).

### *Ethnography*

#### *Yokuts*

The area of the proposed site is linked to the Yokuts who were linguistically associated to Penutian speakers. These included the Costanoan, Miwok, Wintun, Maidu, and Yokuts (Heizer and Elasser 1980:137). The estimate for the time depth based on “the small phonological and morphological differences among Yokuts subgroups . . . indicates a relatively recent date for proto-Yokuts, probably

between 1,500 and 1,000 years ago” (Golla 2007:76) While they could understand each other, the dialect of this group varied from the northern to the southern end of the San Joaquin Valley.

Sutton (2010:3-30) has proposed that an earlier language group of Uto-Aztecan was pervasive in The Great Central Valley based on similarities of language and burial patterns in Central Coastal California. He has suggested that this language group was a remnant of an earlier sub-group known as Takic, previously referred to as “Shoshonean” language that was originally called “The Southern California” branch. Based on these and previous studies, it is thought that this language group originated in the southern foothills of the Sierra Nevada and that these groups occupied the Southern San Joaquin Valley in the Middle Holocene (Sutton 2010:6).

“To the north of the Chumash, there is some linguistic evidence of ‘ancient and long-term contact’ between Salinian and Uto-Aztecan . . . . This contact may have been severed by the entry of Yokuts into the San Joaquin Valley (circa 3000 cal B.P.)” [Sutton 2010:8].

The Yokut held territory “from the San Joaquin Valley floor from the mouth of the San Joaquin River south to Tehachapi Pass to the lower Sierran foothills south of the Fresno River and the lower Kern and Kings river lands in the southern valley” (Heizer and Elasser 1980:14-15). There were at least 50 distinct tribes within this area of approximately 250 by 100 miles (Heizer and Elasser 1980:15, 16; Kroeber 1976:475; Heizer and Whipple 1971:370). The Yokut differed from other groups in that “They are divided into true tribes” . . . each has a name, a dialect, and a territory” (Heizer and Whipple 1971:369; Kroeber 1976:474). The area of the “valley edge and the foothill margin, particularly towards the better-watered Sierra slopes to the east...” led to denser populations south of the Fresno River (Heizer and Whipple 1971:91). While these groups were somewhat mobile to reflect changes in resource availability, some areas were occupied by particular groups “with sufficient permanence to become identified with it” (Heizer and Whipple 1971:370). Individual Yokut groups identified with their name or village more than with the Yokuts as a whole.

#### Historical Background/ Affiliations

The first Europeans to reach the interior valleys were deserting Spanish soldiers from San Diego in 1772 and although there were no permanent settlements the interior valley became well known (Smith, 1976: preface). By 1807 the mission system along the coast was well in place and at this time an expedition under the command of Color-Sergeant Gabriel Moraga was sent into the interior to locate mission sites. This expedition closely followed the present route of highway 99. This expedition continued east along Mariposa Creek. It was on this expedition that Moraga located the Merced River and proposed this area as a possible mission site (Smith 1939/1976:36; Bingaman 1968:2). On a second expedition in 1810 Moraga reversed this decision (Smith, 1976:38).

A second expedition occurred in 1814 by Sargent Ortega, Padre Cabot and thirty men entering the village of Bubal on the southern shore of Tulare Lake. The village contained an estimated 700 residents. The expedition continued north along the Kings River and although the area lacked timber for the construction of large buildings, Cabot recommended this area near the river was suitable for a mission (Smith 1976:42). Several expeditions occurred between 1815 and 1822, however, tribal people were uncooperative and would flee when approached by the Spanish, leading to hostilities between the two.



The majority of California was considered unoccupied or Indian territory. Ranchos and missionary development remained clustered in small areas. Effort to secularize the California missions began as early as 1813 having the effect of weakening the mission control of land and by 1834 was California law (Robinson 1979: 29, 30). In 1848, the Treaty of Guadalupe Hidalgo was signed annexing California from Mexico. This treaty recognized the right of California Native Americans “to occupy their lands until voluntary relinquishment. The policy at this time until 1878 “was to recognize the tribes as nations and to enter into treaties with them as such (Robinson 1979:13, 14; Cossley-Batt 1928:133-141 Rawls 1984:148).

Accordingly, when California became a part of the Union, three commissioners were appointed, under the provisions of the Act of September 30, 1850, to effect a just settlement with the California Indians. Redick McKee, G. W. Barbour, and O. M. Wozencraft, representing the United States, proceeded to negotiate with the headmen of California tribes. Between March 19, 1851, and January 7, 1852 they met 402 tribal heads . . . and entered into eighteen treaties. [Robinson 1979:14]

None of these were ratified. By signing the treaties, the tribes agreed to move to areas in reserve. These areas were contested by whites in the area, this and failure of Indians to present claims for their property in front of the Land Commissioners resulted in the loss of future claims for the property and these lands reverted to public domain (Robinson 1979:15,16). The Native American village community was thought to be the result of pressure from influx of Spanish, Mexican and Caucasian immigrants that drove the Miwok from traditional lands (Heizer 1971:376);

Tulare County was organized on April 20, 1852 and was comprised of more than half of the southern portion of Mariposa County extending from Nevada to the Coast Range (Smith 1976:340).

Traver was established in 1884 and was named for Charles Traver. Traver was the director of the 76 Land and Water Company which owned 30,000 acres in Fresno and Tulare County. The town site contained 240 acres and lots were auctioned between April 8<sup>th</sup> and 9<sup>th</sup> 1884. This had the effect of the abandonment of the earlier town of Cross Creek located to the south (Smith 1976:385, 386). An arrangement was made providing land to the Southern Pacific Railway (Genealogy History Group) giving rise to the fast development of the town as a loading point for wheat that was made possible by the development of the canals. In 1886 the official amount was listed as 30,214,517 pounds with 1887 listed as 34,407,100 (Smith 1976:386). Traver was a boom and bust situation with the irrigated land drawing alkali to the surface and within a decade the land became useless for its original purpose (Smith 1976:388). Today, with the use of different methods, almonds and pistachios are major crops.

## Research Design/Methodology

The work consisted of a pedestrian survey. The survey consisted of 15 meter transects within the project area. (Figure 2). Rodent burrows and roadways were examined opportunistically.

## Report of Findings:

### *Information Center Records Search*

A records search from the California Historical Resources Information System’s Southern San Joaquin Valley Information Center (SSJVIC) at California State University, Bakersfield encompassed the project

areas plus all land within a 0.5-mile radius of the project. SSJVIC staff consulted archaeological site and survey base maps, reports of previous investigations, cultural resource records, the listings of the National Register of Historic Places, the Historic Property Data File (3/8/13), the California Historical Landmarks, the California Register of Historical Resources, the California Inventory of Historic Resources, and the California Points of Historical Interest (Attachments A).

### *Records Search Results*

#### *Prior Cultural Resources Studies In or Near Project Area*

The records search conducted by the Southern San Joaquin Valley Information Center resulted in no previously reported cultural resources within the project area. One previous cultural study, TU-01751 within the study area and five previous studies that have been conducted within a one-half mile radius, TU-00102, 00504, 01008, 01158, and 01324. There are two recorded cultural resources within the one-half mile radius. These consist of P-54-002171 and P-54-004626, the Traver Canal and the Southern Pacific Railroad. There are no resources that are listed in the National Register of Historic Resources the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks. The original survey was a “windshield survey” of 640 acres that included only features visible from a slow drive-by method.

### *Tribal Correspondence*

Culturescape was provided the Native American Heritage Commission Sacred Lands File search results requested by Provost and Pritchard on March 25<sup>th</sup> 2019 to determine if any Native American cultural resources have been recorded in the project area. None were identified. On March 26, 2019, Culturescape sent letters to the individuals or groups listed by the NAHC as those that may have interest or knowledge of resources of sacred or special cultural and spiritual significance in the project areas. A follow-up phone call was made on April 5, 2019. The request and follow-up response is located in Attachment B.

### *Phase I Survey*

A phase I survey was conducted on March 22, 2019 within the proposed APE. The surface visibility was very good, however, the location of the well appeared to be highly disturbed from mechanized leveling. The soils appeared to have a large amount of modern trash mixed with the soil matrix. No evidence of prehistoric materials were located during survey. An applied lip bottle was located within the rainwater catchment on the ramp. This is noted but was not recorded as there was no context

### *Comments /Discussion*

Because the area does not appear to be sensitive for cultural deposits, no further study is suggested. Should any prehistoric or historical components be uncovered, that is, resources possessing physical evidence of human activities over 45 years old, then all work is to stop and a qualified professional of the appropriate discipline is to be contacted to evaluate the discovery.

Should human remains be encountered during ground disturbance, as provided by Health and Safety Code section 7050.5. If human remains are uncovered during future work, then all work is to stop until the county coroner can determine whether the remains are subject to provisions of the Government Code. Pursuant to the Public Resources code 5097.98 if the coroner finds that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be Native

American, the coroner has 24 hours to contact the Native American Heritage Commission. They will contact the most likely descendent who will make recommendations on how to proceed. The most likely descendent has twenty four hours to respond. If the most likely descendent does not respond in twenty four hours the owner may reinter the remains in an area of the property secure from further disturbance, or: If the owner doesn't accept the descendant's recommendations, the owner or the descendent may request mediation by the Native American Heritage Commission.

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1927 1:31680 Traver Quadrangle

## Attachment A: Record Search



**To:** Briza Sholars  
Provost & Pritchard Consulting Group, Inc.  
286 W. Cromwell Ave.  
Fresno, CA 93711

**Record Search 19-062**

**Date:** March 4, 2019

**Re:** Del Oro Traver District – Well 3 TCP

**County:** Tulare

**Map(s):** Traver 7.5'

#### **CULTURAL RESOURCES RECORDS SEARCH**

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

#### **PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS**

According to the information in our files, there has been one previous cultural resource study conducted within the project area, TU-01751. There have been five studies conducted within the one-half mile radius, TU-00102, 00504, 01008, 01158, and 01324.



**KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS**

There are no recorded cultural resource within project area. There are two recorded resource within the one-half mile radius, P-54-002171 and P-54-004626. These resources consist of the Traver Canal and the Southern Pacific Railroad.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

**COMMENTS AND RECOMMENDATIONS**

We understand this project consists of development of a new water treatment system on a lot that currently consists of two wells and vacant land. The survey that was completed on this property, TU-01751, was completed in 2014. The consultant conducted a "windshield survey" of 640 acres. This means that only sites visible from the road during a slow drive-by would have been identified. It is possible there are still unidentified cultural resources in the project area. Therefore, prior to ground disturbance activities, we recommend a qualified, professional consultant conduct a new survey to determine if cultural resources are present. A list of qualified consultants can be found at [www.chrisinfo.org](http://www.chrisinfo.org).

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Celeste M. Thomson, Coordinator

**Date:** March 4, 2019

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.



## Attachment B Native American Correspondence



**Native American Heritage Commission  
Tribal Consultation List  
03/11/2019**

Santa Rosa Rancheria Tachi Yokut Tribe

Rueben Barrios Sr., Chairperson

P.O. Box 8  
Lemoore, CA 93245  
Tache  
Tachi  
Yokut

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Tule River Indian Tribe

Neil Peyron, Chairperson

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Porterville, CA 93258  
Yokuts  
neil.peyron@tulerivertribe-nsn.gov

(559) 781-4271

Wuksache Indian Tribe/Eshom Valley Band

Kenneth Woodrow, Chairperson

1179 Rock Haven Ct.  
Salinas, CA 93906  
Foothill Yokuts  
Mono  
Wuksache  
kwood8934@aol.com

(831) 443-9702

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

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 Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.1, 21080.3.1, and 21080.3.2 for proposed Del Oro Traver District - Well 3 TCP, Tulare County.

Organization	Name	Position	Letter	E-mail	Phone	Summary of Contact
Native American Heritage Commission	Katy Sanchez	Staff Services Analyst		3/11/2019		Provided to Provost and Pritchard
Santa Rosa Rancheria Tachi Yokut Tribe P.O. Box 8 Lemoore Ca 93245 559 924 1278	Ruben Barrios	Chairperson	3/26/2019		4/5/2019	Left a message
Tule River Indian Tribe P.O. Box 589 Porterville Ca. 93258 <a href="mailto:Neil.peyron@tulerivertribe-nsn.gov">Neil.peyron@tulerivertribe-nsn.gov</a> 559 781 4271	Neil Peyron	Chairperson	3/26/2019	3/26/2019	4/5/2019	Left a message
Wuksache Indian Tribe/ Eshom Valley Band 1179 Rock Haven Ct Salinas Ca 93906 <a href="mailto:Kwood8934@aol.com">Kwood8934@aol.com</a> 831 443 9702	Kenneth Woodrow	Chairperson	3/26/2019	3/26/2019	4/5/2019	Left a message





## Attachment C Photographs



*Figure 3 Overview of Project Area, southwest corner with well head at right northeast IMG 1187*



*Figure 4 Overview of west lot from northwest corner east IMG 1188*





*Figure 5 overview of area of proposed pipeline between well head and storm basin south side east IMG 1189*



*Figure 6 Overview of Storm water basin at east side of the project northeast IMG 1190*





*Figure 7 Overview of Storm water basin North IMG 1191*



*Figure 8 Isolated Aquamarine bottle located on modern ramp within the storm water basin IMG 1192*

## Attachment D Qualifications

## Summary of qualifications

Mr. Kile's 15 years' experience with some of California's leading cultural resource management firms, and as a private consultant includes all phases of archaeological investigations of prehistoric and historical resources; evaluations of sites, mines, logging activity, railroads, irrigation, and hydro-electric projects for compliance with the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and the National Historic Preservation Act (NHPA). Mr. Kile's experience includes project design, personnel management, multi-party project coordination and working knowledge of Federal, State and County laws.

## Areas of Expertise:

- A working knowledge of California Environmental Quality Act
- National Environmental Policy Act
- National Historic Preservation Act
- Consultation with Native American groups and concerned persons
- Preparation of Archaeological Research Design proposals,
- Preparation of Archaeological Technical Reports

records searches, site plotting, rectifying field records, field transects, excavation, mapping, recordation, laboratory analysis, organization of site records, use of Total Station, and Geographical Information Systems.

## Relevant Experience

### **Principal Investigator, County of Madera, the Mid-Town Connector,**

Extended Phase I Investigation of CA-MAD-2824/H. The purpose of the investigation was to determine vertical and horizontal extent of the site through positive identification or negative sampling of cultural materials only.

Phase II evaluation of the site to determine the eligibility of the resource for entry into the California Inventory of Historic Places

**Principal Investigator, Central Valley Independent Network, The Central Valley Next Generation Broadband Infrastructure Project, Cultural Resource Inventory, Auburn, Ca. 2015 Culturescape**  
Phase I and report for fiber optic transmission lines.

**Principal Investigator, Cultural Resources Inventory for Hillview Water Company Infrastructure Improvements, Raymond, Ca. 2015 Culturescape** Phase I survey and report for compliance of the California Environmental Quality Act for requirements of the California Department of Public Health (CDPH) Proposition 50 Water Improvement Grant.

**Principal Investigator, Historical Properties Survey Report and Archaeological Survey Report for Tully Road Reconstruction STPL 5411 (014) Hughson, Stanislaus County Ca. 2014 Culturescape.** Phase I survey and report for compliance with FHWA guidelines.

**Field Technician, Field Survey for Historic Resources Evaluation Report for the North County Corridor Project. Oakdale, Stanislaus County. Ca. 2014, LSA** Phase I survey of historical buildings for the evaluation of eligibility for inclusion into the National Register.

**Principal Investigator, Cultural Inventory for 13-MPRO-191 WaterSmart Grant for Madera Irrigation District Water Conservation, Telemetry and Delivery System Management Improvement Project, Madera County California. 2013 Culturescape**

Phase I Survey in conjunction with a Bureau of Reclamation grant to replace manual controls and gauges with automated flume gates and flow meters. This included research into California irrigation and generally focused on built environment.

**Principal Investigator, Avoidance of Site CA-COL-245/H (NTIA 101004A) Colusa, California. Central Valley Independent Network. The Central Valley Next Generation Broadband Infrastructure Project 2013 Culturescape** Phase III Investigation. This research was conducted in an effort to avoid a previously located site within downtown Colusa and to determine if there were undisturbed cultural deposits for the purpose of securing a viable route for fiber optics cables. The project consisted of excavation of 8 test units from 1 X 1 meters to 2 X 1 meters that were excavated to a depth of 2.5 meters. The conclusion was that this substrata was disturbed throughout the proposed route.

**Principal Investigator, , Cultural Resource Inventory, Evaluation and Cultural Mitigation of APN 092-030-100 El Dorado County, California for Central Valley Independent Network, The Central Valley Next Generation Broadband Infrastructure Project 2013 Culturescape**, Extended Phase I Investigation and evaluation of two sites affected by a bentonite spill

**Principal Investigator, Preconstruction Survey for Apex Natural Renewable Generation LLC. Proposed Solar Farm, Orange Cove, Tulare County, Ca. 2013 Culturescape** Phase I Survey for a proposed solar farm.

**Project Archaeologist, Gil Ranch Storage LLC, Madera County, Ca. 2009 ENTRIX**

This project consisted of placement of 26.5 miles of pipeline for a natural gas storage facility in Madera County. Investigations included monitoring, coordinating with GRS management and various construction crews on a daily basis and coordination with Native American Monitors during excavations through recorded sites. Daily reports were used for compliance with the California Public Utilities Commission, Army Corp of Engineers, and Office of Historic Preservation

**Field Supervisor, Sweetwater Mine Evaluation. Mariposa County 2006, Applied Earthworks**

Field supervision and assessment of mine property for evaluation for eligibility for inclusion into the National Register of Historic Places. Reports for this project complied with Caltrans requirements California Environmental Quality Act and Section 106 of the Nation Historic Preservation Act

**Field Supervisor, San Joaquin/ Big Dreamer Mine Evaluation North Fork, Madera County, 2006, Applied Earthworks.**

Duties included field supervision and assessment of mine property for evaluation for eligibility for inclusion into the National Register of Historic Places. Reports for this project complied with Caltrans requirements California Environmental Quality Act and Section 106 of the Nation Historic Preservation Act

**Field Supervisor, Seismic Retrofit of the Crane Valley Dam. Bass Lake 2006, Applied Earthworks**

This project was for the seismic retrofit of buttresses for the Crane Valley Dam.

Tasks included relocation and record updates of historic and prehistoric features for mitigation purposes including modification to forest roads and development of quarries for buttress materials.

**Principal Investigator, CALTRANS Contract 10- OP7704 Emergency Road Widening for Ferguson Slide, Highway 120 Priest Grade 2006 Culturescape**

This project consisted of monitoring emergency road widening conducted as a result of the landslide of Ferguson Ridge on highway 140 in Mariposa County. Duties included recordation of mine trails subsumed by highway construction and identification of historic and prehistoric artifacts. Reports for this project complied with Caltrans requirements California Environmental Quality Act and Section 106 of the Nation Historic Preservation Act

**Field Technician** Auburn/Truckee, Applied Earthworks, Field Technician Yuba/ Bear River, Phase I FERC re-licensing. Duties included location and identification of prehistoric and historic features such as mining apparatus, ditches, cabin structures, and historic trash scatters that related to dams within the P.G. and E system, and the Overland trail. Bowman Lake, Faucherie, French Lake, Rollins Lake, Sawmill Lake, Scotts Flat and Jackson Lake were all surveyed.





# Appendix D

## NRCS Soil Resource Report



United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Tulare County, Western Part, California



March 6, 2019

# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# Contents

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<b>Preface</b> .....	2
<b>How Soil Surveys Are Made</b> .....	5
<b>Soil Map</b> .....	8
Soil Map.....	9
Legend.....	10
Map Unit Legend.....	11
Map Unit Descriptions.....	11
Tulare County, Western Part, California.....	13
105—Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes.....	13
<b>References</b> .....	16

# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil



scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---


The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)


### Soils


 Soil Map Unit Polygons


 Soil Map Unit Lines


 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit


 Clay Spot


 Closed Depression

 Gravel Pit

 Gravelly Spot


 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry


 Miscellaneous Water


 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole

 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Tulare County, Western Part, California  
Survey Area Data: Version 12, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 24, 2015—Oct 23, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
105	Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes	2.6	100.0%
<b>Totals for Area of Interest</b>		<b>2.6</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Tulare County, Western Part, California

### 105—Calgro-Calgro, saline-Sodic, complex, 0 to 2 percent slopes

#### Map Unit Setting

*National map unit symbol:* hp47

*Elevation:* 250 to 480 feet

*Mean annual precipitation:* 8 to 12 inches

*Mean annual air temperature:* 62 to 65 degrees F

*Frost-free period:* 250 to 300 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Calgro and similar soils:* 60 percent

*Calgro, saline-sodic, and similar soils:* 25 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Calgro

##### Setting

*Landform:* Fan remnants

*Landform position (two-dimensional):* Shoulder

*Landform position (three-dimensional):* Side slope

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Alluvium derived from granite

##### Typical profile

*Ap - 0 to 7 inches:* sandy loam

*Bw - 7 to 25 inches:* sandy loam

*2Bkqm - 25 to 33 inches:* cemented

*2Bkq - 33 to 53 inches:* gravelly loamy sand

*3Bkqm - 53 to 60 inches:* cemented

##### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* 20 to 40 inches to duripan

*Natural drainage class:* Moderately well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.20 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* Very rare

*Frequency of ponding:* None

*Calcium carbonate, maximum in profile:* 2 percent

*Salinity, maximum in profile:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)

*Sodium adsorption ratio, maximum in profile:* 12.0

*Available water storage in profile:* Low (about 3.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3s

*Land capability classification (nonirrigated):* 6s

*Hydrologic Soil Group:* C

*Hydric soil rating:* No

## **Description of Calgro, Saline-sodic**

### **Setting**

*Landform:* Fan remnants  
*Landform position (two-dimensional):* Shoulder  
*Landform position (three-dimensional):* Side slope  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from granite

### **Typical profile**

*Ap - 0 to 8 inches:* sandy loam  
*Bw - 8 to 24 inches:* sandy loam  
*2Bkqm - 24 to 33 inches:* cemented  
*2Bkq - 33 to 52 inches:* gravelly loamy sand  
*3Bkqm - 52 to 60 inches:* cemented

### **Properties and qualities**

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* 20 to 40 inches to duripan  
*Natural drainage class:* Moderately well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Low to moderately high (0.01 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* Very rare  
*Frequency of ponding:* None  
*Calcium carbonate, maximum in profile:* 4 percent  
*Salinity, maximum in profile:* Slightly saline to strongly saline (4.0 to 16.0 mmhos/cm)  
*Sodium adsorption ratio, maximum in profile:* 100.0  
*Available water storage in profile:* Very low (about 3.0 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* 4s  
*Land capability classification (nonirrigated):* 7s  
*Hydrologic Soil Group:* C  
*Hydric soil rating:* No

## **Minor Components**

### **Colpien**

*Percent of map unit:* 5 percent  
*Landform:* Fan remnants  
*Hydric soil rating:* No

### **Grangeville**

*Percent of map unit:* 4 percent  
*Landform:* Flood plains, alluvial fans  
*Hydric soil rating:* No

### **Tujunga**

*Percent of map unit:* 3 percent  
*Landform:* Flood plains  
*Hydric soil rating:* No

## Custom Soil Resource Report

### **Exeter**

*Percent of map unit:* 2 percent

*Landform:* Fan remnants

*Hydric soil rating:* No

### **Unnamed, ponded**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

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